Communicating with Intention:

Family-Centered Care in Early Intervention Through the Interpersonal Lens

BY

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THESIS

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This thesis is dedicated to all families and therapists in Early Intervention. Your commitment to the future generation is an aspiration to many. Without your ingenuity, enthusiasm, and perseverance, this dissertation would not be possible.

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LIST OF ABBREVIATIONS

CAM	Clinical Assessment of Modes
CASI-SF	Clinical Assessment of Sub-optimal Interactions-Short Form
DEC	Division for Early Childhood
DSA	Developmental Systems Approach
DT	Developmental Therapist
EI	Early Intervention
EITP	Early Intervention Training Program
ICF	International Classification of Functioning, Disability, and Health
ICF-CY	International Classification of Functioning, Disability, and Health – Children and Youth
IDEA	Individuals with Disabilities Education Act
IRM	Intentional Relationship Model
NEILS	National Early Intervention Longitudinal Study
OT	Occupational Therapist
PT	Physical Therapist
ST	Speech Therapist
ZPD	Zone of Proximal Development

SUMMARY

Family-centered care is a guiding service delivery model in Early Intervention (EI) and a standard of best practice across all pediatric settings. Yet, research suggests that the recommended practices for working with children and families outlined by Individuals with Disabilities Education Act (IDEA) Part C and the Division for Early Childhood (DEC) are not consistently integrated into practice by interdisciplinary EI teams. The majority of EI services remain therapist-driven and families continue to view therapists in the role of an expert. Furthermore, while the family-centered approach to intervention stresses the importance of active family engagement, evidence suggests that the actual levels of family engagement may be lower than what is considered to be optimal and families are more likely to take on a passive (as opposed to active) role in the treatment process.

In addition to system-level barriers, several interpersonal barriers to family engagement have been identified in EI. Consistently, the role of the therapist-parent relationship and therapists' responsiveness in promoting parent engagement has been gaining traction in recent years. Despite the long-standing acknowledgment of the importance of the therapist-parent communication in the delivery of family-centered care, there remains a dearth of empirical evidence on the quality and quantity of therapist-parent interactions or evidence-based approaches for promoting therapist's interpersonal competence in EI.

The purpose of this dissertation is to clarify and explore the role of interpersonal components of family-centered care and their association with family engagement in EI.

This dissertation aims to:

- Integrate the existing evidence on the role of therapist-parent communication in promoting relationship and capacity-building components of family-centered care and family engagement in EI (Chapter I);
- Evaluate existing theoretical frameworks and related literature that can be used to understand the specific components of the family-centered process and the role of therapists' communication from a relationship- and capacity-building perspectives (Chapter II);
- Describe the methods of two studies conducted in EI. The first study (Study I) explores therapist and parent perspectives on parents' engagement, delivery of family-centered care, and therapists' use of communication in EI. The second study (Study II) examines the feasibility, acceptability, and preliminary effects of a continuing education course aimed at promoting therapists' interpersonal competency using the Intentional Relationship Model (IRM) (Chapter III);
- Report the findings from Study I and Study II from therapist and parent perspectives (Chapter IV);
- Evaluate existing evidence on the role of therapists' communication in promoting family-centered care and parent engagement in EI, and examine the role of continuing education in promoting knowledge translation of family-centered theory into practice (Chapter V).

I. INTRODUCTION

A. Early Intervention

Early Intervention is a widely used program that offers multidisciplinary services to families of young children between zero and three years of age. To qualify for EI, a child must: 1) have a medical diagnosis or condition that typically results in a developmental delay, 2) have a non-diagnosed significant developmental delay (of 30% or higher in the state of Illinois), or 3) be otherwise at risk for a significant developmental delay (Illinois Department of Human Services, 2016). The EI program was first established in 1986 as an amendment to the Education for All Handicapped Act (Public Law 94-142) of 1975 (Kuo et al., 2012; MacKean, Thurston, & Scott, 2005) and was renamed to Individuals with Disabilities Education Act (IDEA) Part C in 1990 (Rose, Herzig, & Hussey-Gardner, 2014). Section §303.24 of IDEA Part C (2004) places a strong emphasis on the importance of family engagement in the EI process and requires that the multidisciplinary EI team include a parent (or a caregiver), a service coordinator, and at least one other professional from a separate discipline or service. Families often qualify for one or more therapeutic services. According to the National Early Intervention Longitudinal Study (NEILS), 52% of families that qualified for EI received speech therapy, 43% received special education (i.e., developmental therapy), 38% received occupational therapy, and 37% received physical therapy (Hebbeler et al., 2007); highlighting the critical role of rehabilitation therapists on the EI team.

B. Family-Centered Care in Early Intervention

Early Intervention is guided by the Developmental Systems Approach (DSA) (Guralnick, 2005), which stresses the importance of family-centered care and recognizes parent-child

interactions as an essential contributor to child outcomes. The Division for Early Childhood (DEC) (2014) defines family-centered care as:

> Practices that treat families with dignity and respect; are individualized, flexible, and responsive to each family's unique circumstances; provide family members complete and unbiased information to make informed decisions; and involve family members in acting on choices to strengthen child, caregiver, and family functioning (p. 10).

The family-centered service model stresses that children cannot be viewed apart from their families, and EI is best delivered within the context of the family (Bailey, Raspa, & Fox, 2012). Seven key principles have been identified to guide family-centered care in EI (Bailey et al., 2012; Kuo et al., 2012; MacKean et al., 2005):

1. A strengths-based approach to care;
2. Open, objective and unbiased information sharing;
3. Respect for cultural diversity and family preferences;
4. Family driven decision-making and empowerment;
5. Negotiation and flexibility related to outcomes of care;
6. Delivery of care within the context of the family and the community; and
7. Recognition of the importance of formal and informal support systems.

Family-centered care recognizes that families are unique, diverse, and bring expertise on individual (i.e., contributing critical insight into family and child functioning while working directly with an EI therapist), team (i.e., contributing critical insight into the outcomes listed on the Individualized Family Service Plan as well as the necessary team composition to meet those outcomes), and system levels (i.e., contributing critical insight into system-level support and services that are necessary to achieve child and family outcomes). The DEC (2014) stresses that the EI services should be delivered in collaboration with the family and defines family-therapist collaboration as "practices that build relationships between families and therapists who work

together to achieve mutually agreed-upon outcomes and goals that promote family competencies and support the development of the child" (p. 10). This collaborative approach is argued to support active family engagement in the process of care and, in turn, positive child and family outcomes (Palisano et al., 2012).

The family-centered approach contrasts with the traditional (i.e., "child-centered" and "therapist-driven") service model in pediatric practice. The traditional model focuses on supporting the child's development through direct, one-on-one, assessment, and intervention from the therapist. The role of the therapist in the traditional model is that of an expert, rather than that of a collaborator. Accordingly, the parent involvement within the traditional model is often limited to that of an observer or an implementer of a home program that was designed by the therapist with minimal parent input. Low levels of parent participation and limited carry-over of therapeutic recommendations outside of treatment sessions is one of the biggest arguments in support for a shift away from a traditional model and toward a family-centered approach.

1. **Family-Centered Practices in Early Intervention**

Despite the growing emphasis on family-centered care in pediatric practice guidelines and policies, there remains a dearth of operational definitions and standards by which the quality of family-centeredness can be implemented and evaluated in practice (Bamm & Rosenbaum, 2008). Evidence suggests that family-centered care could be examined according to two domains: 1) relationship-building practices, aimed at developing a strong therapeutic partnership between the therapist and the family, and 2) capacity-building practices, aimed at provision of formal and informal support and services (Dunst, Trivette, & Hamby, 2007; Friend, Summers, & Turnbull, 2009).

a. Relationship-Building Practices in Early Intervention

The family-therapist relationship has been identified as one of the most frequently studied components of family-centered care in EI (Epley, Summers, & Turnbull, 2010; Turnbull et al., 2007). Research suggests that therapists' relational competencies may be stronger determinants of families' ratings of quality of care as compared to therapists' technical competencies (Bamm & Rosenbaum, 2008; MacKean et al., 2005). Consistently, families have been shown to value therapists who demonstrate competence in both technical and interpersonal aspects of care (James & Chard, 2010), and those who are competent in their ability to foster a therapeutic relationship with both the family and the child (MacKean et al., 2005). Despite the growing evidence on the importance of relationship-building practices in EI, the process for establishing and maintaining a strong therapeutic relationship between the family and the therapist remains elusive. Though key elements of relationship-building practices (e.g., active listening, empathy, compassion, respect, collaboration, etc.) have been established (Dunst et al., 2007), they are not operationalized, and the process for how they can be effectively carried out in practice remains under-investigated in pediatrics.

While models that address interpersonal aspects of the family-therapist relationship do exist for use in rehabilitation, such as the Intentional Relationship Model (IRM) (Fan & Taylor, 2016; Popova, Ostrowski, Wong, & Taylor, 2019; Popova & Taylor, 2019; Taylor, 2008), and could address this gap in literature, their application and clinical utility in EI has not been investigated to date. According to the IRM, the therapist's ability to establish and maintain a therapeutic relationship can have a significant impact on the family's engagement, and interpersonal challenges can pose a barrier to achieving both family and child outcomes (Taylor, 2008). As such, the therapist's relational competencies and ability to establish a strong

therapeutic relationship with the family can be hypothesized to have an impact on the ultimate effectiveness of both relationship- and capacity-building practices. Additional information on the IRM is presented in Chapter II.

b. **Capacity-Building Practices in Early Intervention**

According to the DEC (2014), family capacity-building practices are "the participatory opportunities and experiences afforded to families to strengthen existing parenting knowledge and skills and promote the development of new parenting abilities that enhance parenting self-efficacy beliefs and practices" (p. 10). Family-capacity-building practices have been shown to have a direct effect on both parental well-being and self-efficacy (i.e., the sense of confidence and competence in one's parenting behavior), which in turn have been shown to mediate both parent-child interactions and child outcomes (Dunst & Trivette, 2009; Trivette, Dunst, & Hamby, 2010). Even when accounting for family demographics and frequency of services, therapists' ability to implement capacity-building practices has been shown to be the primary predictor of family empowerment (Dempsey & Dunst, 2004); a dynamic, multidimensional, construct that encompasses "self-efficacy, participation and collaboration, sense of control, meeting personal needs, understanding the environment, access to resources, and personal action" (Dempsey & Dunst, 2004, p. 41).

One of the most prominently recognized EI strategies for family capacity-building is coaching (Schwellnus, King, & Thompson, 2015). The DEC (2014) recommends that "practitioners use coaching or consultation strategies with primary caregivers or other adults to facilitate positive adult-child interactions and instruction intentionally designed to promote child learning and development" (p. 13). While the literature on coaching in EI recognizes and stresses the importance of the therapist-family relationship and communication (Rush, Shelden, & Hanft,

2003), guidelines on establishing a therapeutic relationship necessary for effective coaching are lacking and have not been operationalized to date. Additional information on coaching in EI and rehabilitation is presented in Chapter II.

2. Evaluating the Process and Outcomes of Family-Centered Care in Early Intervention

The EI system of care evaluates the impact of services according to three child and three family outcomes. Key child outcomes focus on the child's functioning and include, improved: "1) development of positive social-emotional skills, 2) acquisition and use of knowledge and skills, and 3) use of appropriate behaviors to meet their needs" (Bailey et al., 2012, p. 216). Key family outcomes include, improved: "1) knowledge and understanding of family rights, 2) ability to communicate the child's needs, and 3) ability to help the child develop and learn" (Bailey et al., 2012, p. 218). While family-centered care has been shown to have a significant effect on improving both child and family outcomes (Bailey et al., 2012; Dunst et al., 2007; Friend et al., 2009), evidence examining the components and determinants of family-centered process of care remains limited in EI. The existing body of literature suggests that therapists' perceived self-efficacy and objective competence in being able to carry out family-centered care effectively (i.e., relationship- and capacity-building practices) can have a significant impact on 1) parents' engagement, 2) parents' perceived self-efficacy and objective competence, and 3) child and family outcomes. The proposed model of the process and outcomes of family-centered care is provided in Figure 1.

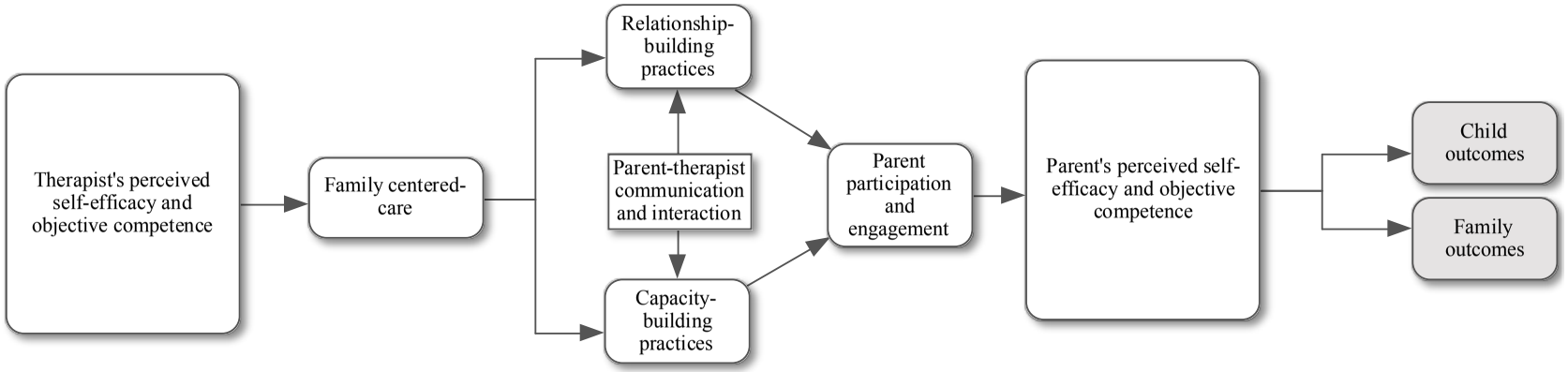

Figure 1. Proposed process (illustrated in white) and outcomes (illustrated in grey) of family-centered care in Early Intervention.

Several assessment tools have been developed to support a systematic approach to evaluating the implementation of family-centered practices in EI. From the process evaluation standpoint, the Measure of Processes of Care (MPOC) (Cunningham & Rosenbaum, 2014) has been developed to evaluate parent and therapist perspectives on the delivery of family-centered care in pediatrics. The MPOC has demonstrated good reliability and validity in a variety of pediatric settings (Cunningham & Rosenbaum, 2014) and could be used in EI to systematically evaluate the implementation and the impact of family-centered services on child and family outcomes over time.

A growing body of research on the MPOC, suggests that family enablement and partnership, provision of respectful and supportive care, and provision of coordinated and comprehensive care are the highest-ranked aspects of family-centeredness, while the provision of general and specific information are ranked the lowest (Cunningham & Rosenbaum, 2014). Research examining the implementation of family-centered care in EI in Australia found that, while the provision of general information was ranked the lowest, it had the strongest correlation with family empowerment (Dyke, Buttigieg, Blackmore, & Ghose, 2006; Fordham, Gibson, & Bowes, 2012). These findings highlight potential challenges related to information sharing within the family-therapist relationship, and a possibility of a communication barrier in achieving family empowerment in pediatrics. While the MPOC demonstrates strong potential toward informing the implementation and the impact of family-centered care in EI, to the author's knowledge, the MPOC has not been used in psychometric or clinical research in EI in the U.S.

3. Family Engagement in Early Intervention

Active family engagement in the EI process of care is an essential feature of family-centered care and is recognized as an essential contributor to positive family and child outcomes in pediatrics. Consistently, family implemented interventions have been shown to be effective in supporting positive child outcomes (Barton & Fettig, 2013; Brown & Woods, 2015). The DEC (2014) practice recommendations stress that EI services should:

> (1) promote the active participation of families in decision-making related to their child (e.g., assessment, planning, intervention); (2) lead to the development of a service plan (e.g., a set of goals for the family and child and the services and supports to achieve those goals); or 3) support families in achieving the goals they hold for their child and the other family members (p. 10).

Therapeutic engagement is a dynamic process that emerges from an interaction between the person (i.e., the person's motivation and perceived self-efficacy) and their environment (i.e., social and physical environment) (Lequerica & Kortte, 2010). As such, family engagement in EI can be understood as a process that is influenced by characteristics of the family, the therapist, and the program (Korfmacher et al., 2008; Wagner, Spiker, Linn, & Hernandez, 2003). A mismatch between family, therapist, or program characteristics can inhibit family engagement despite the family's interest and ability to take an active role in the process (Korfmacher et al., 2008). As therapists and parents navigate interpersonal and system-level barriers in EI (Lee, 2015), interpersonal dynamics within the therapist-parent-child triad may become one of the driving forces behind family engagement. A proposed model that visually depicts how therapist-parent-child interaction may impact engagement is presented in Figure 2.

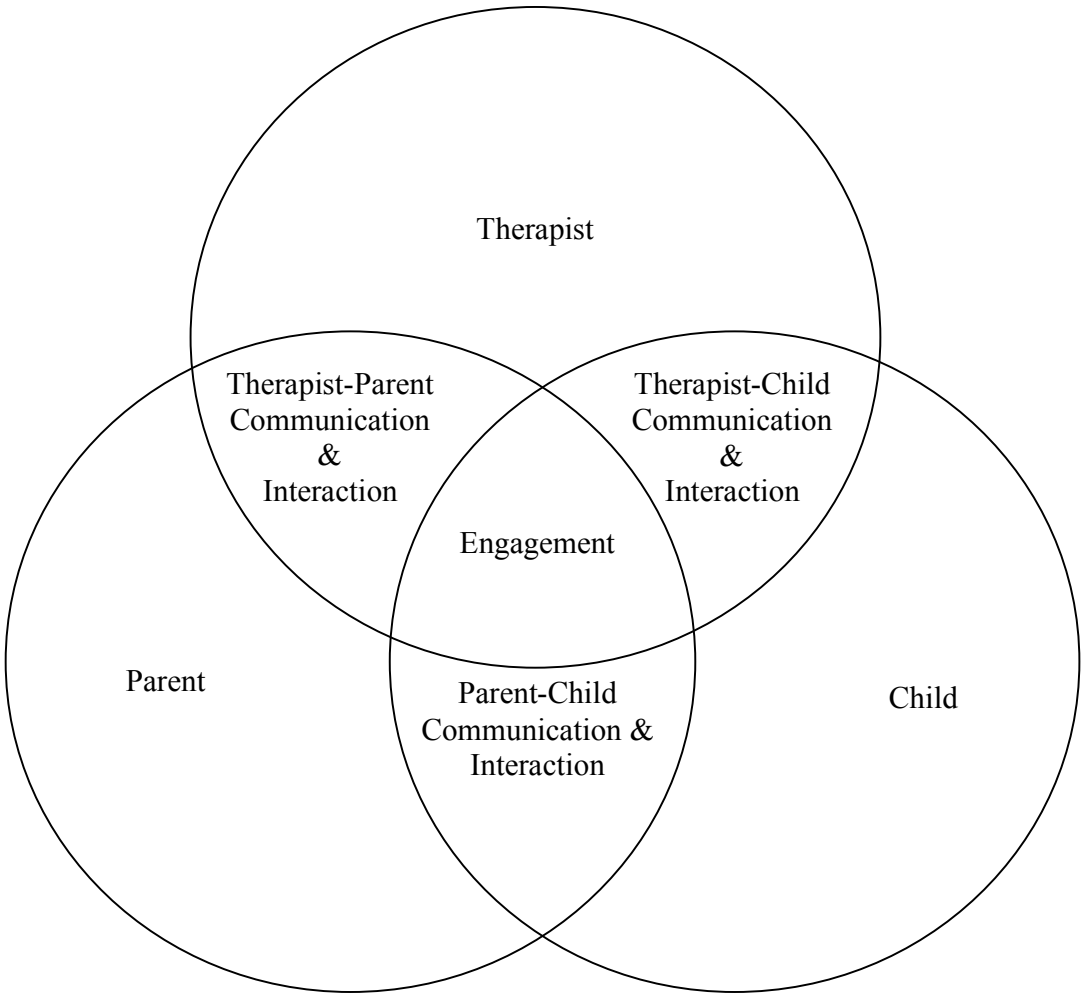

Figure 2. The influence of interpersonal dynamics within the therapist-parent-child triad on engagement.

Parent-therapist relationship and therapist's responsiveness have been acknowledged as essential contributors to parent engagement in pediatric rehabilitation (D'Arrigo, Ziviani, Poulsen, Copley, & King, 2017). Specifically, the interpersonal aspects of the therapist-parent-child relationship have been recognized to impact engagement on three separate levels: autonomy support (supporting client's choices and intrinsic motivation), relatedness support (developing a therapeutic alliance through empathy and respect), and competence support (providing opportunities for mastery) (D'Arrigo et al., 2017). Empirical evidence examining the interpersonal and communication-based enablers and barriers to family engagement remain scarce in the EI literature.

4. Barriers to Family-Centered Care and Active Family Engagement in Early Intervention

Despite a collective acknowledgment that family engagement is both the means and the end of family-centered practice, achieving active family engagement in and outside of sessions continues to present a challenge in EI. To be carried out in practice, family-centered practices need to be fully endorsed by all stakeholders that benefit from the EI system, including families, professionals, researchers, and leaders. While families and therapists value family-therapist collaboration (MacKean et al., 2005; Yang, Hossain, & Sitharthan, 2013), families may expect a more traditional, or expert, approach to care (Hebbeler & Gerlach-Downie, 2002; Leiter, 2004) and some therapists may have firmly held attitudes that do not support implementation of these recommendations in practice (Campbell & Sawyer, 2009).

Evidence suggests that families may need increased time and experience within the EI service system before being able to take on an active role in the treatment process. Families that do become actively involved may perceive push-back from the therapists, feel ignored, view

their contribution to the decision-making process as tokenistic, feel that they were not taken seriously, or consider the effort to assert themselves as a "waste of time" (Knox, 2000). Families may also feel reluctant to actively engage in the EI process due to limited knowledge of the service system, stress experienced as a result of high demands of services, lack of clear expectations related to their level of involvement, belief that their child may benefit less as a result of their involvement, or reluctance to take on an additional role outside of parenting (Bamm & Rosenbaum, 2008; James & Chard, 2010; Leiter, 2004; MacKean et al., 2005).

From the therapist standpoint, the therapists' ability to effectively implement family-centered approaches may be influenced by existing assumptions that the therapist is already practicing in a family-centered manner, feelings of threat, or a certain level of comfort and satisfaction with an authoritarian status that comes along with a traditional, child-centered, approach. A significant proportion of therapists have been shown to have firmly held attitudes that may make them resistant to shifting their clinical practice toward a family-centered service model (Campbell & Sawyer, 2009). It is possible that rather than critically reflecting on the family's desired level of engagement in the process of care, therapists may be pre-defining family roles according to their assumptions of what ideal family involvement in EI should look like. MacKean et al. (2005) summarized this discrepancy between recommended practices and their implementation by writing:

> Family-centered care is beginning to sound like something that is being defined by experts and then carried out to families, which is ironic given that the concept of family-centered care emerged from a strong family advocacy movement (p. 81).

Therapists may also not be well prepared to deliver recommended practices supported by IDEA Part C (2004) and DEC (2014). Family and therapist perspectives on therapists' confidence (i.e., ease with which the practitioners performed the practices) and competence (i.e.,

ability to do specific intervention practices) in delivering recommended EI practices suggests that therapists may be more confident than competent across all five domains of practice; particularly in relation to delivery of family-centered care (Bruder & Dunst, 2015; Bruder, Dunst, & Mogro-Wilson, 2011). Several interpersonal and system-level barriers to implementing effective family-centered intervention have been identified in pediatrics (Bamm & Rosenbaum, 2008; Bruder, 2010; Kuo et al., 2012; Turnbull et al., 2007).

a. **Interpersonal and Communication Barriers**

Evidence suggests that the therapist's interpersonal competence and ability to effectively communicate with families may be one of the most significant forces behind the effective translation of family-centered theory into clinical practice. A growing body of literature suggests that family-therapist interpersonal interactions continue to be limited in both quantity and quality. As such, interpersonal strategies used by therapists may not encompass the full breadth of approaches that are necessary to support both relational- and capacity-building practices in EI. A study by Friedman, Woods, and Salisbury (2012) found that family-therapist interactions were often one-sided, with the therapist either offering families recommendations or responding to questions posed by family members without follow-up. Even when families are participating and engaged in the treatment session, therapists may rely more on proximal coaching strategies (demonstration, direct teaching) as compared to distal coaching strategies that intentionally redistribute the power from the therapist to the family (guided practice with feedback, problem-solving) (Salisbury, Woods, & Copeland, 2010).

The most commonly reported types of family-therapist interactions in EI include information sharing through conversation, modeling, and joint interaction with the child (Barton & Fettig, 2013; Colyvas, Sawyer, & Campbell, 2010; Friedman et al., 2012; Salisbury et al.,

2010). Research suggests that problem-solving, reflection, and practice with feedback, are used infrequently in EI even when services are carried out in a manner that is generally consistent with family-centered service model (Barton & Fettig, 2013; Colyvas et al., 2010; Friedman et al., 2012; Salisbury et al., 2010). Instances of problem-solving have been previously reported to occur in less than 1% of family-therapist interactions (Friedman et al., 2012; Salisbury et al., 2010). Low rates of guided reflection and problem-solving are particularly concerning given that these practices have been linked to family empowerment and engagement.

While a significant number of therapists may be over-relying on direct teaching and direct instruction approaches in their interactions with families, others may focus the majority of their time on interacting directly with the child. A study conducted by Sawyer and Campbell (2012), found that while 66% of therapists agreed that the majority of caregivers were interested in being taught, 41% taught a new strategy every session and only 22% spent more time teaching caregivers as compared to working with children. Additionally, a significant number of therapists (34%) felt that caregivers learned as much from watching as they did from doing (Sawyer & Campbell, 2012), which is largely inconsistent with the vast amount of evidence on the importance of adult learning and family capacity-building practices in EI. Consistently, Dunst et al. (2014) found that only 29% of families reported being involved in a manner that promoted their ability to apply strategies outside of intervention, 25% reported receiving demonstration, 21% reported receiving an explanation, 24% reported observation, and 1% reported not being present during sessions.

The inconsistencies in recommended and actual communication approaches used by EI therapists may point to a more significant issue related to the therapists' ability to communicate and work with parents and caregivers effectively. More specifically, therapists may experience

challenges in interacting with families in a flexible manner that goes beyond direct teaching and modeling of therapist-child interaction. Furthermore, these findings highlight the lack of clarity related to how family-centered practices are translated into practice and the quality of therapist-parent interactions in EI.

b. **Systemic Barriers**

In addition to the possibility of interpersonal and communication barriers, a number of system-level barriers have been identified in EI, including: challenges related to the vast complexity of child and family needs, challenges related to interdisciplinary collaboration, lack of consistency in implementation of recommended practices, and lack of high quality professional development (Bruder, 2010). Implementation of family-centered care requires a culture shift and a significant investment of resources in the initial stages of change. While in the long-term family-centered practices are expected to be a cost-saving strategy, it is difficult for organizations and individuals to devote already limited resources toward something that may, or may not, benefit them in the future (Bamm & Rosenbaum, 2008; Bruder, 2010). At this time, there is limited funding that is explicitly devoted toward implementation of family-centered care, and reimbursement schedules may not correctly account for the time that the therapist should be spending to provide an intervention that is consistent with recommended practices (Kuo et al., 2012).

Supports and services that are strictly dedicated to promoting family outcomes remain limited and are rarely investigated in research (G. King, Williams, & Hahn Goldberg, 2017; Turnbull et al., 2007). Furthermore, a growing body of evidence highlights a lack of sufficient pre-service (Bruder & Dunst, 2005) and in-service (Campbell, Chiarello, Wilcox, & Milbourne, 2009) training in recommended EI practices (Bamm & Rosenbaum, 2008; Bruder, 2010; Espe-

Sherwindt, 2008). Furthermore, the efficacy and the impact of existing professional development opportunities that have been established to promote therapists' competencies associated with family-centered approaches in EI are not systematically examined through research (Campbell & Sawyer, 2009). It is possible that therapists are not well prepared to deliver recommended practices established by IDEA Part C (2004) and DEC (2014); and thus, may not be able to provide the support and services necessary to promote active family engagement despite their best intentions to do so. In an attempt to address this barrier to family engagement and implementation of family-centered practices, there has been a call to integrate more opportunities for professional development (Bamm & Rosenbaum, 2008; Bruder, 2010) and increase in emphasis on interprofessional and team-based learning in order to advance shared competencies for EI therapists (Catalino, Chiarello, Long, & Weaver, 2015).

C. Statement of the Problem

Dunst and Bruder (2002) posed a question of whether IDEA Part C made an "overpromise" related to what can be expected from the EI system of care. Existing literature on the process and outcomes of EI suggests that while EI does have a positive impact on children and families, there continues to be room for improvement related to the delivery of family-centered care. Parent-therapist communication is a critical component of family-centered care from both relationship- and capacity-building perspectives, and it can be hypothesized that the discrepancy between family-centered theory and practice is a result of 1) a lack of operational definitions for effective interpersonal approaches in practice, and 2) limited use of valid and reliable means of evaluating therapist-parent-child interactions that could support critical self-awareness and reflexivity in EI therapists. A critical examination of the existing gaps between

actual and recommended practices can support reflective dialogue between the stakeholders in the EI system of care, including families, therapists, researchers, and leadership.

D. Purpose of the Study

The purpose of this study is to explore the role of therapist-parent communication, family-centered practices, and family engagement in EI using the IRM (Taylor, 2008) lens. The IRM offers an integrated model for examining the client-therapist relationship, is generalizable across rehabilitation settings, and applies to a diverse group of therapists and clients. The IRM recognizes that the interpersonal dynamics within the therapist-parent-child triad has the power to enable or inhibit parent and child participation in the treatment process. To develop and maintain supportive therapeutic interactions, the IRM stresses the importance of the therapist's competency in responding to a parent's or a child's needs with flexibility and intentionality. To effectively match their communication to the unique needs of the client and the situation, the therapist must remain critically aware of the client's interpersonal characteristics, preferences, and needs.

According to the IRM, therapeutic communication falls within one of six therapeutic modes: advocating, collaborating, empathizing, encouraging, instructing, or problem-solving (Taylor, 2008). Further discussion of each of these modes is presented in Chapter II. The IRM recognizes that each mode comes with a unique set of strengths and challenges, and offers strategies for maximizing the therapeutic potential of mode delivery. Specifically, the IRM stresses the importance of communicating within each mode in a manner that is: emotionally congruent, matched to the interpersonal characteristics and preferences of the client, and delivered in a pure and flexible manner.

Despite the relevance and potential for the clinical utility of the IRM as a framework for evaluating relationship- and capacity-building practices in EI, such research has not been carried out to date. Two studies are proposed to explore the role of therapist-parent communication on the implementation of family-centered care and the promotion of family engagement in EI:

- Study I: An exploratory, descriptive study of therapists' and parents':

  a) EI self-efficacy and previous EI experience and training;

  b) Perspectives on parents' participation, therapists' use of family-centered practices, and therapists' therapeutic communication and sub-optimal interaction (as defined by the IRM).

- Study II: A pilot descriptive study of the feasibility, acceptability, and preliminary effectiveness of an IRM-based curriculum for a combined audience of therapists and parents in EI.

The objectives, research questions, and associated hypotheses for Study I and Study II are presented in Table I and Table II (respectively).

TABLE I

STUDY I: RESEARCH QUESTIONS

Study I: Objective 1
From the therapists' and parents' perspectives in Early Intervention (EI), to describe: 1) EI self-efficacy; 2) Previous EI experience, and; 3) Previous EI training.
Research Questions
1.1 What do therapists report in regard to their EI self-efficacy, previous EI experience, and EI training?
1.2 What is the association between therapists' EI self-efficacy, previous EI experience, and EI training?
1.3 Is there a difference in the therapists' self-reported EI self-efficacy, previous EI experience, and EI training according to a professional group (developmental, occupational, physical, and speech therapy)?
1.4 What do parents report in regard to their EI self-efficacy, previous EI experience, and EI training?
1.5 What is the association between parents' self-reported EI self-efficacy, previous EI experience, and EI training?

TABLE I (continued)
STUDY I: RESEARCH QUESTIONS

Study I: Objective 2
From the therapists' and parents' perspectives in EI, to describe: 1) Parents' participation in EI; 2) Therapists' use of family-centered practices, and; 3) Therapists' use of therapeutic communication and sub-optimal interaction (as defined by the IRM).
Research Questions
2.1 What is the frequency of parents' participation in EI from the therapist and parent perspectives?
2.2 How do therapist and parent perspectives on parents' participation compare in EI?
2.3 What is the frequency of therapists' use of family-centered practices in EI from therapist and parent perspectives?
2.4 How do therapist, and parent perspective on therapists' use of family-centered practices compare in EI?
2.5 What is the frequency of therapists' use of therapeutic communication and sub-optimal interaction in EI from therapist and parent perspectives?
2.6 How do therapist and parent perspectives on therapists' use of therapeutic communication and sub-optimal interaction compare in EI?

TABLE I (continued)
STUDY I: RESEARCH QUESTIONS

Study I: Objective 3

From the therapists' perspective in EI, to describe the association between:

1) Therapists' professional background;
2) Therapists' self-efficacy;
3) Parents' participation;
4) Therapists' use of family-centered practices, and;
5) Therapists' use of therapeutic communication and sub-optimal interaction.

Research Questions

3.1 What is the strength of association between therapists' professional background, self-efficacy, and perception of:

1) Parents' participation;
2) Therapists' use of family-centered practices, and;
3) Therapists' use of therapeutic communication and sub-optimal interaction?

Secondary research questions:

3.2 Is the therapists' perception of parents' participation significantly predicted by:

1) Therapists' professional background;
2) Therapists' self-efficacy;
3) Therapists' use of family-centered practices, and;
4) Therapists' use of therapeutic communication and sub-optimal interaction?

3.3 Is the therapist's perception of their ability to use family-centered practices significantly predicted by:

1) Therapists' professional background;
2) Therapists' self-efficacy, and;
3) Therapists' use of therapeutic communication and sub-optimal interaction?

3.4 Is the therapist's perception of their ability to use therapeutic communication and sub-optimal interaction significantly predicted by:

1) Therapists' professional background, and;
2) Therapists' self-efficacy?

TABLE I (continued)
STUDY I: RESEARCH QUESTIONS

Study I: Objective 4
From the parents' perspective in EI, to describe the association between: 1) Parents' background; 2) Parents' self-efficacy; 3) Parents' participation; 4) Therapists' use of family-centered practices, and; 5) Therapists' use of therapeutic communication and sub-optimal interaction.
4.1 What is the strength of association between the parents' background, self-efficacy, and perception of: 1) Participation; 2) Therapists' use of family-centered practices, and; 3) Therapists' use of therapeutic communication and sub-optimal interaction.

TABLE II

STUDY II: RESEARCH QUESTIONS AND ASSOCIATED HYPOTHESES

Study II: Objective 1	
From therapists' and parents' perspectives, to explore the feasibility of delivering a five-week, IRM-based curriculum for a combined audience of therapists and parents in EI.	
Research Question	**Research Hypotheses**
1.1 What is the demand for the proposed curriculum, as evidenced by the rate of recruitment, retention, attendance, participation, and assignment completion, from therapists in EI?	Not specified due to the exploratory nature of the research questions.
1.2 What is the demand for the proposed curriculum, as evidenced by the rate of recruitment, retention, attendance, participation, and assignment completion, from parents in EI?	
Study II: Objective 2	
From the therapist and parent perspectives, to explore the acceptability of a five-week, IRM-based curriculum for a combined audience of therapists and parents in EI.	
Research Question	**Research Hypotheses**
2.1 What is the participants' satisfaction with the course content, as evidenced by participants' feedback in the final course evaluation and follow-up interviews?	Not specified due to the exploratory nature of the research questions.
2.2 What is the participants' satisfaction with the course structure, as evidenced by participants' feedback in the final course evaluation and follow-up interviews?	
2.3 What is the participants' satisfaction with the course relevance, as evidenced by participants' feedback in the final course evaluation and follow-up interviews?	

TABLE II (continued)
STUDY II: RESEARCH QUESTIONS AND ASSOCIATED HYPOTHESES

Study II: Objective 3

From the therapist perspective, to evaluate the preliminary effects of a five-week, IRM-based curriculum for a combined audience of therapists and parents in EI.

Research Question	Research Hypotheses
3.1 Following course completion, do therapists demonstrate a significant change in their responses to surveys that evaluate: 1) Perceived self-efficacy; 2) Perceived parent participation; 3) Perceived use of family-centered practices, and; 4) Perceived use of therapeutic communication and sub-optimal interaction?	**3.1.1** At the end of the five-week curriculum, participants will demonstrate a statistically significant increase in perceived self-efficacy, parent participation, use of family-centered practices, and use of therapeutic communication. **3.1.2** At the end of the five-week curriculum, participants will demonstrate a statistically significant decrease in perceived use of sub-optimal interaction.
3.2 Following course completion, do therapists demonstrate a significant change in their ability to use interpersonal reasoning in their reflections on: 1) Their clinical practice during take-home assignments, and; 2) Clinical practice of another clinician during an in-class video reflection assignment?	**3.2.1** At the end of the five-week curriculum, participants will demonstrate an increased ability to use interpersonal reasoning in their reflections on their own and other's clinical practice as evidenced by: 1) Increased emphasis on interpersonal (as opposed to activity) aspects of the interaction with a client, and; 2) Increased use of IRM-based terminology.
3.3 As therapists reflect upon their experience of the course during the follow-up interview, what are the main themes related to their overall experience? What are the main themes related to their: 1) Interpersonal knowledge; 2) Interpersonal awareness; 3) Interpersonal reflexivity, or; 4) Interpersonal behavior?	**3.3.1** Not specified due to the exploratory nature of the research question.

TABLE II (continued)
STUDY II: RESEARCH QUESTIONS AND ASSOCIATED HYPOTHESES

Study II: Objective 4	
From the parent perspective, to evaluate the preliminary effects of a five-week, IRM-based curriculum for a combined audience of therapists and parents in EI.	
Research Question	**Research Hypotheses**
4.1 Following course completion, do parents demonstrate a significant change in their responses to surveys that evaluate: 1) Perceived self-efficacy; and 2) Perceived participation?	**4.1.1** At the end of the five-week curriculum, participants will demonstrate a statistically significant increase in perceived self-efficacy and participation.
4.2 Following course completion, do parents demonstrate a significant change in their ability to use interpersonal reasoning in their reflections on: 1) Their interactions with their child during take-home assignments, and; 2) The therapist-parent interaction during an in-class video reflection assignment?	**4.2.1** At the end of the five-week curriculum, participants will demonstrate an increased ability to use interpersonal reasoning in their reflections on their own and other's interactions as evidenced by: 1) Increased emphasis on interpersonal (as opposed to activity) aspects of the interaction, and; 2) Increased use of IRM-based terminology.
4.3 As parents reflect upon their experience of the course during the follow-up interview, what are the main themes related to their overall experience? What are the main themes related to their: 1) Interpersonal knowledge; 2) Interpersonal awareness; 3) Interpersonal reflexivity, or; 4) Interpersonal behavior?	**4.3.1** Not specified due to the exploratory nature of the research question.

II. CONCEPTUAL FRAMEWORKS AND RELATED LITERATURE

The proposed research questions and research design was guided by the: Developmental Systems Approach (DSA) model (Guralnick, 2005), International Classification of Functioning, Disability, and Health for Children and Youth (ICF-CY) (World Health Organization, 2001), Intentional Relationship Model (IRM) (Taylor, 2008), and two adult learning theories (social and transformative learning). Additionally, in light of the growing emphasis on coaching, and support and services that specifically target family outcomes in EI, a comprehensive literature review was conducted on evidence-based practice recommendations related to coaching and family-centered services that go beyond one-on-one intervention in pediatric rehabilitation and EI.

A. Theoretical Frameworks

The overlay of the theoretical frameworks informing research questions and research design is depicted in Figure 3.

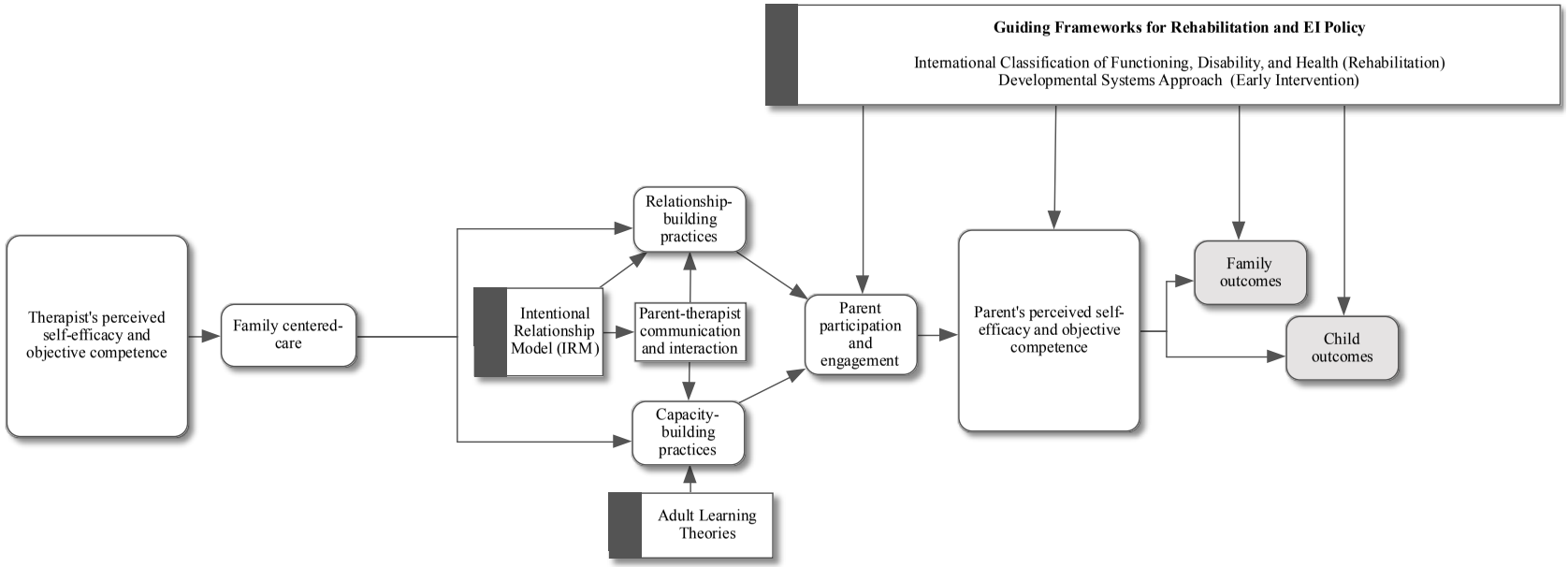

Figure 3. Theoretical frameworks informing research questions and research design.

The DSA and the ICF-CY were selected as the guiding frameworks for understanding the expected process and outcomes of EI. Provided that both the DSA and ICF-CY are conceptual frameworks that do not provide specific guidance on how to carry out the recommended strategies in practice, the IRM and adult learning theories were selected to clarify specific components of relationship- and capacity-based practices in EI. The IRM was selected to inform theoretically grounded strategies for 1) establishing and maintaining therapeutic relationships within the therapist-parent-child triad, and 2) promoting effective therapist-parent-child communication and interaction necessary for the delivery of family-centered care from a relationship- and capacity-building perspectives. The adult learning theories (specifically social and transformative learning theories) were selected to inform theoretically grounded strategies for supporting capacity-building practices within the scope of working with families in EI from both family-coaching and professional training perspectives.

1. **Developmental Systems Approach**

The DSA is a theoretical model that guides systems-level program design and evaluation approaches in EI. The model stresses the importance of family-centered care as the means of supporting positive child-family interactions and child development (Guralnick, 2005). The DSA recognizes that family systems are complex and multidimensional, and proposes that child development influences, and is influenced by, the patterns of family interactions, which are in turn impacted by the availability of family resources (Guralnick, 2011). Research suggests that while families do adjust to the needs of the child, a child's disability can be a significant stressor on the child-family interactions (particularly during the first three years of life) which can be further exacerbated by increased family stress and limited social supports (Guralnick, 2017).

Thus, in order to best support positive child and family outcomes, the EI system must support not only positive child-family interactions but also ensure sufficient family support and resources.

2. International Classification of Functioning, Disability, and Health

The ICF (World Health Organization, 2001) and the ICF-CY (World Health Organization, 2007), stress that individual's health influences, and is influenced by 1) body structure and function, 2) activity, 3) participation, 4) environmental factors, and 5) personal factors (Hwang et al., 2014; World Health Organization, 2001, 2007). The ICF and the ICF-CY recognize the importance of contextual influences on the child's developmental capacities, functional task performance, and participation in everyday life activities. Consistent with the assumptions of the DSA, the ICF and the ICF-CY propose that rehabilitation professionals can ensure positive child outcomes by supporting positive child-family interactions (i.e., activity and participation domains) and ensuring that the family has access to necessary support and resources (i.e., environmental domain). The conceptual overlap between the DSA and the ICF-CY models is illustrated in Figure 4.

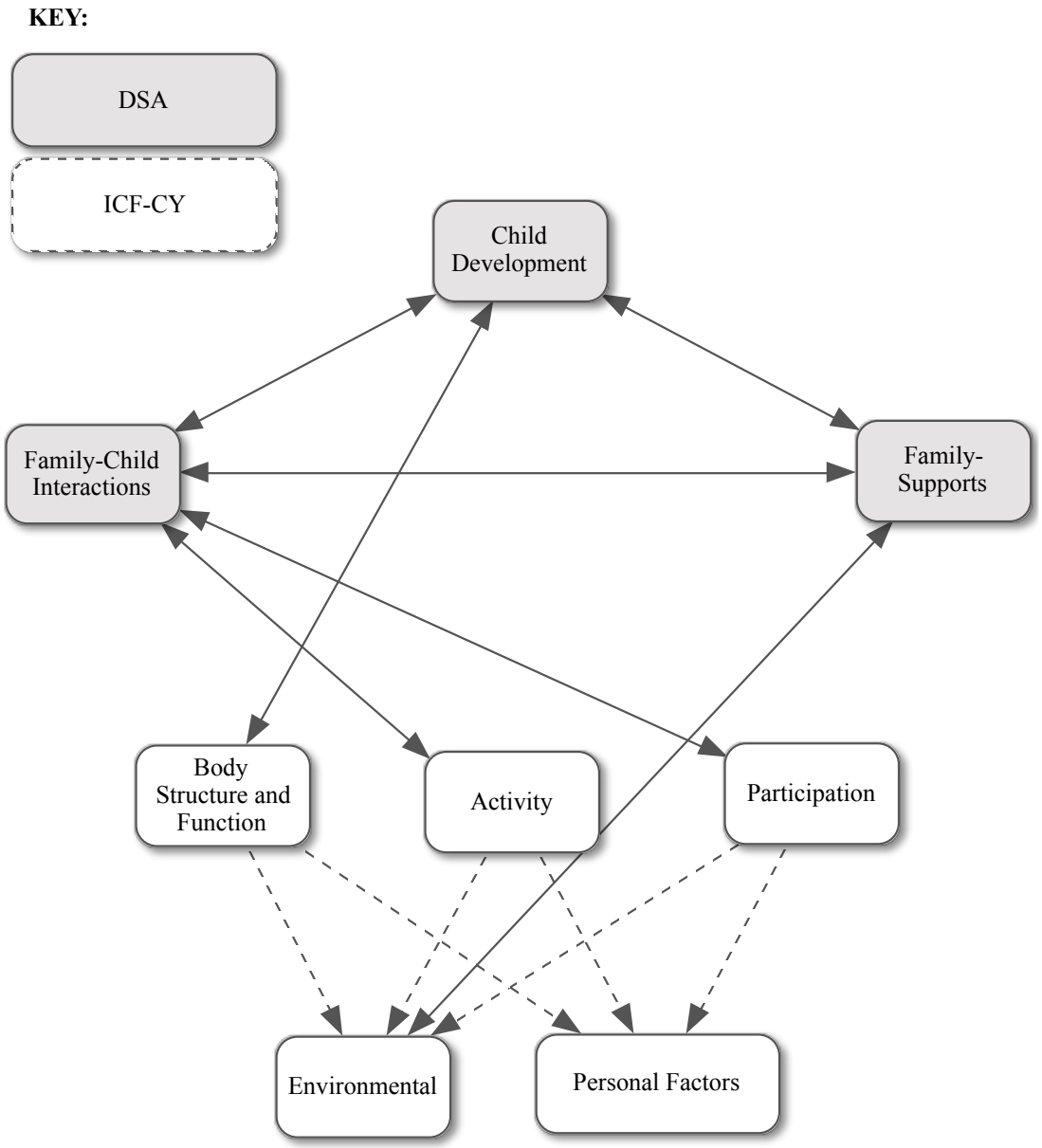

Figure 4. The conceptual overlap between theoretical models.

3. Intentional Relationship Model

The IRM was designed with a specific aim to strengthen therapists' interpersonal skill base and critical self-awareness of interpersonal aspects of rehabilitation (Taylor, 2008). The model offers a series of strategies and recommendations that can be used to guide critical self-awareness and interpersonal reasoning within the therapeutic process (Friedman et al., 2012); and stresses that therapeutic use of self "is a skill that must be developed, reinforced, monitored, and refined" (Taylor, 2008, p. 45). The IRM has been recognized as the primary guiding model for therapeutic use of self in occupational therapy, with a growing body of evidence in support for the use of this model to help bridge the gap between the evidence and practice on therapeutic use of self in occupational therapy (Fan & Taylor, 2016; Gorenberg, 2013; Popova et al., 2019; Popova & Taylor, 2019; Solman & Clouston, 2016).

The IRM defines the therapeutic relationship as a dynamic interaction between the: 1) client's interpersonal characteristics and preferences, 2) therapist's interpersonal skill base and clinical reasoning, 3) inevitable (or naturally occurring) interpersonal events, and 4) client's engagement in occupations (or therapeutic activities) (Taylor, 2008). The IRM places the client's experience and needs at the forefront by stressing that the client is the only person within the therapeutic relationship that can determine its success (Taylor, 2008). While the client defines what a successful relationship looks like, it is the therapist who is solely responsible for ensuring that an effective therapeutic relationship is developed and maintained over time (Taylor, 2008). As such, the therapist is responsible for developing a robust interpersonal understanding of the client's enduring (interpersonal tendencies that are typical for the client across a variety of situations) and situational characteristics (an acute reaction to a situation that is not typical of

how the client generally interacts with others), such as: communication style, need for control, ability to receive and provide feedback (Taylor, 2008).

In addition, the therapist is expected to continuously grow their interpersonal competence, including effective use of interpersonal skills (rapport building, therapeutic communication, strategic questioning, etc.) and ability to apply the interpersonal reasoning process, illustrated in Figure 5 (Taylor, 2008).

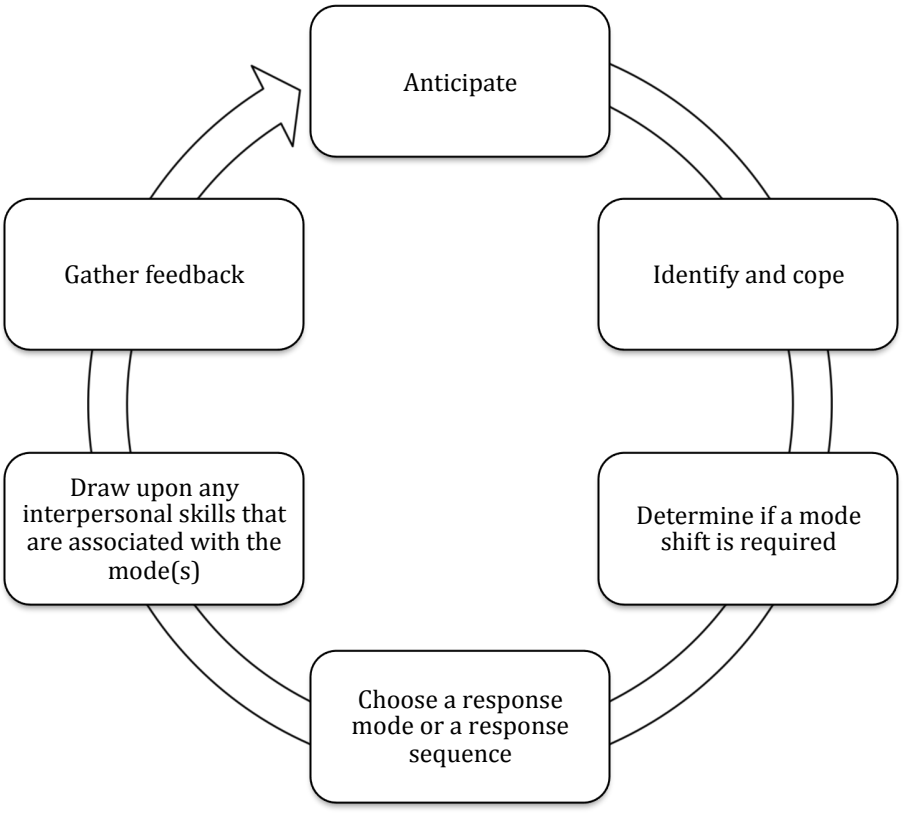

Figure 5. Interpersonal reasoning process.

TABLE III

THERAPEUTIC COMMUNICATION MODES

Mode	Definition	Example of Mode Use in Early Intervention (EI)
Advocating	Working with the client on overcoming physical, social, and environmental barriers that they may encounter; supporting the client's access to resources and services; normalizing the client's experience.	• Ensuring that the parent is aware of their, and their child's, full rights and protections under IDEA Part C • Supporting the child's access to available services and supports through the EI and in the community • Introducing the child's parents to peer, support groups,
Collaborating	Letting go of control and supporting the client's autonomy and independence in the decision-making process; ensuring that the client has an active role throughout the treatment process.	• Supporting the parent's goals for treatment of care • Providing the child with opportunities to make independent choices and following the child's lead during play • Ensuring that the parent's choices and requests are adhered to
Empathizing	Understanding and validating the client's physical, psychological, and emotional experience through the use of summary statements and empathic listening.	• Listening to the parent's concerns and asking enrichment questions • Striving to understand the child's lived experience through observation • Validating the parent's experience using summary statements
Encouraging	Fostering hope; rewarding the client through positive reinforcement.	• Providing social praise or a tangible reward to the child • Supporting the parent's hope for the best possible outcomes • Encouraging the parent to continue practicing therapeutic strategies outside of sessions
Instructing	Taking on the role of an expert guide or a teacher; establishing direction and structure; providing clear feedback on the client's performance.	• Teaching the parent strategies for engaging the child during play • Setting limits and clear expectations in response to the child's challenging behavior • Providing the parent with constructive feedback related to the implementation of the home program
Problem-Solving	Using logic to facilitate problem-solving and analytic reasoning; using strategic questioning; outlining the options available to the client as well as any potential outcomes of actions.	• "Wondering" with the parent about the best possible steps and actions to support positive child outcomes • Discussing the benefits and challenges associated with school-based and outpatient services upon the child's discharge from EI • Asking the child strategic questions in order to promote their ability to problem-solve through activity or a game

a. Therapeutic Communication Modes

To support the interpersonal reasoning process, the IRM proposes that the therapist should be competent in the pure and flexible use of the six therapeutic communication modes (referred to as "modes"): advocating, collaborating, empathizing, encouraging, instructing, and problem-solving (Taylor, 2008). Definitions and examples of the IRM mode use in EI context are presented in Table III.

Intentional use of the modes is particularly crucial during inevitable interpersonal events (Taylor, 2008). The IRM defines "inevitable interpersonal events" as emotionally charged, or otherwise challenging, moments that emerge naturally during rehabilitation and have the power to strengthen, or damage, the therapeutic relationship depending on how they are responded to by the therapist (Taylor, 2008). A therapist who can use a variety of modes effectively is considered as having a multimodal interpersonal style by the IRM (Taylor, 2008). A core objective of the IRM is to support the therapist in being able to identify and expand the number of modes that they can use in practice comfortably.

The modes can be delivered through verbal or non-verbal means, and the IRM stresses that each mode has the potential of being experienced as therapeutic by the client as long the mode is used in a manner that is guided by the needs and preferences of the individual client rather than those of the therapist (Taylor, 2008). As such, different circumstances within a therapeutic interaction may call for mode shifts (i.e., an intentional change of modes based on the needs of the client in a given situation) (Taylor, 2008). Three different types of communication barriers can prevent therapists from communicating in an intentional and therapeutic manner including: mode incongruence (the mode is perceived as insincere by the client), mixed-mode use (blending of modes in a way that creates confusion as to what message is being

communicated to the client), and mode mismatch (the mode is not well matched to the needs of the client) (Taylor, 2008).

The notion of the six therapeutic communication modes proposed by the IRM has been supported by descriptive (Bonsaksen, 2013; Taylor, Lee, & Kielhofner, 2011; Yazdani, Carstensen, & Bonsaksen, 2017) and psychometric research (Fan & Taylor, 2016; Popova et al., 2019). Furthermore, the model descriptions are consistent with therapists' communication styles described in EI literature (Barton & Fettig, 2013; Colyvas et al., 2010; Friedman et al., 2012; Salisbury et al., 2010). However, the unique contribution of each of the six modes to a more general construct of "therapeutic use of self" has been challenged. Holmqvist et al. (2013), for example, used the Delphi method to examine how therapeutic use of self was defined by Swedish occupational therapists that worked with individuals with cognitive impairments. While the therapists agreed that collaborating, empathizing, and encouraging forms of communication was essential to the therapeutic use of self, this was not the case for communication that encompassed instructing, problem-solving, and advocating (Holmqvist et al., 2013). The reason for this finding is unclear and was not examined at length in the study. As such, additional research in this area is warranted.

b. **Evaluating Therapist-Client Communication**

Three tools grounded in the IRM have been developed for use in education and clinical practice: Self-Assessment of Modes Questionnaire (SAMQ), Clinical Assessment of Modes (CAM), and Clinical Assessment of Sub-optimal Interaction. The SAMQ (Taylor, 2008; Taylor et al., n.d.) was developed as a teaching tool that could be used to support therapists' self-reflection on preferred mode use based on individual responses to clinical vignettes that describe interpersonal situations in occupational therapy. In addition to the original English version, the

Norwegian translation is available (Bonsaksen, Kvarsnes, Eirum, Torgrimsen, & Hussain, 2016) and has been used in recently published IRM research. Research examining mode preferences of students in Norway, for example, found that students may be most consistently drawn toward the problem-solving mode (Bonsaksen, 2013; Yazdani et al., 2017).

The CAM (Fan & Taylor, 2016; Popova et al., 2019), a measure of therapeutic mode use, and the CASI (Popova & Taylor, 2019), a measure of sub-optimal interaction that may damage or otherwise hinder the therapeutic relationship, have been developed for evaluating therapist's communication during a clinical interaction. The CAM and the CASI have been used to explore the association between therapists' communication and clients' participation in adult inpatient and acute rehabilitation (manuscript in preparation) and pediatric outpatient rehabilitation (manuscript in preparation). In addition, the CAM has been used in entry-level occupational therapy education to examine the student and instructor perspectives on student's mode use in the classroom (manuscript in preparation).

Provided that the CAM and the CASI are theoretically grounded in the IRM, both assessments can be used to guide critical self-reflection on the frequency of therapeutic and sub-optimal communication within a therapist-client interaction. These tools may be particularly effective in the instances where the therapist experiences an interpersonal challenge while attempting to establish a therapeutic relationship with a client. The process of assessment completion can support a systematic approach to evaluating positive and negative aspects of therapist-client interaction. Furthermore, the assessment results can shed light on the therapists' interpersonal strengths as well as areas in need of ongoing professional development. Additional details on the CAM and the CASI are presented in Chapter III.

c. Interpersonal Contributors to Client Engagement

The IRM views the therapeutic relationship as a process that: 1) supports the client's engagement, and 2) provides a space where the client's emotional reactions in response to the therapeutic process can be addressed (Taylor, 2008). The IRM views client- and family-centeredness as an outcome in and of itself. While IRM acknowledges that client- and family-centeredness could indirectly enable the potential for engagement, increasing the client's engagement is not seen as the ultimate goal of the IRM. In fact, Taylor (2008) emphasizes that "if a therapist utilized only this model, the essential work of…therapy would not occur" (p. 47) and the IRM should be used to complement other strategies that are directly targeted at facilitating positive client outcomes and active engagement in rehabilitation.

The IRM places a strong emphasis on the therapist's responsibility over the positive and the negative inevitable interpersonal events that occur in therapy, and proposes that the therapist's ability to adapt their interpersonal approach to the individual needs of the client can facilitate, or hinder, the client's ability to engage in therapy (Taylor, 2008). The IRM stresses that to ensure that the therapeutic relationship is successful, the therapist should be critically aware of the interpersonal events that occur in therapy, their interpersonal approach, and the client's response (Taylor, 2008). In addition to supporting therapeutic responding, increased self-awareness through the use of the interpersonal reasoning process can ensure that the therapist can effectively manage any inherent tendencies toward non-therapeutic behavior and sub-optimal interaction (Taylor, 2008).

The IRM recognizes the importance of social systems (such as the family and caregivers of a child receiving EI services), and stresses that as the number of people within an interaction increases, the therapist must become more intentional in their communication due to the higher

likelihood on an interpersonal event occurring (Taylor, 2008). To sustain intentionality within the therapeutic relationship, the therapist must be intimately aware of the unique dynamics of the family. The therapist must also recognize that the members of the family (child, parents, siblings, etc.) are intimately connected (i.e., a change in one person's emotional state is likely to lead to a change in an emotional state of another). For example, a child showing a high level of excitement in therapy may motivate their parents to be more actively present in the session. As such, the therapist must be critically aware of the interpersonal dynamics of the client's relationships with others and be able to distinguish between adaptive (trust, collaboration, problem-solving) and maladaptive (dominance, disengagement, manipulation, helplessness, scapegoating) dynamics that may exist within a family (Taylor, 2008).

d. **Intentional Relationship Model in Professional Education**

Research on integrating the IRM into professional education is promising but limited. Student exposure to the IRM as part of entry-level occupational therapy education has been shown to support students self-efficacy related to their ability to effectively: 1) use the six communication modes, 2) recognize client's interpersonal characteristics, and 3) respond to interpersonal events in practice (Hussain, Carstensen, Yazdani, Ellingham, & Bonsaksen, 2018). Additionally, the IRM has been used to support professional development in pediatric occupational therapists and showed promising results in improving participants knowledge of therapeutic communication and improved working alliance with challenging pediatric clients (Gorenberg, 2013). Two additional studies are in progress and examining student's use of therapeutic communication modes and the development of interpersonal reasoning in a sample of entry-level Masters students in occupational therapy (manuscript in preparation).

4. Adult Learning Theories

Recommendations for supporting family capacity and empowerment in EI are consistent with the core principles of adult learning theory (Friedman et al., 2012), particularly social and transformative learning theories. These findings are not surprising, keeping in mind that to effectively work with families, EI therapists must be confident and competent in their ability to work and collaborate with other adults.

Knowles (1973) proposed six assumptions behind adult learning:

1. Adults learners are self-directed;
2. Role of the teacher is to engage the learner in the process of inquiry, analysis and problem-solving;
3. Life experience is a rich resource for adult learning; engagement, problem-solving, and analysis within real-life situations should be a core teaching methodology;
4. Adults are intimately aware of their learning needs particularly when related to valuable real-life events (e.g., parenting);
5. Self-identified goals and interests should be the starting point for any ongoing learning; and,
6. Adults are competency-based learners and learn best when new knowledge can be applied pragmatically to their immediate life situation (i.e., life and work-related situations offer a more appropriate context for adult learning as compared to academic or theoretical approaches).

a. Social Learning

Social learning (learning from others) is a powerful approach toward working with adults and fits well within the current model of EI practice. One social learning

approach that has been heavily influenced by Vygotsky's (1978) theory of learning is cognitive apprenticeship (Dennen & Burner, 2008). Vygotsky (1978) proposed that learning takes place within a "zone of proximal development" (commonly referred to as a "ZPD"), which is a space between the current zone of independent performance and potential performance that can be achieved with guidance from a more competent other (peer or coach). The ZPD can be leveraged to support the learner by breaking down new knowledge and skills into smaller subcomponents that are within the learner's ability level (Dennen & Burner, 2008).

Scaffolding, or the level of assistance that is needed for the student's ultimate success, is an essential aspect of learning and is closely linked to the concept of the ZPD. Some examples of scaffolding that can be used by therapists and parents in EI include direct instruction, questioning, modeling, cognitive structuring, feedback, and contingency management (Dennen & Burner, 2008). Certain types of scaffolding may be easier to observe than others, with more subtle forms of scaffolding, including monitoring, guiding questions, and outlining options (Dennen & Burner, 2008). Scaffolding can be thought of as a scaffold with fading, or permanent scaffolding for performance (Dennen & Burner, 2008). In the instances where the ultimate aim of the intervention is capacity-building, development of a concrete plan for fading of scaffolding is essential for ensuring that the learner can achieve confidence and competence within a given task once the support system is taken away (Dennen & Burner, 2008).

Consistent with social learning theory, it is assumed that a person cannot engage in cognitive apprenticeship on their own, and the learning process is heavily dependent on the availability of appropriate coaching and modeling from a more competent other (Dennen & Burner, 2008). Three features of cognitive apprenticeship include (Dennen & Burner, 2008):

1. Situated learning – i.e., active learning that occurs in an authentic context or activity;
2. Legitimate peripheral participation – i.e., validation of observation as a valid learning experience, and;
3. Guided participation – i.e., the ability to practice the skills within the learners ZPD.

To maintain intentionality, teaching and learning through cognitive apprenticeship requires that the teacher is competent in their ability to: 1) model through demonstration, 2) coach by assisting and supporting the learner through scaffolding, 3) reflect through self-analysis and evaluation, 4) articulate or verbalize their findings from the reflection and, 5) explore, formulate, and test self-formulated hypotheses (Collins, Brown, & Newman, 1989). On the other hand, the role of the learner is to engage in observation, practice, and reflection with support from the teacher (Collins et al., 1989). As such, cognitive apprenticeship can be thought of as a collaborative process that requires the teacher to be: 1) critically aware of the learner's needs, and 2) able to adjust their communication to the unique needs and preferences of the learner.

b. **Transformative Learning**

Another approach that is consistent with the current push toward family capacity-building and empowerment in EI is based on Mezirow's transformative learning theory (Kitchenham, 2008). Transformative learning theory places a strong emphasis on changing existing beliefs through critical reflection and discourse (Kitchenham, 2008; Phillippi, 2010). Mezirow (1991) proposed an eleven-phase process for transformative learning, including:

1. A disorienting dilemma
2. Self-examination
3. Critical assessment of assumptions
4. Recognition of discontent and identification with similar others

5. Exploration of new options
6. Planning
7. Acquiring knowledge for plans
8. Experimenting with new roles
9. Building confidence
10. Reintegration
11. Negotiation of relationships

Critical reflection is considered to be an essential component for perspective transformation and behavioral change. Transformative learning approaches stress that learners must have access to tools that they can use to evaluate the validity and applicability of new knowledge and ideas (Phillippi, 2010). While critical reflection is an individual process, critical discourse is inherently social. Since true critical discourse can only take place when two people hold equal power, the "teacher" (or in the instance of EI, the therapist) must be actively aware of any hierarchical power dynamics that could potentially impact the relationship between them and the learner (Phillippi, 2010).

Critical reflection has been proposed to be essential for translating client- and family-centered care from rhetoric to practice (Gupta & Taff, 2015; McCorquodale & Kinsella, 2015; Whalley Hammell, 2015). Whalley Hammell (2015) defines critical thinking as "an intellectually engaged process of thinking about thinking: of examining assumptions and beliefs and the taken-for-granted knowledge that is assumed to be – or that one holds to be – 'true'" (p. 238). Critical reflection is an essential component of clinical reasoning, as it supports informed decision-making and problem-solving in a manner that is consistent with the client's needs and values. Despite the growing emphasis on the importance of critical reflection in rehabilitation,

knowledge of what it means to be critically reflective remains superficial and methods for teaching and evaluating critical reflexivity as part of clinical practice has not been systematically examined (Thompson & Pascal, 2012).

Transformative learning has been gathering more interest in healthcare as a mechanism for promoting change on individual, organizational, and system levels. Phillippi (2010) explored the application of transformative learning in healthcare on an individual level of the client-therapist relationship and proposed that while a change in health status can act as a "disorienting dilemma" much of healthcare does not go beyond step one of the transformative process. Consistently, the role of therapists and other healthcare providers in the transformative process is left largely unexplored. On a team level, transformative learning approaches have been successfully used in pediatrics as a means for professional development initiatives for occupational and physical therapists. For example, a study by Cahill and Bulanda (2009) found that a transformative learning approach toward professional development was successful in helping students transform their perspective on existing practices in EI.

On an organizational level, one transformative learning approach that has been effectively used to support family-centered practice is appreciative inquiry. In their work, Ludema, Cooperrider, and Barrett (2001) highlight the power of “unconditional positive question” to ignite a transformative dialogue in order to support the person’s capacity to challenge their existing assumptions behind everyday practices and move toward generating novel and alternative approaches to support social change. They describe the phases of appreciative inquiry as consisting of 1) deciding on a positive topic, 2) discovery and appreciation of "what is", 3) dreaming and envisioning of "what could be", 4) designing and co-constructing of "what should be," and 5) designing and sustaining of "what will be" (Ludema et

al., 2001; Trajkovski, Schmied, Vickers, & Jackson, 2013). Appreciative inquiry has been successfully applied toward supporting organizational change to improve family-centered care and family-therapist collaboration on neonatal units (Trajkovski et al., 2013; Trajkovski, Schmied, Vickers, & Jackson, 2015) and has been proposed as a guiding framework for supporting family-centered services in EI (Madsen, 2009).

B. Review of Related Literature

Additional review of the literature was conducted on coaching and the role of family-centered support and services outside of standard one-on-one service provision.

1. Coaching in Pediatrics and Early Intervention

Family coaching has been recognized by the DEC as a recommended intervention strategy for supporting family-capacity building in EI (2014, pp. 12–13) and is one of the most prominent best-practice recommendations for therapists in EI. Coaching intervention supports learner competence through an increased opportunity to acquire new knowledge and skills through guided experiences and self-reflection (Rush et al., 2003). The coaching process can be separated into five phases: 1) initiation, 2) observation or action, 3) reflection, 4) evaluation and 5) continuation or resolution (Rush et al., 2003). The level of assistance provided by the coach to the learner is guided by the learner's needs, thus requiring that the coach is critically aware of the learner's needs and abilities throughout the learning process. This process requires buy-in from both the coach (i.e., therapist) and the learner (i.e., family), and the success of the intervention is largely dependent on open communication, trust, and respect within the therapeutic relationship (Rush et al., 2003). As such, coaching acknowledges the importance of effective therapist-client communication, and the impact of communication on relationship- and capacity-building domains of family-centered care.

Coaching interventions have been shown to be associated with a variety of positive outcomes, including 1) improved caregiver perception of child's abilities, 2) improved family responsiveness to child's needs, 3) decreased family stress, 4) improved family capacity and self-efficacy, 5) improved therapeutic alliance between caregiver and therapist, and 6) improved child outcomes (Kemp & Turnbull, 2014). Coaching practices have also been shown to have a positive impact on the therapist, including 1) increased acquisition of new knowledge and skills, 2) improved family-therapist relationship and collaboration, 3) reduced feelings of isolation, and 4) increased refinement of practices (Rush et al., 2003). Evidence suggests that even a brief coaching intervention can have a positive impact on the family's ability to carry out therapeutic recommendations while interacting with their child and, in turn, positive child outcomes (Lane et al., 2016).

a. Solution-Based Coaching in Early Intervention

A variety of coaching approaches have been discussed and evaluated in rehabilitation and EI literature. Solution-based coaching is one type of coaching intervention that uses positive reframing and strategic questioning to help guide the learner toward meeting their goals. A major strength of this approach is that it facilitates awareness and discovery of new ideas and potential solutions that are available to the client (Baldwin et al., 2013). This approach is consistent with the strengths-based principles that guide rehabilitation and family-centered care, due to its focus on 1) client strengths, competency, and capacity-building, 2) positive language, 3) client-directed and goal-oriented approach (Baldwin et al., 2013). Baldwin et al. (2013) propose a seven-step process for solution-based coaching: 1) setting the stage, 2) forming the client-therapist relationship, 3) envisioning the desired future, 4) goal discovery, 5) strategy development, 6) plan confirmation and 7) action/reflection cycle.

To be able to effectively implement solution-based coaching in practice, therapists need to be competent in: 1) relationship-building and collaborative practices, 2) coaching practices, including active listening, reframing, and use of guiding questions, 3) ability to facilitate, and effectively respond to, the client's readiness for change, and 4) ability to critically reflect on their own practice (Baldwin et al., 2013). Grant (2012) found that, in comparison to the problem-oriented coaching (aimed at helping the client identify and solve pertinent problems or issues in their everyday life), the solution-focused approach resulted in significantly: 1) higher levels of behaviors that supported goal attainment, 2) higher levels of positive affect, 3) higher ratings of self-efficacy, and 4) lower levels of negative affect. In EI, solution-based coaching has been shown to be effective from a variety of approaches to rehabilitation, including the triadic intervention approach (Brown & Woods, 2015, 2016; Salisbury & Cushing, 2013), participation-based approach (Colyvas et al., 2010; Palisano et al., 2012), and occupational performance coaching (Graham, Rodger, & Ziviani, 2013, 2014; Kahjoogh, Rassafiani, Dunn, Hosseini, & Akbarfahimi, 2016).

Despite the growing body evidence in support of coaching practices in EI, a major limitation of existing guidelines for implementing coaching within the family context is that, while coaching is heavily reliant on the establishment of a supportive family-therapist relationship, recommendations for how a therapeutic relationship can be established and maintained over time are lacking. It appears that the existing guidelines assume that a strong relationship between the family and the therapist develops naturally throughout the intervention and the therapists that enter EI are equipped to address interpersonal and communication barriers that may arise between them and the families served. Evidence presented in Chapter I, however, suggests that therapists may not have the full breadth of interpersonal competencies required for

effective implementation of specific coaching strategies or general recommendations for implementing family-centered care.

2. **Additional Family-Centered Services in Pediatrics and Early Intervention**

Several research studies have been examining the need for additional family-centered support and services that go beyond direct, one-on-one, intervention (G. King et al., 2017; Turnbull et al., 2007). Outside of coaching, specific family-centered services that should be delivered within the scope of EI practice remain heavily under-investigated (Turnbull et al., 2007). In response to this gap in the literature, King, Williams, and Hahn Goldberg (2017) recommended a framework that can be used to examine the extent of family-centered service provision that explicitly outlines family-specific services. The authors conceptualized family-centered services as being comprised of three essential components (G. King et al., 2017):

- Services that address parent-specific needs (e.g., service coordination, psychosocial services, support groups);
- Services that support parents in their ability to deliver therapeutic recommendations outside of the session (e.g., caregiver training and education), and;
- Services that support parents' ongoing information and education needs (e.g., educational and information resources).

While many consider professional development opportunities as solely targeting licensed professionals and therapists, the National Professional Development Centre on Inclusion (2008) specifically identifies families as key partners in EI that have a role as both recipients and providers of professional development (Buysse & Hollingsworth, 2009). Despite these recommendations, professional development opportunities and workshops for families receiving services through EI are not systematically evaluated, and the evidence on the development of

such educational supports remains limited. For example, while there is some evidence on the courses that are specifically designed to promote effective teaming and collaboration in EI, the course curricula do not appear to be inclusive of family members as potential course participants (e.g., Chen, Klein, & Minor, 2009).

Theoretically grounded and evidence-informed professional development can support the utilization of recommended practices and improve implementation to family-centered care in EI. To support knowledge translation in EI, Odom (2009) called for a push toward "enlightened professional development," which encompasses approaches for professional development that have been shown to support the implementation of evidence-based practices outside of the classroom. Some recommended professional development approaches include: teaming and team building, coaching and consultation, participation in Communities of Practice (CoP), online instruction, and access to web-based curricula (Odom, 2009). Wesley and Buysse (2001) suggested that CoP can be effective in closing the gap between theory and practice through critical reflection, collaborative inquiry, reduced feelings of isolation, and formal and informal supports for knowledge translation of evidence-based strategies into practice. In EI, CoPs have been examined as systems of support for both therapists and families (Turnbull et al., 2009; Wesley & Buysse, 2001).

III. METHODS

Two research studies were conducted to meet the research objectives and research questions outlined in Chapter I:

- Study I: An exploratory, descriptive study of therapists' and parents':

  a) EI self-efficacy and previous EI experience and training;

  b) Perspectives on parents' participation, therapists' use of family-centered practices, and therapists' therapeutic communication and sub-optimal interaction (as defined by the IRM).

- Study II: A pilot descriptive study of the feasibility, acceptability, and preliminary effectiveness of an IRM-based curriculum for a combined audience of therapists and parents in EI.

The objectives, research questions, and associated hypotheses for Study I and Study II are presented in Table I and Table II (Chapter I).

A. Design

1. Study I

Study I is a cross-sectional study of therapist and parent experiences in EI. Data collection and analyses for Study I was guided by descriptive and exploratory research designs.

2. Study II

Study II is a pretest-posttest study of the feasibility, acceptability, and preliminary effects of a five-week, IRM-based, curriculum. Study II was guided by quasi-experimental, one-group research design, and utilized both quantitative and qualitative approaches to data collection and analyses.

The feasibility and acceptability of delivering the proposed five-week curriculum were examined according to the criteria published by Orsmond & Cohn (2015):

1. Feasibility of sampling, recruitment, and retention of research participants;
2. Appropriateness of data collection methods and outcome measures;
3. Acceptability of the curriculum;
4. Appropriateness and practicality of curriculum implementation, and;
5. Preliminary evaluation of participant response to intervention.

Researcher's perspective on the course feasibility and acceptability was gathered using observation and field notes gathered during participant enrollment and curriculum implementation stages of Study II. Participants' perspective on the course feasibility and acceptability was gathered using final course evaluations and participant interviews during a one-month follow-up phase of Study II.

Preliminary effects of the curriculum were evaluated using a pretest-posttest design, and the data were collected using participant surveys, reflection assignments, and follow-up interviews. The pretest and posttest surveys were used to capture the participants' perceived: EI self-efficacy, family participation, family-centered practices, therapeutic communication, and sub-optimal interaction. In addition, it was recognized that the proposed five-week curriculum would likely have an impact on the participants' knowledge, self-awareness, and reflexivity related to the IRM and interpersonal aspects of family-centered care in EI. Given the dearth of psychometrically sound assessments that could be used to evaluate interpersonal knowledge (as described by the IRM), self-awareness, and reflexivity, it was deemed to be most appropriate to capture this information using individual responses to open-ended questions. As such, information related to the change in participants knowledge, self-awareness, and reflexivity

related to the IRM and the interpersonal aspects of EI was collected using in-class video reflections, online reflection assignments, and follow-up interviews.

Triangulation of quantitative and qualitative data offers rich description necessary for summative (aimed at examining overall effectiveness) and formative (aimed at improving programs in the future) evaluation of the curriculum. Qualitative data gathering and analysis have been reported to be particularly appropriate for formative evaluation, as it can bridge the gap between the lived experience of the study participants and the descriptive statistics gathered using a quantitative approach (Patton, 2001). Qualitative inquiry is argued to be one of the most reliable approaches to gathering data on process implementation since 1) program participants' experience is critical to fully understanding the process, 2) the individual experience of the process is best captured in the participants' own words, 3) process evaluation requires a detailed depiction of individual interactions, and 4) rating scales may not adequately capture the dynamic nature of the process (Patton, 2001, p. 159).

a. **Curriculum Design**

The title of the five-week curriculum developed for Study II was "Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches in Early Intervention." The outline of the five-week curriculum is provided in Appendix A. The vision for the curriculum is that: "All families have the opportunity to be active participants in the EI process of care and are a vital component to helping the child achieve their full potential within the context of everyday routines." The mission of the curriculum is: "To promote family-centered care and active parent participation in EI by promoting therapists' and parents' awareness and intentionality related to interpersonal aspects of the therapist-parent-child relationship."

The curriculum is guided by social constructivist theory, which defines learning as the construction of meaning from experience and interaction with others. The curriculum is strategically tailored toward a multidisciplinary team of therapists and families in EI and is designed to support social learning opportunities by drawing from the participants' everyday life experience. To support ongoing learning opportunities, the curriculum is designed to support the natural development of a learning community (Community of Practice) that could serve as an ongoing resource and an informal support system after course completion.

Consistent with the six assumptions of adult learning theory proposed by Knowles (Marriam & Bierema, 2013), the curriculum assumes that the participants enrolled in the course are independent and self-directed learners, are internally motivated to learn, and their life experience is an essential source of learning. The material is presented in a manner that is immediately applicable to the learners' integral life role (as an EI therapist or parent), is problem-centered, and the rationale behind the material presented is explicitly stated. The participants can direct their learning through setting their learning objectives, engaging in action planning, and applying the learning to real-life situations. The role of the facilitator is to support the learning community by 1) sharing their own experience, 2) providing access to resources, 3) posing strategic discussion questions, and 4) providing opportunities for critical self-reflection. The material is delivered in the format of cognitive apprenticeship focused on experiential learning and reflective practice as it is applied to individual experiences of providing or receiving EI services.

One of the principal aims of this curriculum is to challenge the learner's assumptions related to the delivery of family-centered care and parent participation in EI. The course aims to do so by promoting the learner's knowledge, awareness, and reflexivity related to the role and

impact of communication and interpersonal behaviors within the therapist-parent-child triad. Brookfield (Marriam & Bierema, 2013) proposed that there are three components to critical reflection: 1) identification of personal assumptions behind thoughts and actions, 2) analysis of accuracy and validity of assumptions and their relationship to experienced reality, and 3) reconstruction of assumptions to make them inclusive and integrative. For this curriculum, it is assumed that transformative learning will take place within the individual.

Throughout the course, learners are asked to share their assumptions behind the what, the how, and the why of family-centered care by critically examining their interactions with others through an IRM lens. Reflection questions are posed to challenge existing assumptions by critically examining real-life experiences against recommended, evidenced-based, practices. Participants are asked to engage in reflection in and on action as they bring their life experiences into the classroom and apply the strategies presented in their everyday life experience.

To challenge participants' assumptions regarding their understanding of family-centered approaches in EI, a disorienting dilemma is introduced at the start of the course using a video case example. In the video, participants witness a therapist-parent-child interaction that illustrates: 1) common interpersonal barriers to communication frequently reported in healthcare, and 2) mother's and child's resistance and reluctance to participate in the session. It is anticipated that witnessing this video will provoke an emotional reaction and drive the participants to reflect on the challenges that they and others experience in EI. The participants will have an opportunity to view the video again and reflect on what they have learned in the course at the end of the five-week curriculum.

Additionally, throughout the course, the participants are challenged to reflect upon their own ability to empathize, exercise interpersonal intentionally, and match their communication to

the interpersonal needs of others during small group activities and reflection exercises. For example, one of the in-class activities (the "IRM dice" exercise) pushes participants to use communication approaches outside of their comfort zone. The activity achieves this by asking the learners to switch between the six modes of communication (advocating, collaborating, empathizing, encouraging, instructing, and problem-solving) based on a random roll of a dice. Following the exercise, participants reflect in small groups on their effectiveness within each mode, interpersonal preferences specific to their mode use, and personal discoveries of communication barriers experienced during the exercise.

B. **Procedures**

Therapist and parent participants were recruited and enrolled in the course using snowball sampling. Snowball sampling relies on the people enrolled in the study as an additional referral source for new study participants. Snowball sampling is particularly effective in studying hidden and difficult to access populations (Sadler, Lee, Lim, & Fullerton, 2010). Provided that EI services are most frequently conducted in the family home, and EI therapists may not have a central location or a clinic, the snowball sampling approach was selected as the best approach to maximize recruitment and enrollment of therapists and parents that may not be otherwise accessible to the researcher.

Recruitment and enrollment were limited to therapists and families in Illinois. Therapist participants were recruited through word-of-mouth, state associations, online groups specific to EI and pediatric rehabilitation, and community pediatric clinics. Parent participants were recruited through word-of-mouth, support and advocacy networks for parents of children with developmental disabilities, and community pediatric clinics.

To ensure that there was no overlap in the participant samples for Study I and Study II, participant enrollment and pretest data collection for Study II was completed before initiation of participant enrollment and data collection for Study I (Figure 6). Participant enrollment and data collection for Study II took place from 8/2/2018-10/13/2018. Participant enrollment and data collection for Study I took place from 10/9/2019-7/10/2019.

1. **Study I**

Quantitative survey data for Study I was collected in one of two ways: 1) anonymous online surveys for participants enrolled in Study I, and 2) online pretest surveys for participants enrolled in Study II. All participants completed the screening questionnaire and the digital informed consent process upon enrollment in the study. The surveys were anonymous, and personal identifiers were not collected for research purposes in Study I. The online surveys took approximately 45 to 60 minutes to complete. At the end of the survey, participants were given an option to enter their name and email address to receive a $5.00 gift card as a thank you for their participation in research. Personal identifiers were only available to the principal investigator for gift card distribution, and the participants' contact information was not retained for any other use.

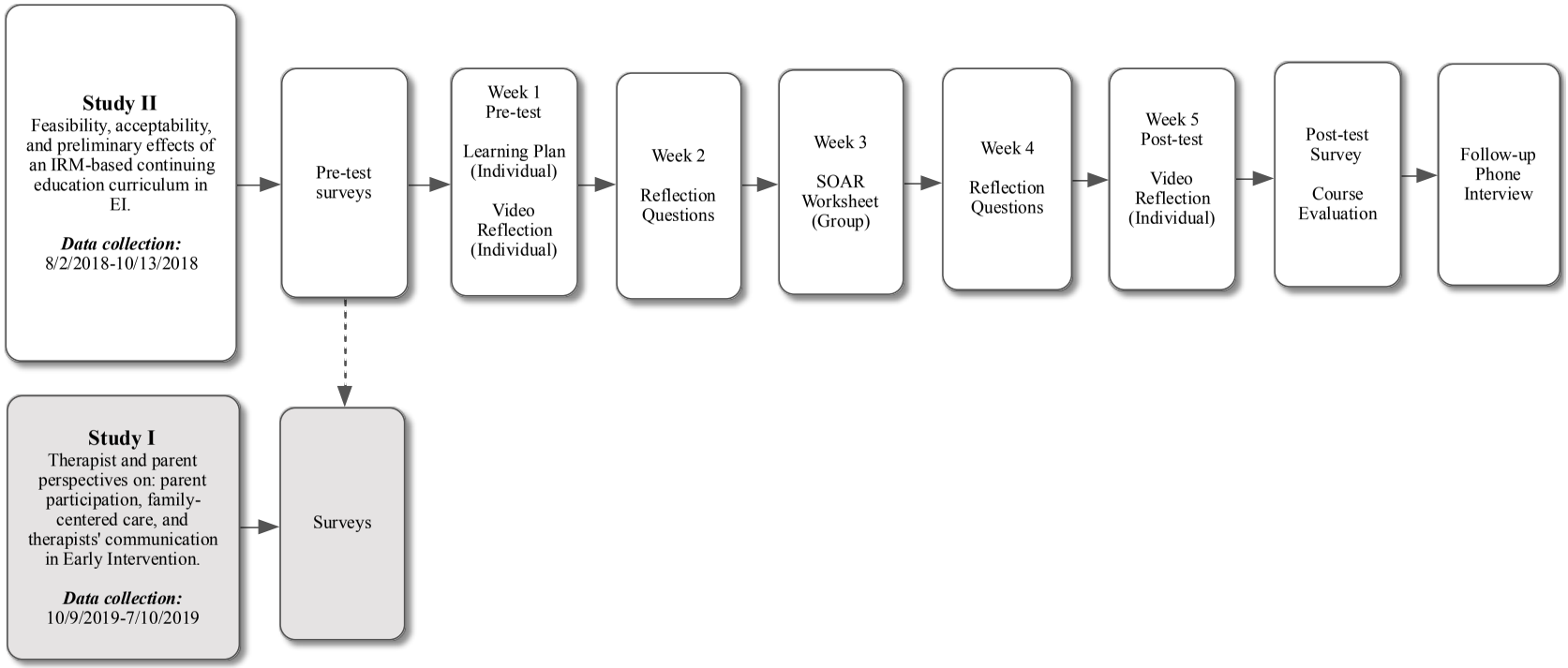

Figure 6. Overview of data collection procedures for Study I and Study II.

2. **Study II**

The course was posted on the Illinois EI Training Program website: http://www.illinoiseitraining.org/page.aspx?module=15&type=1&item=1&eventid=19577 Participants had an option of enrolling in one of two short-course sessions 1) Thursday evening course that met from 6:00 PM to 8:00 PM, or 2) Saturday morning course that met from 10:00 AM to 12:00 PM. Accounting for at least a 20% dropout rate, up to 20 parents and 20 therapists were invited to enroll in each course. The sample size of 15 participants per group was deemed appropriate based on the recommendations of at least 12 subjects per group for pilot studies (Julious, 2005) and at least 15 subjects per group for comparative studies (Mertens, 2014).

Each course was delivered over five weeks and consisted of both in-person and online components. The course was offered free of charge, and all participants were offered light refreshments during each two-hour, in-person session. All participants received a course completion certificate upon course completion. Additionally, therapists were qualified to receive up to 10 continuing education units as a result of their participation in the course; the Illinois EI Training Program approved this event for 10 hours of EI credential credit in the area of Working with Families (Illinois EI Credit Request #10589; Approved July 27, 2018).

The plan for course delivery is presented in Figure 7.

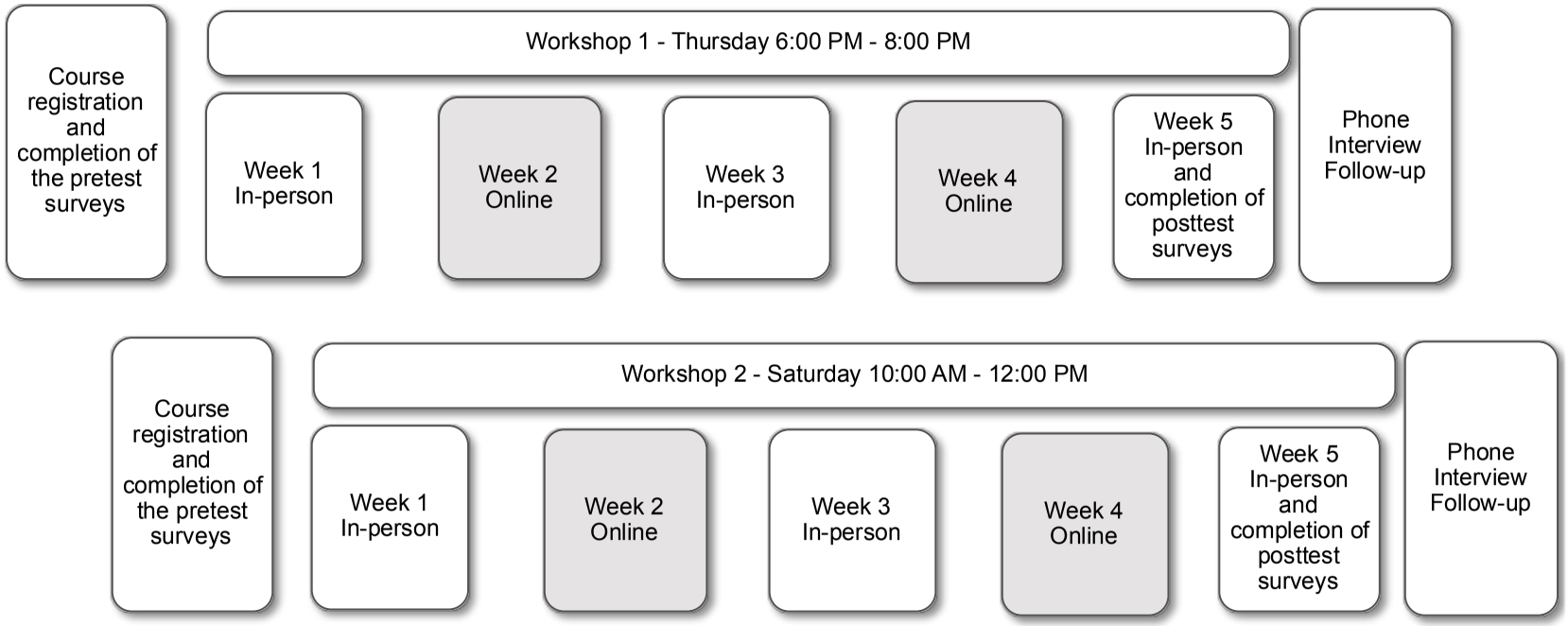

Figure 7. Plan for curriculum delivery.

Written informed consent was collected upon participant enrollment in the course via REDCap. Participants' first name, last name, and email address were collected and coded using a master code list for data tracking. Pretest surveys were administered via REDCap as part of the registration process and took between 45 to 60 minutes to complete. Participants completed a paper-based posttest survey and final course evaluation at the end of Week 5, in-person, meeting.

Accessibility concerns were considered and addressed during curriculum development, including visual, hearing, and physical accommodations. Digital and paper copies of course materials were offered to all participants. The online curriculum was delivered through a seven-video series, with video length ranging from 22 to 32 minutes. Each video had an audio voiceover, which was supplemented with a verbatim transcript and handout. To further support the accessibility of the material presented, terminology that is not commonly used outside of healthcare or academia was identified and defined throughout the course. Additionally, the participants were provided with "cheat sheets" that outlined terms and definitions that were frequently used in the course.

Intervention fidelity and adherence to the curriculum was conducted using fidelity monitoring. At least one in-vivo observer (research assistant) was present to evaluate and record facilitators' adherence to curriculum content and process. This data was gathered using field notes. The participants had an opportunity to develop and evaluate their individualized learning plans and weekly action plans throughout the curriculum. Participants were encouraged to provide feedback to the course facilitator in the form of open-ended and anonymous survey responses throughout the course. Additionally, the course and the course facilitator were formally evaluated during the final course evaluation.

a. **Course Structure**

The purpose of the curriculum was two-fold: 1) to support therapists' capacity for relationship- and capacity-building practices in EI by bolstering their interpersonal and communication skill base, and 2) to support parents' capacity to effectively communicate and respond to their child's needs from an interpersonal perspective. The curriculum was guided by the IRM; targeting four topic areas (Figure 8):

1) Introduction to the relationship- and capacity-building practices in EI
2) Implementing relationship-building practices in EI
3) Solution-based approaches for resolving interpersonal challenges in EI
4) Solution-based approaches for resolving participation-based challenges in EI

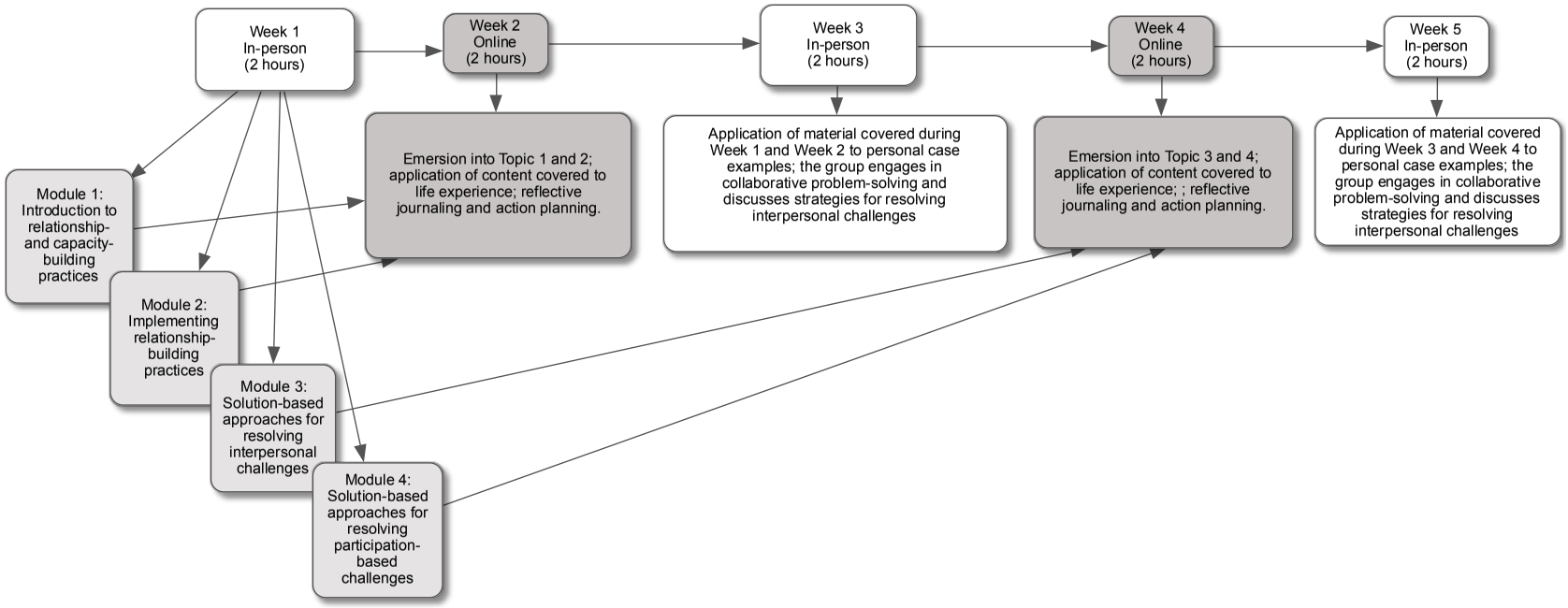

Figure 8. Course content overview.

The role of interpersonal communication and interpersonal strategies for supporting relationship- and capacity-building in EI were integrated throughout the course curriculum. In-person sessions were primary, comprised of experiential and social learning opportunities that encompassed small and large group discussions and activities. Online sessions required participants to immerse into the topic area by reviewing a series of short videos and reflecting on the content by completing a reflective journaling assignment. The course facilitator reviewed each assignment and provided participants with individualized feedback that encompassed an outline of the participants' 1) strengths, 2) opportunities for growth, and 3) constructive feedback for change.

Participants were asked to watch a total of seven videos on the IRM in preparation for in-class activities:

1) Week 2: Video 1 - Introducing the Intentional Relationship Model (22 min)
2) Week 2: Video 2 - Interpersonal Characteristics (24 min)
3) Week 2: Video 3 - Inevitable Interpersonal Events (25 min)
4) Week 2: Video 4 - Therapeutic Communication Modes (25 min)
5) Week 4: Video 5 - Responding to Strong Emotions (30 min)
6) Week 4: Video 6 - Responding to Challenging Behaviors (32 min)
7) Week 4: Video 7 - Interpersonal Reasoning Process (29 min)

Additional (optional) videos and readings specific to the course content were offered to the participants each week. In the instances where a participant was absent from an in-person session, a one-on-one make-up opportunity was offered via Skype. A detailed description of course content and assignments is provided in Appendix A.

C. Setting

Study I was conducted online via REDCap, secure web-based software for survey data collection. Study II was conducted online and in-person. In-person sessions were conducted at the University of Illinois at Chicago, Occupational Therapy Department. Consistent with Study I, Study II surveys, and online reflection assignments were administered via REDCap. In-class assignments were collected using paper-based methods, scanned, and stored in REDCap. The online curriculum and the associated course materials were delivered to participants using Google Sites and YouTube.

D. Participants

Study I and Study II were comprised of two convenience samples of participants: 1) developmental, occupational, physical, and speech therapists who were providing services through the EI system in Illinois, and 2) parents whose children were receiving services through the EI system in Illinois.

1. Therapist Inclusion and Exclusion Criteria

Therapists were recruited based on meeting the following inclusion criteria:

1) Must be 18 years old or older;
2) Must be licensed, or certified, as an EI developmental, occupational, physical, or speech therapist
3) Must be providing full-time or part-time direct-services in EI, and;
4) Must have at least three families active on the EI caseload.

Therapists who were not licensed, or certified, as a developmental, occupational, physical, or speech therapist in EI were excluded from the study to limit variability in the professional characteristics of the therapist sample. To ensure that the therapists enrolled in the study had the

opportunity to reflect on their experience of working with multiple families, therapists that maintained a caseload of fewer than three families were excluded from the study based on having a limited amount of direct interaction with families in EI every week.

2. **Parent Inclusion and Exclusion Criteria**

Parents were recruited on the basis of meeting the following inclusion criteria:

1) Must be 18 years old or older;
2) Must be the parent or the primary caregiver of a child who is younger than 36 months upon enrollment in Study I, or who is 33 months or younger upon enrollment in Study II.
3) Must be the parent or a primary caregiver of a child who is receiving services from at least one EI therapist (developmental, occupational, physical, or speech therapist), and;
4) Must be the parent or a primary caregiver present during the regularly scheduled EI appointments.

Families whose children are 36 months or older were excluded from Study I since the child was no longer eligible for EI services in Illinois. Families whose children were 34 months or older upon enrollment in Study II were excluded since the child was likely to exit from the EI system before study completion. Only one parent from each household was eligible to participate in Study I and Study II, as cohabitation could be a significant confounding factor. Additionally, parents and caregivers that were not present during regularly scheduled EI appointments were excluded from the study based on limited, in-person, involvement with direct EI services.

E. Instrumentation

1. Study I

Survey data for Study I were collected using therapist and parent versions of six individual assessments. Therapists' assessments included:

1) Demographic questionnaire
2) EI Self-Efficacy Scale (EISES)
3) Parent Participation Engagement Measure (PPEM)
4) Measure of Processes of Care – Service Provider (MPOC-SP)
5) Clinical Assessment of Modes (CAM)
6) Clinical Assessment of Sub-optimal Interaction – Short Form (CASI-SF)

Parents' assessments included:

1) Demographic questionnaire
2) EI Parenting Self-Efficacy Scale (EIPSES)
3) Parent Participation Engagement Measure (PPEM)
4) Measure of Processes of Care – 20 (MPOC-20)
5) Clinical Assessment of Modes (CAM)
6) Clinical Assessment of Sub-optimal Interaction – Short Form (CASI-SF)

A visual summary of the surveys is depicted in Figure 9.

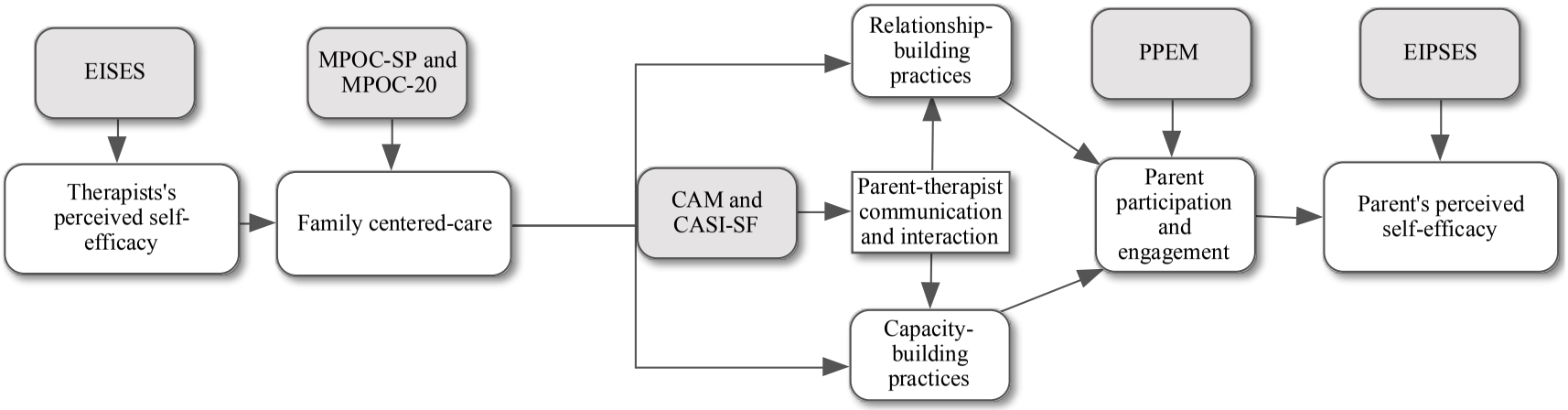

Figure 9. Variables of interest and associated assessments selected for Study I and Study II.

a. **Demographic Questionnaire**

Therapists' demographic questionnaire included items related to therapist's basic demographics (age, gender, employment, etc.), professional experience (years practicing in the profession, number of families served, etc.), and professional training (training in family-centered care, training in therapeutic communication training, etc.) (Appendix B). Parents' demographic questionnaire included items that were related to the parent's basic demographics (age, gender, employment, etc.), child's basic demographics (age, gender, reason for referral, etc.), and parent's experience specific to EI (length of services, training related to EI, etc.) (Appendix C).

b. **Early Interventionist Self-Efficacy Scale (EISES) and Early Intervention Parenting Self-Efficacy Scale (EIPSES)**

Therapists' and parents' self-reported EI self-efficacy was evaluated using the Early Interventionists Self-Efficacy Scale (EISES) (Lamorey & Wilcox, 2005) and the EI Parenting Self-Efficacy Scale (EIPSES) (Guimond, Wilcox, & Lamorey, 2008). The 15-item EISES (Lamorey & Wilcox, 2005) and the 14-item EIPSES (Guimond, Wilcox, & Lamorey, 2008) are rated on a seven-point scale (from 1 = "strongly disagree" to 7 = "strongly agree"). The EISES items 3, 5, 9, 11 and 15 and EIPSES items 3, 5, 6, 8, 10, 11, 13, and 14 are reverse scored.

Both assessments previously demonstrated adequate internal validity as supported by the findings from exploratory factor analysis (Guimond et al., 2008; Lamorey & Wilcox, 2005). While these initial validation studies suggested that the EISES and the EIPSES are likely comprised of two separate self-efficacy domains, the authors cautioned against the utilization of the individual domain scores until further assessment validation. As such, only the average

scores for the overall assessment were used for this study. To the author's knowledge, the EISES and the EIPSES have not been utilized for research purposes within the EI setting in the U.S. to date.

c. **Parent Participation Engagement Measure (PPEM)**

Parent Participation Engagement Measure (PPEM) (Haine-Schlagel et al., 2016) is a self-report measure of parent participation during therapy. The PPEM consists of five items that are rated on a five-point scale (from 0 = "not at all" to 5 = "very much"). The participant can mark an item as "not applicable" where deemed appropriate. A "not applicable" option was considered as "system missing" for data analysis.

The PPEM demonstrated excellent internal consistency, good convergent validity, and good discriminant validity in adolescent community mental health settings (Haine-Schlagel et al., 2016). To the author's knowledge, the PPEM has not been utilized for research purposes within the EI setting in the U.S. to date.

d. **Measure of Processes of Care (MPOC)**

The Measure of Processes of Care (MPOC) (Cunningham & Rosenbaum, 2014) is a self-report measure of family-centered behaviors of pediatric therapists from therapist and parent perspectives. A therapist version of the MPOC (MPOC-SP) and a short-form version of the parent MPOC (MPOC-20) were used for this study. The 27-item MPOC-SP and the 20-item MPOC-20 are both rated on a seven-point scale (from 1 = "never" to 7 = "to a great extent"). The participant can mark an item as "not applicable" where deemed appropriate. A "not applicable" option was considered as "system missing" for data analysis.

The items of the MPOC-SP are broken down into four domains: Showing Interpersonal Sensitivity (10 items), Treating People Respectfully (9 items), Providing General Information (5

items), and Communicating Specific Information (3 items) (Woodside, Rosenbaum, King, & King, 2001). Initial development and validation of the MPOC-SP demonstrated that the questionnaire had good internal consistency and validity (Woodside et al., 2001).

The items of the MPOC-20 are broken down into five domains: Respectful and Supportive Care (5 items), Enabling and Partnership (3 items), Coordinated and Comprehensive Care (4 items), Communicating General Information (5 items), and Communicating Specific Information (3 items) (S. King, King, & Rosenbaum, 2004). Initial development and validation of the MPOC-20 demonstrated that the questionnaire had good internal consistency, test-retest reliability, and internal validity, and was psychometrically comparable to the 56-item MPOC (S. King et al., 2004).

Original and translated versions of the MPOC-SP and the MPOC-20 are reliable and valid for use across a variety of pediatric settings (Cunningham & Rosenbaum, 2014). The English versions of the MPOC-SP and the MPOC-20 have also been evaluated for use in EI in Singapore, however, the results from exploratory factor analysis suggested that not all items were applicable for use in EI with this specific population (Chong, Goh, Tang, Chan, & Choo, 2012; Tang, Chong, Goh, Chan, & Choo, 2012). The Chinese versions of the MPOC-SP demonstrated adequate internal consistency and test-retest reliability in EI in Taiwan (Tang et al., 2012). To the author's knowledge, the English versions of the MPOC-SP and the MPOC-20 have not been psychometrically validated for use in EI in the U.S.

e. **Clinical Assessment of Modes (CAM)**

The CAM is a self-report assessment of therapist's use of therapeutic communication modes as defined by the IRM. Four versions of the CAM have been developed for evaluating client-therapist communication from three perspectives: client (preferred and

experienced mode use), therapist, and observer. The CAM consists of 30 items that can be divided into six subscales: Advocating, Collaborating, Encouraging, Empathizing, Instructing, and Problem-solving. Each item is rated on a four-point scale (from 0 = “never” to 4 = “frequently”). The participant can mark an item as "not applicable" where deemed appropriate. A “not applicable” option was considered as "system missing" for data analysis.

All four versions of the CAM were psychometrically validated using Rasch analysis and demonstrated adequate validity and reliability in inpatient rehabilitation with individuals with neurological and orthopedic diagnoses (Fan & Taylor, 2016). Additionally, the observer version of the CAM has demonstrated appropriate internal consistency and structural validity for use in outpatient pediatric rehabilitation (Popova et al., 2019). To the author’s knowledge, the CAM has not been utilized or evaluated for research purposes within the EI setting in the U.S. to date.

f. **Clinical Assessment of Sub-optimal Interaction – Short Form (CASI-SF)**

The CASI-SF was developed for evaluating sub-optimal interpersonal interactions between the therapist and the client that may damage the client-therapist relationship or otherwise compromise the client’s ability to engage in the rehabilitation process. Therapist and parent versions of the CASI-SF were utilized for this study and are presented in Appendices L and M. The CASI-SF was developed to complement the CAM and is theoretically grounded in the IRM. The CASI-SF consists of 15 items that are measured on a four-point scale (from 1 = “never” to 4 = “ frequently”). The participant can mark an item as "not applicable" where deemed appropriate. A "not applicable" option was considered as "system missing" for data analysis. The observer version of the CASI-SF has demonstrated appropriate internal consistency and structural validity for use in outpatient pediatric rehabilitation (Popova et al., 2019). To the

author's knowledge, the CASI-SF has not been utilized or evaluated for research purposes within the EI setting in the U.S. to date.

2. **Study II**

Pretest and posttest survey data for Study II were collected using quantitative and qualitative methods. Quantitative measures selected for Study II included an identical set of surveys as what was utilized in Study I. In addition to the pretest and posttest surveys, course acceptability was evaluated using a final course evaluation survey that was developed for this study.

Qualitative data collection methods included observational data (study feasibility and curriculum fidelity checklists) and first-person narratives (open-ended responses to survey questionnaires, in-class video reflection assignments, online reflection assignments, and follow-up interviews). The qualitative approach to data collection was selected based on the understanding that open-ended questions could provide additional information that may not be otherwise captured by a standardized questionnaire. In addition to informing and triangulating quantitative findings, qualitative data were used to explore the participants' perspective on the feasibility, acceptability, and preliminary effects of the course curriculum. A summary of data collection instruments and the process of data collection for Study II is presented in Figure 10.

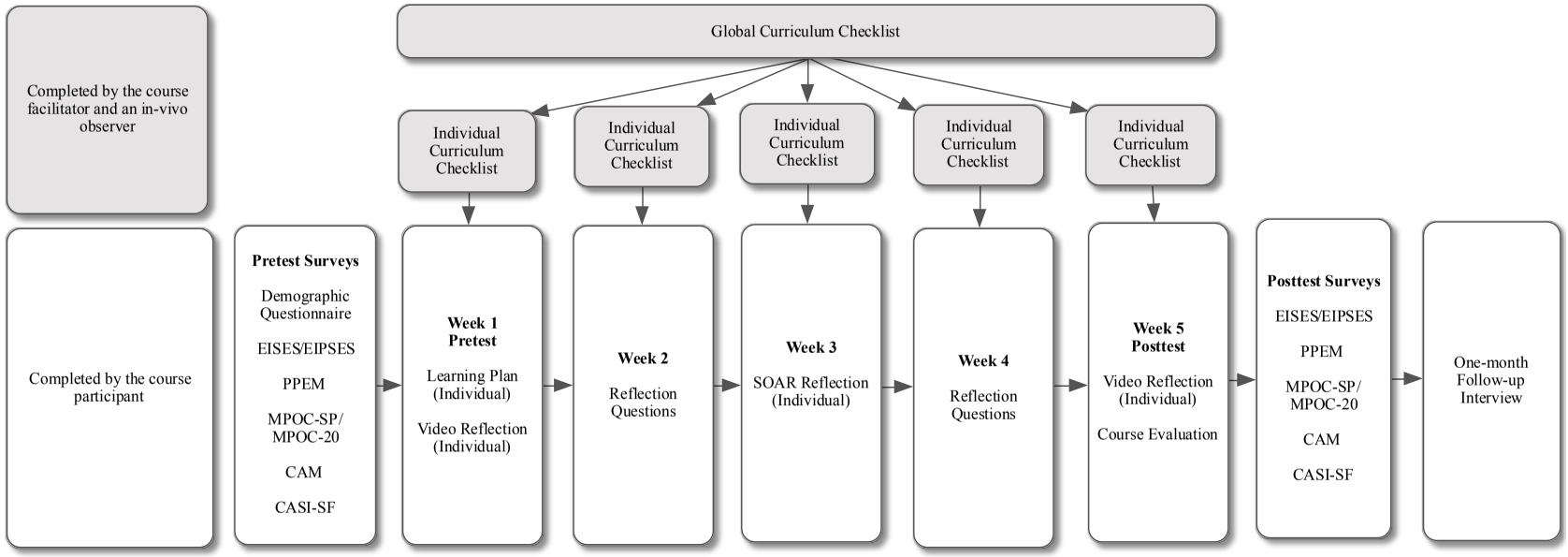

Figure 10. Summary of data collection instruments and the process of data collection for Study II.

a. **Quantitative Data Collection Instruments**

Quantitative methods for data collection included an identical set of surveys utilized for Study I:

1) Demographic questionnaire
7) EI Self-Efficacy Scale (EISES)/EI Parenting Self-Efficacy Scale (EIPSES)
2) Parent Participation Engagement Measure (PPEM)
8) Measure of Processes of Care – Service Therapist (MPOC-SP)/Measure of Processes of Care – 20 (MPOC-20)
3) Clinical Assessment of Modes (CAM)
4) Clinical Assessment of Sub-optimal Interaction – Short Form (CASI-SF)

b. **Qualitative Data Collection Instruments**

Acceptability of the course content and structure, as well as the instructional competency of the course facilitator, were evaluated weekly using anonymous weekly reflections (Appendix D) and at the end of the course using a final course evaluation survey (Appendix E).

c. **Study Feasibility Checklist**

A study feasibility checklist was developed based on the recommendations published by Orsmond and Cohn (2015) and is presented in Appendix F.

d. **Curriculum Fidelity Checklist**

A global and individual curriculum fidelity checklists were developed for the study and are presented in Appendixes G and H. The individual checklist was completed every week, while the global checklist was used to evaluate overall curriculum implementation at

the end of Week 5 of the course. The checklists were completed and compared by the course facilitator and an in-vivo observer who was present for all in-person sessions.

e. **Enrollment Survey and Learning Plan**

An Enrollment Survey and Learning Plan was developed for the study and is presented in Appendix I. Three open-ended questions were used to evaluate the participants' knowledge of family-centered care as well as their perspective on the strengths and challenges of using family-centered approaches in EI. Additionally, the participants were asked to reflect upon what they hoped to achieve as part of the course.

f. **Video Reflection Assignment**

A Video Reflection Assignment was developed for the study and is presented in Appendix J. After watching a video of a therapist-parent-child interaction; participants were asked to reflect on the strengths, the challenges, and areas for improvement that could be communicated back to the therapist in the video.

g. **Weekly Reflection Assignments**

Two weekly reflection assignments were developed for the study. Reflection assignments for Week 2 and Week 4 are presented in Appendixes K and L. After reflecting on their interactions with others (parents or children), participants were asked to reflect on the individual interaction, their mode use, and potential areas for improvement. In addition, all participants completed an individual reflection related to the strengths and areas of growth using the Strengths, Opportunities, Aspirations, and Results (SOAR) worksheet during Week 3 (Appendix M).

h. Follow-up Interview

A semi-structured follow-up interview was developed for the study. Parent and therapist versions of the interview script are presented in Appendix N and O. The follow-up interview encompassed two sets of questions: 1) the participants' experience of the course content, and 2) the participants' experience of the course structure.

F. Ethics

The Institutional Review Board at the University of Illinois at Chicago approved the research study titled Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches (Protocol # 2018-0380); approved documents are presented in Appendix P.

G. Data Analysis

Data analysis for Study I was conducted using quantitative approaches. Data analysis for Study II was conducted using quantitative and qualitative approaches. Data for Study I and Study II were digitally stored in REDCap and exported from REDCap before analyses.

1. Quantitative Data Analysis

Quantitative analysis was carried out using IBM SPSS Statistics for Windows, Version 22.0. Descriptive nominal data were analyzed using frequencies and percentages. Ordinal and ratio level data were analyzed using means and standard deviations. Data distribution was initially evaluated using the Shapiro-Wilk test for normality, with a $p < 0.05$. In cases where the assumption of normality was violated, a secondary analysis was conducted via visual examination of the normal probability plots (quantile-quantile plots) and box plots. Provided that the data were approximately normally distributed, parametric tests were used. Additionally, the internal consistency of the assessment measures was evaluated by examining

Cronbach's α. The Cronbach's α was expected to be > 0.70 as evidence of appropriate internal consistency (Tavakol & Dennick, 2011).

a. **Study I**

Group differences for independent groups were evaluated using an independent-samples t-test and the one-way analysis of variance with a $p < 0.05$. Associations between variables were evaluated using the Pearson correlation coefficient. The cutoff criteria for the Pearson correlation coefficient was, r: < 0.20 = "very weak," 0.20-0.39 = "weak," 0.40-0.59 = "moderate," 0.60-0.79 = "strong," 0.80-1.00 = "very strong" (Akoglu, 2018).

In the instances where a statistically significant correlation between variables was found, and the sample size met the minimum number of 10 participants per independent variable included in the analysis, multiple linear regression was used to evaluate the predictive power between a single dependent variable and multiple independent variables. The p-value was expected to be $p < 0.05$, and R^2 was evaluated to examine the percent of variability in the dependent variable that was explained by the regression model. Collinearity was suspected for any independent variables with an $r > 0.70$.

b. **Study II**

The pretest and posttest group differences were evaluated using a paired-samples t-test with a $p < 0.05$.

2. **Qualitative Data Analysis**

The qualitative methods were driven by the phenomenological perspective, aimed at gaining a rich understanding of the participants' lived experience and perspective on the feasibility, acceptability, and preliminary effects of the course curriculum. Examination of first-person narratives supported triangulation of quantitative findings and informed the findings

related to the participants' experience of change related to interpersonal knowledge, awareness, reflexivity, and behaviors following completion of the curriculum in Study II.

The participants submitted pretest and posttest video reflections and weekly assignments via REDCap. The follow-up interviews were audio-recorded and transcribed verbatim. Reflection assignments and interview transcripts were analyzed separately for therapist and parent participants using content analysis (Patton, 2014).

The principal investigator conducted all qualitative data analysis in consultation with 1) an IRM expert, and 2) a qualitative researcher with expertise in adult learning and curriculum development. The principle investigator read participants' reflection assignments and interviews to establish an initial set of codes and patterns, and the process was tracked using analytic memos. The codes were examined for patterns and separated into categories (and sub-categories). Each category and sub-category which were individually examined for 1) cohesiveness in meaning between the codes in each category, and 2) distinct differences between the categories generated from the data (Patton, 2014).

The content was analyzed using inductive and deductive approaches. In the initial stages of coding, the PI read participant's responses using an inductive approach (Patton, 2014), thus allowing the initial set of codes, patterns, and categories emerge from the data in a manner that was free from expectations and was not based on an existing theoretical framework. This stage of analysis was used to inform the participants' overall experience and perception of the course content, structure, and relevance. A qualitative researcher with expertise in adult learning and curriculum development crosschecked the initial set of codes.

Secondary analyses were conducted using a deductive approach (Patton, 2014). Codes were selected based on the existing IRM framework and grouped into categories that are

consistent with the IRM theory (therapeutic mode use, client's interpersonal characteristics, and inevitable interpersonal events). Following classification and coding of data according to the IRM theoretical framework, categories of codes related to the participants' ability to integrate and apply the IRM in their interpersonal reasoning were established. This second stage of analysis was conducted with code checks from an IRM expert.

Lastly, the principal investigator reread the interviews and reflection assignments to triangulate the findings across different sources and refine the established coding and category structure. Once the codes and categories were established, overarching themes were generated to provide a full description of the participants' experience of using the IRM lens in their everyday interactions in and outside of the course. Member checks with three therapist-participants and two parent-participants from Study II were conducted on the final set of codes, categories, and themes.

IV. RESULTS

A. Study I: Therapist and Parent Perspectives on Family Participation, Family-Centered Care, and Therapists' Communication

Therapist and parent perspectives on therapists' communication, therapists' capacity to practice in a family-centered manner, and parents' participation in EI was evaluated using a cross-sectional survey approach. Data were evaluated separately for therapist and parent participants.

Data distribution was initially evaluated using a Shapiro-Wilk test for normality (Table IV). The EISES, MPOC-SP: Showing Interpersonal Sensitivity, MPOC-SP: Providing General Information, and the CASI-SF met the assumption for normality. The CAM, PPEM, MPOC-SP: Treating People Respectfully, and MPOC-SP: Communicating Specific Information did not. A secondary analysis was conducted via visual examination of the normal probability plots (quantile-quantile plots) and box plots, which suggested that the data were approximately normal and would not significantly violate the assumption for normality necessary for parametric tests used in this study.

The Cronbach's alpha were > 0.70 for all assessments, except for the Empathizing and the Instructing subscales on the CAM, which were < 0.70 (Table IV). Upon further examination, the items that were negatively influencing the Cronbach's α on the Empathizing subscale were: "I shared something about my personal experience so that parents/caregivers did not feel alone." and "I asked parents/caregivers questions with a high level of sensitivity such that they felt comfortable." The items that were negatively influencing the Cronbach's α on the Instructing subscale were "I taught parents/caregivers something." and "I told or demonstrated to parents/caregivers how to improve their performance or behavior."

TABLE IV
NORMALITY AND RELIABILITY OF INDEPENDENT AND DEPENDENT VARIABLES

Variable	Shapiro-Wilk			Cronbach's α
	Statistic	df	p	
EISES	0.975	92	0.068	0.74
MPOC-SP: Showing Interpersonal Sensitivity	0.978	92	0.127	0.87
MPOC-SP: Treating People Respectfully	0.948	92	0.001	0.88
MPOC-SP: Providing General Information	0.980	92	0.159	0.74
MPOC-SP: Communicating Specific Information	0.954	92	0.002	0.91
CAM	0.889	92	0.000	0.92
Advocating	0.955	92	0.003	0.79
Collaborating	0.832	92	0.000	0.76
Empathizing	0.803	92	0.000	0.49
Encouraging	0.740	92	0.000	0.79
Instructing	0.865	92	0.000	0.63
Problem-solving	0.868	92	0.000	0.82
CASI-SF	0.979	92	0.137	0.89
PPEM	0.962	92	0.009	0.79

1. **Objective 1: Participants' Background Characteristics**

Two groups of participants were combined for Study I: 1) participants that completed the anonymous surveys for Study I, and 2) participants that completed the pretest questionnaires upon their enrollment in Study II. Screening, enrollment, and retention of participants from Study I and Study II for Study I is depicted in Figure 11. Of the 211 therapists and 39 parents that expressed interest in participating in the study, 183 (86.7%) therapists and 31 (79.5%) parents were eligible to participate. Of the eligible participants, 124 (67.6%) therapists and 23 (74.2%) parents completed the written consent, and 101 (55.2%) therapists and 19 (61.3%) parents completed the surveys in full. Since the survey data collection was anonymous and was conducted online, specific reasons for sample attrition are unknown, and there was no opportunity to identify and contact participants with follow up attrition questions.

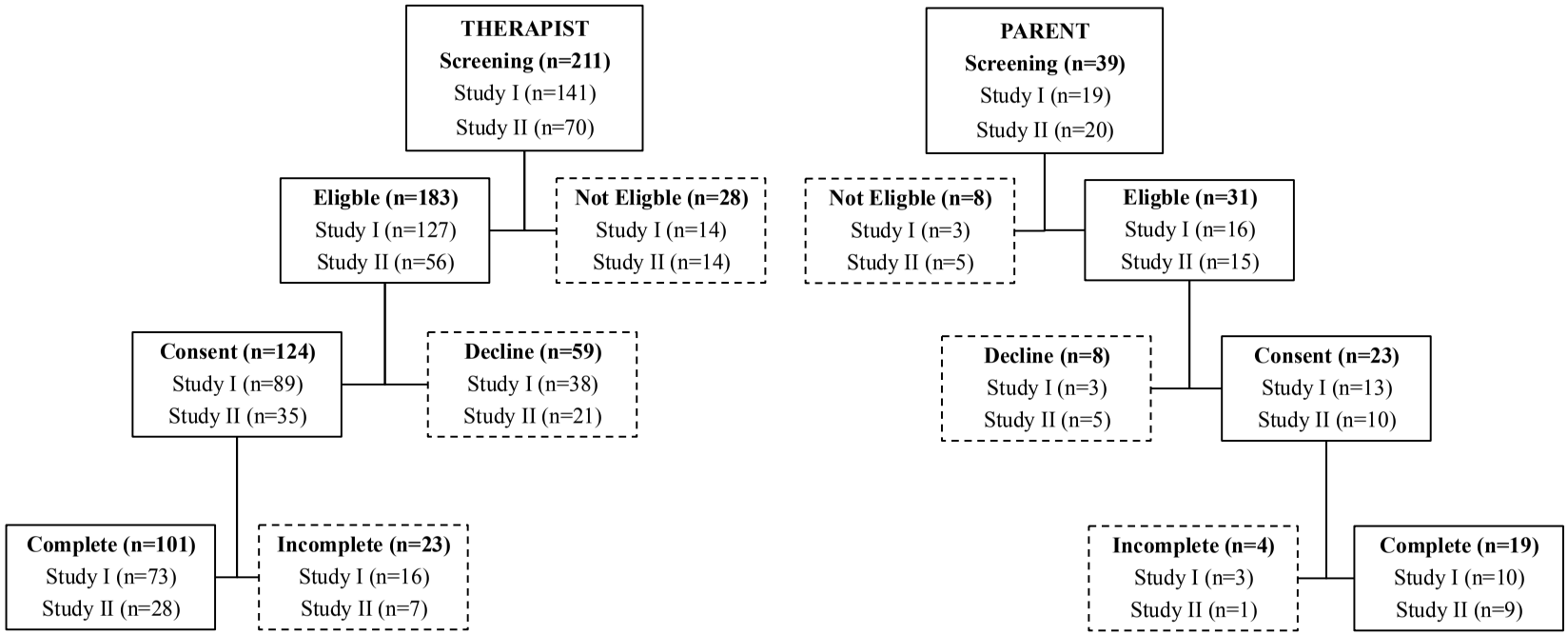

Figure 11. Participant recruitment and retention flow diagram for Study I.

A convenience sample of 101 therapists and 19 parents in EI in Illinois completed the study. Therapists' age ranged from 24 to 72 (M = 38.07, SD = 11.31). Parents' age ranged from 26.00 to 45.00 (M = 33.47, SD = 4.90). Additional demographic information is presented in Table V.

TABLE V
PARTICIPANT DEMOGRAPHICS

Variable	Therapist (n = 101)		Parent (n = 19)	
	n	%	n	%
Gender				
Female	100	99.0	18	94.7
Male	1	1.0	1	5.3
Race/ethnicity				
American Indian or Alaska Native	1	1.0	0	0.0
Asian	3	3.0	1	5.3
Black or African American	2	2.0	2	10.5
Hispanic or Latino	6	5.9	7	36.8
White or Caucasian	86	85.1	8	42.1
Other	3	3.0	1	5.3
Education				
High-school diploma	0	0.0	5	26.3
Bachelors	13	12.9	9	47.3
Masters	75	74.2	4	21.1
Professional doctorate	13	12.9	1	5.3
Annual household income				
Decline to state	11	10.9	4	21.1
< $21,000	0	0.0	2	10.5
$21,000-$40,000	7	6.9	1	5.3
$41, 000-$60,000	16	15.8	2	10.5
$61,000-$80,000	16	15.8	1	5.3
$81,000-100,000	12	11.9	4	21.1
> $100,000	39	38.7	5	26.2
Employment				
Full-time	74	73.3	6	31.6
Part-time	27	26.7	6	31.6
Unemployed	0	0.0	5	26.3
Other	0	0.0	2	10.5

a. **Questions 1.1-1.3: Therapists' Early Intervention Self-Efficacy, Experience, and Training**

Therapists' professional experience specific to EI is provided in Table VI and Table VII. Therapists' disciplines included developmental, occupational, physical, and speech therapy. The majority of therapists practiced full-time and held an EI evaluator credential. At the time of enrollment, therapists reported serving between three and 40 (M = 14.26, SD = 11.11) families on their caseload.

Therapists' EI self-efficacy (EISES) ranged from 3.75 to 6.30 (M = 5.23, SD = 0.62). The majority of therapists reported greater than 25 hours of training in family-centered care. The amount of training in therapeutic communication varied; approximately the same number of therapists reported zero training in therapeutic communication (n=27), as those reporting greater than 25 hours of training (n=28). The most commonly reported delivery methods for training in family-centered care and therapeutic communication included: graduate coursework, one-on-one supervision, and training through an employer, and continuing education. The majority of the therapists were not familiar with the IRM. Therapists who were familiar with the IRM reported learning about the model by reading a textbook, attending a course or a workshop, and visiting a website.

TABLE VI

THERAPISTS' PROFESSIONAL EXPERIENCE

Variable	n	%
Professional discipline		
Developmental therapist	24	23.8
Occupational therapist	32	31.7
Physical therapist	17	16.8
Speech therapist	28	27.7
Length of practice in a professional discipline (years)		
< 1	5	5.0
1-5	36	35.5
6-10	14	13.9
11-20	24	23.8
> 20	22	21.8
Length of practice in Early Intervention (years)		
< 1	10	9.9
1-5	42	41.6
6-10	12	11.9
11-20	25	24.7
> 20	12	11.9
Early Intervention evaluator credential		
Yes	62	61.4
No	39	38.6
Area for service provision*		
Urban	59	58.4
Suburban	54	53.5
Rural	9	8.9
Setting for service provision*		
Home	99	98.0
Daycare	84	83.2
Community	40	39.6
Clinic or Center	13	12.9
Other	2	2.0

Note: * = Percentages may not add up to 100%; participants had an option to "select all that apply."

TABLE VII

THERAPISTS' EXPERIENCE AND TRAINING

Variable	n	%
Amount of training in family-centered care (hours)		
0	4	4.0
1-5	12	11.9
6-10	10	9.9
11-15	12	11.9
16-20	7	6.9
21-25	3	3.0
> 25	53	52.5
Format of training in family-centered care*		
Undergraduate coursework	22	18.3
Graduate coursework	63	52.5
Continuing education	82	68.3
One-on-one supervision, consultation, or training	40	33.3
Group supervision or consultation or training	25	20.8
Other	5	4.2
Amount of training in therapeutic communication (hours)		
0	27	26.7
1-5	16	15.8
6-10	14	13.9
11-15	9	8.9
16-20	5	5.0
21-25	2	2.0
> 25	28	27.7
Format of training in therapeutic communication*		
Undergraduate coursework	16	13.3
Graduate coursework	46	38.3
Continuing education	49	40.8
One-on-one supervision, consultation, or training	26	21.7
Group supervision or consultation or training	18	15.0
Other	1	0.8
Familiarity with the Intentional Relationship Model (IRM)*		
Not Familiar	78	65.0
Textbook	13	10.8
Website	9	7.5
Course	13	10.8
Workshop	7	5.8
Other	3	2.5

Note: * = Percentages may not add up to 100%; participants had an option to "select all that apply."

Associations between years practicing, hours of training in family-centered care, hours of training in therapeutic communication, and EI self-efficacy (EISES) were evaluated using Pearson's correlation (Table VIII). The number of years a therapist spent practicing in EI had a moderate positive correlation with the number of hours of training in family-centered care, a weak positive correlation with the number of hours of training in therapeutic communication, and a weak positive correlation with EI self-efficacy. Therapists' EI self-efficacy had a weak positive correlation with the number of hours of training in family-centered care, and no correlation with the number of hours of training in therapeutic communication.

TABLE VIII
ASSOCIATION BETWEEN YEARS PRACTICING, TRAINING, AND SELF-EFFICACY

Variable	Years Practicing in Early Intervention	Training in Family-Centered Care	Training in Therapeutic Communication	Early Intervention Self-Efficacy
Years Practicing in Early Intervention	-			
Training in Family-Centered Care	.447**			
Training in Therapeutic Communication	.245*	.274**		
Early Intervention Self-Efficacy	.332**	.266**	0.034	-

**. Correlation is significant at the 0.01 level; *. Correlation is significant at the 0.05 level.

i. **Analysis of Professional Experience by Therapist Group**

Preliminary analysis was conducted to evaluate group differences in the scores reported by the four professional disciplines (developmental, occupational, physical, and speech therapists) using a one-way ANOVA. There was no statistically significant difference in years practicing in EI, training in family-centered care, or EI self-efficacy (EISES) ($p > 0.05$).

There was a statistically significant difference between the professional discipline groups in reported levels of exposure to training in therapeutic communication ($F(3,97) = 4.00$, $p = 0.01$). The Tukey post hoc comparisons indicated that occupational therapists ($M = 4.81$, $SD = 2.10$) reported significantly greater levels of exposure to training in therapeutic communication compared to speech therapists ($M = 2.96$, $SD = 2.27$; $p = 0.013$), and developmental therapists ($M = 3.21$, $SD = 2.50$; $p = 0.05$). There was no statistically significant difference between occupational therapists and physical therapists ($M = 3.29$, $SD = 2.39$; $p = 0.13$).

In light of the difference in training between professional disciplines, a secondary analysis was conducted on therapists' self-report specific of family participation (PPEM), family-centered practices (MPOC-SP), therapeutic communication (CAM), and sub-optimal interaction (CASI-SF). There was no significant difference in reported PPEM scores across the four professional disciplines ($p > 0.05$). A one-way ANOVA indicated that there was a significant difference in the self-reported scores on the MPOC-SP: Showing Interpersonal Sensitivity and MPOC-SP: Providing Specific Information domains between the four professional discipline groups (Table IX).

TABLE IX
FAMILY-CENTERED PRACTICES BY PROFESSIONAL DISCIPLINE

Variable	Sum of Squares	df	Mean Square	F	Sig.
Showing Interpersonal Sensitivity	9.98	3, 97	3.33	4.57	0.005
Treating People Respectfully	3.19	3, 97	1.06	1.82	0.149
Communicating Specific Information	16.90	3, 97	5.63	3.09	0.031
Providing General Information	15.67	3, 97	5.22	2.29	0.084

The Tukey post hoc comparisons indicated that, physical therapists (M = 5.84, SD = 0.66) reported greater frequency of behaviors on the MPOC-SP: Showing Interpersonal Sensitivity domain compared to developmental therapists (M = 5.12, SD = 0.96; p = 0.044) and occupational therapists (M = 5.04, SD = 0.89; p = 0.012). Similarly, physical therapists (M = 5.85, SD = 1.20) reported greater frequency of behaviors on the MPOC-SP: Providing Specific Information domain compared to developmental therapists (M = 4.67, SD = 1.64; p = 0.044) and occupation therapists (M = 4.72, SD = 1.37; p = 0.038).

A one-way ANOVA indicated that there was a significant difference in the self-reported scores on the overall CAM, Advocating subscale, and the Instructing subscale between the four professional disciplines (Table X).

The Tukey post hoc comparisons indicated that, while occupational therapists (M = 2.43, SD = 0.40) reported lower frequency of communication on the overall CAM compared to speech therapists (M = 2.63, SD = 0.25), the numerical difference did not reach statistical significance (p = 0.059). Similarly, while occupational therapists (M = 1.74, SD = 0.71) reported lower frequency of communication on the Advocating subscale compared to physical therapists (M = 2.20, SD = 0.41), the numerical difference did not reach statistical significance (p = 0.053). On the Instructing subscale, developmental therapists (M = 2.48, SD = 0.37) reported significantly lower levels of communication compared to physical therapists (M = 2.79, SD = 0.26; p = 0.018) and speech therapists (M = 2.78, SD = 0.22; p = 0.006).

TABLE X
THERAPEUTIC COMMUNICATION AND SUB-OPTIMAL INTERACTION BY PROFESSIONAL DISCIPLINE

Variable	Sum of Squares	df	Mean Square	F	Sig.
CAM	0.99	3, 97	0.33	3.30	0.024
Empathizing	0.35	3, 97	0.12	1.68	0.177
Encouraging	0.93	3, 97	0.31	2.31	0.081
Instructing	1.68	3, 97	0.56	5.41	0.002
Collaborating	1.04	3, 97	0.35	2.02	0.116
Problem-solving	1.36	3, 97	0.45	2.16	0.098
Advocating	2.91	3, 97	0.97	2.75	0.047
CASI-SF	0.54	3, 97	0.18	1.01	0.390

b. **Questions 1.4-1.5: Parents' EI Self-Efficacy, Experience, and Training**

Demographic information related to parents' experience of EI is presented in Table XI. The majority of parents were enrolled in EI for the first time, lived in an urban area, and received EI services at home. All parents reported that only one child in the household was receiving EI at the time of enrollment. The length of services ranged from two to 30 months (M = 13.79, SD = 7.98). The children's age ranged from two to 35 months (M = 24.95, SD = 9.10).

The majority of parents reported zero hours of training specific to EI services and the role of therapists on the EI team (Table XI). Parents' EI self-efficacy (EIPSES) ranged from 4.51 to 6.85 (M = 5.66, SD = 0.48). There was no correlation between the parents' self-reported ratings on the EIPSES and the hours of training related to EI or length of services in EI ($p > 0.05$).

TABLE XI

PARENTS' EARLY INTERVENTION EXPERIENCE

Variable	n	%
First time in Early Intervention		
Yes	15	78.9
No	4	21.1
Area for service provision		
Urban	17	89.4
Suburban	1	5.3
Rural	1	5.3
Setting for service provision*		
Home	17	89.5
Daycare	2	10.5
Clinic or Center	9	47.5
Early Intervention services received*		
Developmental therapy	15	78.9
Nutrition	4	21.1
Occupational therapy	15	78.9
Physical therapy	14	73.7
Social work	5	26.3
Speech therapy	16	84.2
Child's gender		
Female	5	26.3
Male	14	73.7
Reason for referral		
Autism	1	5.3
General developmental delay	7	36.8
Down syndrome	6	31.6
Speech delay	5	26.3
Training in Early Intervention process of care (hours)		
0	10	52.6
1-5	5	26.3
6-10	0	0.0
11-15	1	5.3
>25	3	15.8
Format of training in the Early Intervention process of care*		
Self-taught	3	15.8
One-on-one training from the EI service coordinator	4	21.1
One-on-one training from one or more EI therapists	7	36.8

Note: * = Percentages may not add up to 100%; participants had an option to "select all that apply."

2. Objective 2: Therapist and Parent Perspectives on Early Intervention

a. Questions 2.1-2.2: Family Participation

Therapists' average scores on the PPEM ranged from 1.40 to 5.00 (M = 3.73, SD = 0.71). Parents' average scores on the PPEM ranging from 3.00 to 5.00 (M = 4.33, SD = 0.65).

b. Questions 2.3-2.4: Therapists' Use of Family-Centered Practices

Therapist and parent scores on the MPOC-SP and MPOC-20 are presented in Table XII. The MPOC-SP and MPOC-20 scores were greater on the domains that focused on the relational aspects of care, as compared to the communication of specific and general information. Therapists and parents reported the lowest mean average scores for the domains related to communication of general information, followed by communication of specific information.

c. Questions 2.5-2.6: Therapists' Use of Communication

Therapists' identified between zero and six modes (M = 2.08, SD = 1.40) that they could have used more effectively in practice. Therapists reported that they could have been more effective in their use of: collaborating (n = 47), problem-solving (n = 47), instructing (n = 43), advocating (n = 41), empathizing (n = 19), and encouraging (n = 13) modes. Only 10 therapists reported that they were satisfied with their communication across all six of the IRM modes.

TABLE XII

THERAPISTS' USE OF FAMILY-CENTERED PRACTICES

Variable	Therapist				Parent			
	Min	Max	M	SD	Min	Max	M	SD
MPOC-SP								
Treating People Respectfully	3	7	5.95	0.77	-	-	-	-
Showing Interpersonal Sensitivity	3	7	5.34	0.90	-	-	-	-
Communicating Specific Information	2	7	5.02	1.39	-	-	-	-
Providing General Information	1	7	3.97	1.54	-	-	-	-
MPOC-20								
Respectful and Supportive Care	-	-	-	-	2	7	5.91	1.25
Coordinated and Comprehensive Care	-	-	-	-	2	7	5.87	1.27
Enabling and Partnership	-	-	-	-	2	7	5.40	1.59
Providing Specific Information	-	-	-	-	1	7	3.92	1.69
Providing General Information	-	-	-	-	1	6	3.55	1.64

Comparatively, the number of modes that the parents reported that therapists could have utilized more effectively was lower, ranging from zero to four (M = 0.53, SD = 1.07). Parents reported that therapists could have been more effective in their use of: instructing (n = 4), problem solving (n = 3), collaborating (n = 1), advocating (n = 1), empathizing (n = 1), and encouraging (n = 0). The majority of parents (n = 14) reported that they were satisfied with how the therapists used their communication across the six IRM modes.

Therapists and parents reported a high frequency of therapeutic communication (CAM) and a low frequency of sub-optimal interaction (CASI-SF) (Table XIII). Both participant groups reported that therapists most frequently used the empathizing and encouraging modes, followed by instructing, collaborating, problem-solving, and advocating (Table XIII).

3. **Objective 3: Association Between Parents' Participation, Therapists' Use of Family-Centered Practices, and Therapists' Communication**

a. **Question 3.1.1 and 3.2: Factors Associated with Family Participation**

Pearson's correlation was used to evaluate the strength of association between therapists': 1) professional experience (years practicing in EI, training in family-centered practices, and training in therapeutic communication), 2) frequency of therapeutic communication (CAM) and sub-optimal interaction (CASI-SF), 3) frequency of family-centered practices (MPOC-SP), and 4) level of parent participation in EI treatment sessions (PPEM) (Table XIV). There was no evidence of collinearity between independent variables (Table XIV). Variables with a statistically significant correlation and an $r > 0.20$ were included in the regression models that were used to test the association strength between the independent and dependent variables.

TABLE XIII

THERAPISTS' COMMUNICATION AND SUB-OPTIMAL INTERACTION

Variable	Therapist				Parent			
	Min	Max	M	SD	Min	Max	M	SD
CAM	1	3	2.53	0.33	2	3	2.52	0.26
Empathizing	2	3	2.76	0.27	2	3	2.72	0.35
Encouraging	1	3	2.73	0.37	2	3	2.71	0.27
Instructing	2	3	2.65	0.34	2	3	2.75	0.21
Collaborating	1	3	2.59	0.42	2	3	2.66	0.42
Problem-solving	1	3	2.51	0.47	2	3	2.66	0.34
Advocating	0	3	1.94	0.61	0	2	1.60	0.62
CASI-SF	0	2	0.77	0.42	0	1	0.25	0.35

TABLE XIV

FAMILY PARTICIPATION, FAMILY-CENTERED PRACTICES, AND THERAPISTS' COMMUNICATION

Variable	PPEM
Years Practicing in Early Intervention	.300**
Training in Family-Centered Care	.453**
Training in Therapeutic Communication	.221*
EISES	.332**
MPOC-SP: Showing Interpersonal Sensitivity	.275**
MPOC-SP: Treating People Respectfully	.316**
MPOC-SP: Providing General Information	0.082
MPOC-SP: Communicating Specific Information	.232*
CAM	.389**
Advocating	.376**
Collaborating	.258**
Empathizing	.194*
Encouraging	.346**
Instructing	.329**
Problem-solving	.277**
CASI-SF	-.252**

** = Correlation is significant at the 0.01 level; * = Correlation is significant at the 0.05 level.

A moderate positive correlation was found between parent participation (PPEM) and training in family-centered care (Table XIV). A weak positive correlation was found between the parent participation (PPEM) and a number of years practicing, training in therapeutic communication, and EI self-efficacy (EISES), MPOC-SP: Showing Interpersonal Sensitivity, MPOC-SP: Treating People Respectfully, and MPOC-SP: Communicating Specific Information (Table XIV). There was no significant correlation between parent participation (PPEM) and MPOC-SP: Providing General Information (Table XIV). Therapists' overall mode use (CAM), Advocating mode use, Collaborating mode use, Encouraging mode use, Instructing mode use, and Problem-solving mode use had a weak positive correlation with parent participation (PPEM) (Table XIV). Therapists' Empathizing mode use had a very weak but significant positive correlation with parent participation (PPEM) (Table XIV). Therapists' sub-optimal interaction (CASI-SF) had a weak negative correlation with parent participation (PPEM) (Table XIV).

Multiple linear regression was calculated to evaluate whether the therapists' parent participation ratings could be significantly associated with the variables mentioned above. Due to concerns with collinearity, separate analyses were conducted for the overall CAM score (Table XV) and the six individual mode subscales (Table XVI). The model that utilized the overall CAM score predicted 52% of variability on the PPEM; the model that utilized individual domain scores predicted 55% of variability on the PPEM. The PPEM was most significantly associated with the number of hours of training in family-centered care, a number of hours of training in therapeutic communication, and the MPOC-SP: Treating People Respectfully domain. When accounting for individual CAM subscale scores, the PPEM was most significantly associated with the number of hours of training in family-centered care and therapists' EI self-efficacy (EISES).

TABLE XV

VARIABLES PREDICTING PARENTS' PARTICIPATION (OVERALL COMMUNICATION)

Variable	B	SE B	β	t	p	R^2	F	p
Years Practicing in Early Intervention	-0.05	0.06	-0.08	-0.84	0.404	0.52	8.66	0.000
Training in Family-Centered Care	0.07	0.03	0.21	2.04	0.044			
Training in Therapeutic Communication	0.05	0.02	0.17	2.02	0.047			
EISES	0.17	0.10	0.16	1.75	0.083			
MPOC-SP: Showing Interpersonal Sensitivity	0.19	0.11	0.25	1.70	0.092			
MPOC-SP: Treating People Respectfully	0.29	0.12	0.33	2.49	0.015			
MPOC-SP: Providing General Information	0.00	0.04	0.01	0.08	0.935			
MPOC-SP: Providing Specific Information	-0.01	0.06	-0.02	-0.18	0.857			
CASI	0.03	0.14	0.02	0.25	0.806			
CAM	0.12	0.25	0.06	0.48	0.633			

Note: Only the variables with statistically significant correlations and an $r > 0.20$ were included in the regression model.

TABLE XVI

VARIABLES PREDICTING PARENTS' PARTICIPATION (MODE SUBSCALES)

Variable	B	SE B	β	t	p	R^2	F	p
Years Practicing in Early Intervention	-0.04	0.06	-0.07	-0.66	0.512	0.55	6.12	0.000
Training in Family-Centered Care	0.07	0.03	0.23	2.19	0.032			
Training in Therapeutic Communication	0.04	0.02	0.14	1.69	0.094			
EISES	0.20	0.10	0.18	1.99	0.050			
MPOC-SP: Showing Interpersonal Sensitivity	0.21	0.12	0.28	1.84	0.070			
MPOC-SP: Treating People Respectfully	0.22	0.13	0.24	1.70	0.093			
MPOC-SP: Providing General Information	0.00	0.05	0.01	0.09	0.927			
MPOC-SP: Providing Specific Information	0.01	0.06	0.02	0.21	0.836			
CASI	0.06	0.14	0.04	0.45	0.652			
CAM: Advocating	-0.11	0.13	-0.10	-0.87	0.386			
CAM: Collaborating	0.07	0.23	0.04	0.31	0.757			
CAM: Empathizing	-0.22	0.25	-0.09	-0.90	0.371			
CAM: Encouraging	0.27	0.23	0.14	1.16	0.250			
CAM: Instructing	-0.23	0.25	-0.12	-0.90	0.371			
CAM: Problem-solving	0.23	0.19	0.15	1.17	0.247			

Note: Only the variables with statistically significant correlations and an $r > 0.20$ were included in the regression model.

b. **Questions 3.1.2 and 3.3: Factors Associated with Family-Centered Practices**

Pearson's correlation was used to evaluate the strength of association between therapists' self-reported: 1) professional experience (years practicing in EI, training in family-centered practices, training in therapeutic communication), 2) frequency of therapeutic communication (CAM) and sub-optimal interaction (CASI-SF), and 3) frequency of family-centered practices (MPOC-SP) (Table XVII). There was no evidence of collinearity between independent variables (Table XVII). Variables with statistically significant correlations and an $r > 0.20$ were included in the regression models that were used to test the association strength between the independent and dependent variables.

A number of years practicing had a weak positive correlation with therapists' scores on three of the four MPOC-SP domains: Showing Interpersonal Sensitivity, Treating People Respectfully, and Communicating Specific Information (Table XVII). Therapists' training in family-centered practices has a weak positive correlation with two of the four MPOC-SP domains: Treating People Respectfully, and Providing General Information (Table XVII). There was no significant correlation between the therapists' training in therapeutic communication and MPOC-SP (Table XVII). The therapist's EI self-efficacy (EISES) had a weak positive correlation with therapists' scores on three of the four MPOC-SP domains: Showing Interpersonal Sensitivity, Treating People Respectfully, and Providing General Information (Table XVII).

TABLE XVII

ASSOCIATION BETWEEN FAMILY-CENTERED PRACTICES AND THERAPISTS' COMMUNICATION

Variable	Years Practicing in Early Intervention	Training in Family-Centered Care	Training in Therapeutic Communication	EISES	MPOC-SP: Showing Interpersonal Sensitivity	MPOC-SP: Treating People Respectfully	MPOC-SP: Providing General Information	MPOC-SP: Communicating Specific Information
MPOC-SP: Showing Interpersonal Sensitivity	.275**	0.087	0.064	.204*				
MPOC-SP: Treating People Respectfully	.316**	.278**	-0.003	.359**	.717**			
MPOC-SP: Providing General Information	0.082	.308**	0.033	.208*	.406**	.333**		
MPOC-SP: Communicating Specific Information	.232*	0.031	0.067	0.148	.712**	.546**	.326**	
CAM	.389**	0.177	0.039	.239*	.683**	.604**	.425**	.550**
Advocating	.376**	0.185	0.065	0.145	.516**	.374**	.410**	.353**
Collaborating	.258**	0.145	0.018	.217*	.552**	.586**	.432**	.428**
Empathizing	.194*	0.166	0.038	.223*	.390**	.365**	.226*	.394**
Encouraging	.346**	0.148	-0.008	.226*	.552**	.609**	.362**	.375**
Instructing	.329**	0.063	-0.013	.258**	.593**	.468**	.272**	.574**
Problem-solving	.277**	0.112	0.055	0.126	.606**	.489**	.250*	.486**
CASI-SF	-.252**	-0.185	-0.099	-.313**	-0.182	-.344**	-0.135	-.213*

**. Correlation is significant at the 0.01 level; *. Correlation is significant at the 0.05 level.

Therapists' overall therapeutic communication (CAM), as well as their use of the six individual modes, had a weak to moderate positive correlation with all four MPOC-SP domains: Showing Interpersonal Sensitivity, Treating People Respectfully, Providing General Information, and Communicating Specific Information (Table XVII). The CASI-SF had a weak negative correlation with two of the four MPOC-SP domains: Treating People Respectfully, and Providing Specific Information (Table XVII).

Separate multiple linear regressions were calculated to evaluate whether the therapists' scores on the four MPOC-SP domains were significantly associated with the variables mentioned above. Due to concerns with collinearity, separate analyses were conducted for the overall CAM (Table XVIII) score and the six individual mode subscales (Table XIX). The models that utilized the overall CAM score predicted 24-47% of the variability in the MPOC-SP; models that utilized individual domain scores predicted 32-53%.

The Showing Interpersonal Sensitivity and the Providing Specific Information domains were most significantly associated with therapists' overall mode use (CAM) (Table XVIII). Further analysis suggested the Instructing subscale may be the most significant predictor of variability in the Showing Interpersonal Sensitivity and the Providing Specific Information domains on the MPOC-SP (Table XIX).

The Treating People Respectfully domain was most significantly associated with therapists' overall mode use (CAM) and sub-optimal interaction (CASI-SF) (Table XVIII). Further analysis suggested the Encouraging domain and the CASI-SF may be the most significant predictors of variability in the Treating People Respectfully domain on the MPOC-SP (Table XIX).

The Providing General Information domain was most significantly associated with the number of hours of training in family-centered care and therapists' overall mode use (CAM) (Table XVIII). Further analysis suggested the Advocating and the Collaborating domains may be the most significant predictors of variability in the Providing General Information domain on the MPOC-SP (Table XIX).

c. Questions 3.1.3 and 3.4: Factors Associated with Therapists' Communication

Pearson's correlation was used to evaluate the strength of association between therapist's self-reported: 1) professional experience (years practicing in EI, training in family-centered practices, training in therapeutic communication), and 2) frequency of therapeutic communication (CAM) and sub-optimal interaction (CASI-SF) (Table XX). There was no evidence of collinearity between independent variables (Table XX). Variables with statistically significant correlations and an $r > 0.20$ were included in the regression models that were used to test the association strength between the independent and dependent variables.

A number of years practicing had a weak positive correlation with therapists' overall therapeutic mode use (CAM) and the six individual mode subscales (Table XX). Additionally, the overall CAM ratings, and the Collaborating, Empathizing, Encouraging, and Instructing subscales had a weak positive correlation with the therapists' EI self-efficacy (EISES) (Table XX). Therapists' sub-optimal interaction (CASI-SF) had a weak negative correlation with the number of years the therapist spent practicing and the therapists' EI self-efficacy (EISES) (Table XX). There was no significant correlation between the therapist's therapeutic communication (CAM) or sub-optimal interaction (CASI-SF) and the amount of training the therapist received on family-centered practices or therapeutic communication (Table XX).

TABLE XVIII

VARIABLES PREDICTING FAMILY-CENTERED PRACTICES (OVERALL COMMUNICATION)

Variable	B	SE B	β	t	p	R^2	F	p
Showing Interpersonal Sensitivity						0.47	28.56	0.000
Years Practicing in Early Intervention	0.01	0.06	0.02	0.19	0.847			
EISES	0.06	0.11	0.04	0.49	0.623			
CAM	1.83	0.22	0.67	8.32	0.000			
Treating People Respectfully						0.47	16.93	0.000
Years Practicing in Early Intervention	-0.02	0.06	-0.03	-0.29	0.770			
Training in Family-Centered Care	0.05	0.03	0.12	1.45	0.150			
EISES	0.18	0.10	0.14	1.71	0.091			
CASI-SF	-0.39	0.15	-0.21	-2.68	0.009			
CAM	1.26	0.19	0.53	6.56	0.000			
Providing General Information						0.24	9.81	0.000
Training in Family-Centered Care	0.17	0.07	0.23	2.44	0.017			
EISES	0.15	0.24	0.06	0.65	0.518			
CAM	1.72	0.43	0.37	3.97	0.000			
Providing Specific Information						0.32	14.58	0.000
Years Practicing in Early Intervention	0.02	0.11	0.02	0.19	0.853			
CASI-SF	-0.48	0.29	-0.15	-1.68	0.097			
CAM	2.34	0.41	0.53	5.71	0.000			

Note: Only the variables with statistically significant correlations and an $r > 0.20$ were included in the regression model.

TABLE XIX

VARIABLES PREDICTING FAMILY-CENTERED PRACTICES (MODE SUBSCALES)

Variable	B	SE B	β	t	p	R^2	F	p
Showing Interpersonal Sensitivity						0.49	11.00	0.000
Years Practicing in Early Intervention	0.01	0.06	0.01	0.14	0.890			
EISES	0.05	0.12	0.03	0.42	0.673			
CAM: Advocating	0.27	0.15	0.19	1.83	0.070			
CAM: Collaborating	0.06	0.27	0.03	0.23	0.816			
CAM: Empathizing	0.08	0.31	0.02	0.24	0.809			
CAM: Encouraging	0.37	0.28	0.15	1.34	0.182			
CAM: Instructing	0.70	0.28	0.27	2.48	0.015			
CAM: Problem-solving	0.37	0.24	0.19	1.54	0.128			
Treating People Respectfully						0.52	9.87	0.000
Years Practicing in Early Intervention	-0.01	0.06	-0.01	-0.15	0.882			
Training in Family-Centered Care	0.05	0.03	0.14	1.67	0.098			
EISES	0.14	0.10	0.11	1.32	0.189			
CASI	-0.38	0.14	-0.21	-2.61	0.011			
CAM: Advocating	0.00	0.13	0.00	0.00	0.996			
CAM: Collaborating	0.30	0.23	0.16	1.28	0.204			
CAM: Empathizing	0.08	0.26	0.03	0.30	0.766			
CAM: Encouraging	0.73	0.23	0.35	3.12	0.002			
CAM: Instructing	0.25	0.24	0.11	1.03	0.305			
CAM: Problem-solving	0.03	0.20	0.02	0.13	0.897			

Note: Only the variables with statistically significant correlations and an $r > 0.20$ were included in the regression model.

TABLE XIX (continued)

VARIABLES PREDICTING FAMILY-CENTERED PRACTICES (MODE SUBSCALES)

Variable	B	SE B	β	t	p	R^2	F	p
Providing General Information						0.32	5.059	0.000
Training in Family-Centered Care	0.160	0.069	0.218	2.318	0.023			
EISES	0.112	0.240	0.045	0.468	0.641			
CAM: Advocating	0.749	0.287	0.300	2.604	0.011			
CAM: Collaborating	1.299	0.557	0.362	2.331	0.022			
CAM: Empathizing	-0.518	0.623	-0.091	-0.832	0.408			
CAM: Encouraging	0.275	0.551	0.068	0.498	0.620			
CAM: Instructing	0.407	0.568	0.092	0.717	0.475			
CAM: Problem-solving	-0.875	0.483	-0.269	-1.812	0.073			
Providing Specific Information						0.39	6.98	0.000
Years Practicing in Early Intervention	0.04	0.11	0.03	0.37	0.712			
CASI	-0.49	0.29	-0.15	-1.71	0.091			
CAM: Advocating	0.10	0.26	0.04	0.39	0.695			
CAM: Collaborating	-0.12	0.48	-0.04	-0.26	0.796			
CAM: Empathizing	0.91	0.53	0.17	1.71	0.090			
CAM: Encouraging	-0.02	0.48	0.00	-0.04	0.969			
CAM: Instructing	1.69	0.50	0.42	3.36	0.001			
CAM: Problem-solving	0.28	0.42	0.09	0.67	0.502			

Note: Only the variables with statistically significant correlations and an $r > 0.20$ were included in the regression model.

TABLE XX

ASSOCIATION BETWEEN THERAPISTS' BACKGROUND, THERAPEUTIC COMMUNICATION AND SUB-OPTIMAL INTERACTION

Variable	Years Practicing in Early Intervention	Training in Family-Centered Care	Training in Therapeutic Communication	EISES	CAM
CAM	.389**	0.177	0.039	.239*	-
Advocating	.376**	0.185	0.065	0.145	.786**
Collaborating	.258**	0.145	0.018	.217*	.843**
Empathizing	.194*	0.166	0.038	.223*	.650**
Encouraging	.346**	0.148	-0.008	.226*	.794**
Instructing	.329**	0.063	-0.013	.258**	.750**
Problem-solving	.277**	0.112	0.055	0.126	.856**
CASI-SF	-.252**	-0.185	-0.099	-.313**	-0.139

**. Correlation is significant at the 0.01 level; *. Correlation is significant at the 0.05 level.

Multiple linear regression was calculated to evaluate whether the therapists' therapeutic communication (CAM overall and the six individual subscales) and sub-optimal interaction (CASI-SF) were significantly associated with the length of EI practice and self-efficacy (EISES) (Table XXI). While the models examined were significant, they explained between 6% and 16% of the variance in the dependent variable. Except for the Empathizing subscale (which was not significantly associated with any of the variables included in the model), therapists' therapeutic communication (CAM) was most significantly associated with the number of years practicing in EI; with greater years practicing corresponding with greater CAM scores overall and on the individual subscale. The therapists' sub-optimal communication (CASI-SF) was most significantly associated with the therapists' EI self-efficacy (EISES); with greater self-efficacy corresponding with lower CASI-SF scores.

TABLE XXI

VARIABLES PREDICTING THERAPEUTIC COMMUNICATION AND SUB-OPTIMAL INTERACTION

Variable	B	SE B	β	t	p	R^2	F	p
CAM						0.15	8.70	0.000
Years Practicing	0.09	0.03	0.32	3.29	0.001			
EISES	0.07	0.05	0.13	1.34	0.185			
Advocating						0.16	9.16	0.000
Years Practicing	0.19	0.05	0.39	3.99	0.000			
EISES	0.01	0.10	0.01	0.15	0.882			
Collaborating						0.09	4.65	0.012
Years Practicing	0.07	0.03	0.21	2.06	0.043			
EISES	0.10	0.07	0.15	1.44	0.152			
Empathizing						0.07	3.42	0.037
Years Practicing	0.03	0.02	0.13	1.28	0.203			
EISES	0.08	0.04	0.18	1.72	0.088			
Encouraging						0.11	5.90	0.004
Years Practicing	0.08	0.03	0.25	2.49	0.014			
EISES	0.09	0.06	0.14	1.40	0.163			
Instructing						0.11	5.81	0.004
Years Practicing	0.06	0.03	0.21	2.09	0.040			
EISES	0.10	0.06	0.19	1.85	0.067			
Problem-solving						0.06	3.30	0.041
Years Practicing	0.09	0.04	0.23	2.23	0.028			
EISES	0.04	0.08	0.05	0.47	0.637			
CASI						0.11	6.09	0.003
Years Practicing	-0.04	0.03	-0.12	-1.18	0.241			
EISES	-0.19	0.07	-0.27	-2.71	0.008			

Note: Only the variables with statistically significant correlations and an $r > 0.20$ were included in the regression model.

4. **Objective 4 – Research Question 4.1: Parent Perspective on the Contributors to Family-Centered Practices and Parent Participation in Early Intervention**

Pearson's correlation was used to evaluate the strength of associations between parents' self-reported: 1) experience in EI (length of services and exposure to training related to EI), 2) frequency of therapists' therapeutic communication (CAM) and sub-optimal interaction (CASI-SF), 3) frequency of therapists' use of family-centered practices, and 3) level of parent participation in the EI sessions. Due to the small sample size, regression analyses could not be conducted on this sample.

A moderate positive correlation was found between the length of EI services and parents' training related to EI. Additionally, a moderate positive correlation was found between the parents' EI self-efficacy (EIPSES) and participation (PPEM). There was no association found between the parent factors (length of EI services, training in EI, EPSES, or PPEM) and the therapist factors (MPOC-20, CAM, or CASI-SF).

MPOC-20: Enabling and Partnership and the Coordinated and MPOC-20: Comprehensive Care had a strong positive correlation with the overall CAM and the Advocating subscale; a moderate positive correlation with the Encouraging, Instructing and Problem-solving subscales; and a moderate negative correlation with the CASI-SF. MPOC-20: Respectful and Supportive Care had a strong positive correlation with the overall CAM and the Problem-solving subscale; a moderate positive correlation with the Advocating, Collaborating, and Encouraging subscales; and a moderate negative correlation with the CASI-SF. MPOC-20: Providing General Information had a moderate positive correlation with the Advocating subscale. MPOC-20: Providing Specific Information had a moderate positive correlation with the Instructing and the Problem-solving subscales.

B. Study II: Communicating with Intention: Promoting Therapeutic Communication Through Continuing Education in Early Intervention

The feasibility, acceptability, and preliminary effects of a five-week EI continuing education course titled Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches in Early Intervention was evaluated using qualitative and quantitative approaches. Course feasibility and acceptability were evaluated for a combined group of therapist and parent participants. Preliminary effects of the course were evaluated separately for therapist and parent participants due to differences in sample size and sample characteristics.

1. Participants

A convenience sample of 27 therapists and six parents enrolled in EI in Illinois completed the study. Therapists' age ranged from 24 to 72 (M = 38.93, SD = 14.44). Parents' age ranged from 27.00 to 37.00 (M = 33.17, SD = 3.54). Additional demographic information is presented in Table XXII.

TABLE XXII
PARTICIPANT DEMOGRAPHICS

Variable	Therapist (n = 27)		Parent (n = 6)	
	n	%	n	%
Gender				
Female	26	96.3	6	100.0
Male	1	3.7	0.0	0.0
Race/ethnicity				
American Indian or Alaska Native	1	3.7	0	0.0
Asian	0	0.0	0	0.0
Black or African American	2	7.4	0	0.0
Hispanic or Latino	4	14.8	3	50.0
White or Caucasian	20	74.1	2	33.3
Other	0	0.0	1	16.7
Education				
High-school diploma	0	0.0	2	33.3
Bachelors	4	14.8	3	50.0
Masters	20	74.1	1	16.7
Professional doctorate	3	11.1	0	0.0
Annual household income				
Decline to state	5	18.5	2	33.3
< $21,000	0	0.0	1	16.7
$21,000-$40,000	4	14.9	0	0.0
$41, 000-$60,000	6	22.2	0	0.0
$61,000-$80,000	5	18.5	1	16.7
$81,000-100,000	2	7.4	1	16.7
> $100,000	5	18.5	1	16.7
Employment				
Full-time	21	77.8	1	16.7
Part-time	6	22.2	2	33.3
Unemployed	0	0.0	2	33.3
Other	0	0.0	1	16.7

a. **Therapists**

Therapists' professional background and level experience specific to EI is presented in Tables XXIII and XXIV. Therapists' disciplines included developmental, occupational, physical, and speech therapy. The majority of therapists practiced full-time and held an EI evaluator credential. At the time of enrollment, therapists reported serving between three to 40 (M = 14.26, SD = 11.11) families on their caseload

The majority of therapists reported greater than 25 hours of training in family-centered care. The amount of training in therapeutic communication varied; the same number of therapists reported zero training in therapeutic communication (n=8), as those reporting greater than 25 hours of training (n=8). The most commonly reported delivery method for training in family-centered care and therapeutic communication included: graduate coursework, one-on-one supervision, and training through an employer, and continuing education. The majority of the therapists were not familiar with the IRM before the course. Therapists that reported familiarity with the model reported previous exposure to the model through reading a textbook, attending a course or a workshop, and visiting a website.

TABLE XXIII

THERAPISTS' PROFESSIONAL EXPERIENCE

Variable	n	%
Professional discipline		
Developmental therapist	10	37.0
Occupational therapist	10	37.0
Physical therapist	3	11.2
Speech therapist	4	14.8
Length of practice in a professional discipline (years)		
< 1	2	7.4
1-5	11	40.8
6-10	3	11.1
11-20	6	22.2
> 20	5	18.5
Length of practice in Early Intervention (years)		
< 1	4	14.8
1-5	13	48.2
6-10	2	7.4
11-20	6	22.2
> 20	2	7.4
Early Intervention evaluator credential		
Yes	16	59.3
No	11	40.7
Area for service provision*		
Urban	22	81.5
Suburban	13	48.1
Rural	1	3.7
Setting for service provision*		
Home	26	96.3
Daycare	22	81.5
Community	12	44.4
Clinic or Center	7	25.9
Other	1	3.7

Note: * = Percentages may not add up to 100%; participants had an option to "select all that apply."

TABLE XXIV
THERAPISTS' EXPERIENCE AND TRAINING

Variable	n	%
Training in Family-Centered Care (hours)		
None	2	7.4
1-5	5	18.5
6-10	3	11.1
11-15	4	14.8
16-20	1	3.7
21-25	1	3.7
> 25	11	40.7
Training in Family Centered Care Setting*		
Undergraduate coursework	4	14.8
Graduate coursework	16	59.3
Continuing education	15	55.6
One-on-one supervision, consultation, or training	9	33.3
Group supervision or consultation or training	6	22.2
Other	1	3.7
Training in Therapeutic Communication		
None	8	29.6
1-5	1	3.7
6-10	6	22.2
11-15	2	7.4
16-20	2	7.4
21-25	0	0.0
> 25	8	29.6
Training in Therapeutic Communication*		
Undergraduate coursework	4	14.8
Graduate coursework	13	48.1
Continuing education	9	33.3
One-on-one supervision, consultation, or training	10	37.0
Group supervision or consultation or training	5	18.5
Other	0	0.0
Familiarity with the Intentional Relationship Model (IRM)*		
Not Familiar	18	66.7
Textbook	6	22.2
Website	2	7.4
Course	6	22.2
Workshop	1	3.7
Other	1	3.7

Note: * = Percentages may not add up to 100%; participants had an option to "select all that apply."

b. **Parents**

Demographic information related to parents' experience of EI is presented in Table XXV. The majority of parents reported that this was their first time receiving EI services. All parents lived in an urban area and received services through an EI clinic as well as at home.

All parents reported that only one child in the household was receiving EI at the time of enrollment. The length of services ranged from six to 26 months (M = 13.17, SD = 7.39). Child's age ranged from 30 to 33 months (M = 31.33, SD = 1.51). All children were male and were receiving services due to ongoing concerns related to an Autism diagnosis, speech delay, or developmental delay. Parents reported a range of exposure to training related to EI services and the role of therapists on the EI team.

TABLE XXV

PARENTS' EARLY INTERVENTION EXPERIENCE

Variable	n	%
First time in Early Intervention		
Yes	5	83.3
No	1	16.7
Area of service provision		
Urban	6	100.0
Suburban	0	0.0
Rural	0	0.0
Setting for service provision*		
Home	5	83.3
Daycare	0	0.0
Clinic or Center	6	100.0
Early Intervention services received*		
Developmental therapy	5	83.3
Nutrition	0	0.0
Occupational therapy	1	16.7
Physical therapy	3	50.0
Social work	1	16.7
Speech therapy	6	100.0
Child's gender		
Female	0	0.0
Male	6	100.0
Reason for Referral		
Autism	1	16.7
General developmental delay	2	33.3
Speech delay	3	50.0
Training in Early Intervention process of care (hours)		
0	2	33.3
1-5	3	50.0
6-10	0	0.0
11-15	0	0.0
>25	1	16.7
Training in Family Centered Care Setting		
Self-taught	0	0.0
One-on-one training from the EI service coordinator	2	33.3
One-on-one training from one or more EI therapists	3	50.0

Note: * = Percentages may not add up to 100%; participants had an option to "select all that apply."

2. Objective 1 – Research Questions 1.1-1.2: Feasibility

Two aspects of course feasibility were evaluated, participant recruitment, and participant retention.

a. Participant Recruitment

A flow diagram of participant screening, enrollment, and retention is depicted in Figure 12. Of the 56 therapists and 15 parents who were eligible to participate, 35 (62.5%) therapists and 10 (66.7%) parents completed the written consent and enrolled in the course. The majority of therapists (n = 26; 74.3%) learned about the course through word-of-mouth and referral from colleagues, friends, and the principal investigator; the rest of therapists (n = 9; 25.0%) learned about the course through the EITP website. All parents (n=10; 100.0%) learned about the course and were recruited by the principal investigator.

One of the major barriers to parent recruitment included limited availability and access to parent networks that could be used to disseminate recruitment information. Additionally, limited access to childcare was identified as a major barrier to parent participation during the recruitment process. One of the six parents interviews in the study confirmed this finding, noting that “the childcare piece was hard…that was probably the biggest struggle” (Parent 1).

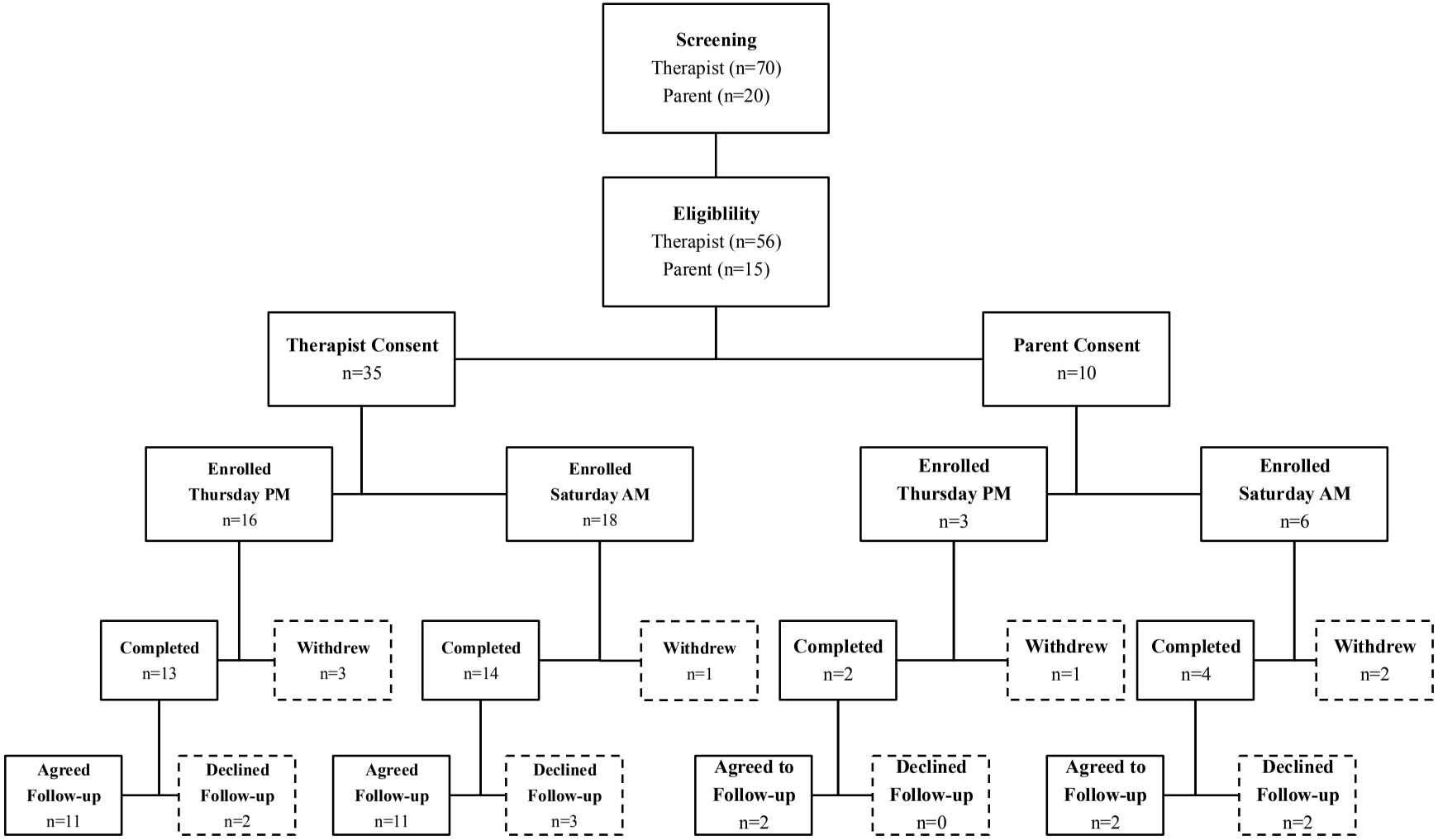

Figure 12. Flow diagram depicting participant screening, enrollment, and retention for Study II.

b. **Participant Retention**

Of the 35 therapists originally enrolled in the course, 28 (80.0%) were present during Week 1, and 27 (77.1%) completed Week 1 through Week 5. Of the 10 parents originally enrolled in the course, 8 (80.0%) were present during Week 1, and 6 (60.0%) completed Week 1 through Week 5. One therapist and one parent withdrew from the course during Week 1, reporting a life event and a change in schedule (respectively). One parent was lost to follow-up following Week 3.

Of the 27 therapists that completed the full course, five required a one-on-one make-up (three for Week 1, one for Week 3, and one for Week 3 and Week 5). Of the six parents that completed the full course, three required a one-on-one make-up (two for Week 3, and one for Week 3 and Week 5). All participants completed the research surveys, submitted their assignments before the in-person session, and were actively engaged in small group discussions. Participant engagement (measured by observation conducted by the principal investigator and an observer) in large group discussions ranged from active observation and maximal engagement in a large group discussion by making comments and asking questions (Table XXVI).

TABLE XXVI
PARTICIPANT ENGAGEMENT IN LARGE GROUP DISCUSSIONS

Observed Level of Engagement	Therapist n (%)	Parent n (%)
Active Observer (0 comments/questions)	5 (18.5%)	2 (33.3%)
Minimal (< 3 comments/questions)	3 (11.1%)	3 (50.0%)
Moderate (3-5 comments/questions)	16 (59.3%)	1 (16.7%)
Maximal (> 5 comments/questions)	3 (11.1%)	0 (0.0%)

3. **Objective 2: Acceptability**

Due to a small number of parent participants, to ensure anonymity, all course attendees were given an opportunity to complete an anonymous final course evaluation without including any participant identifiers. For this reason, comparative analysis of therapist and parent-reported course satisfaction could not be conducted. Twenty-seven therapists and five parents completed the final course evaluation (n = 32); one parent was lost to follow-up. Additionally, twenty-four therapists and four parents agreed to and completed the follow-up interview; five therapists and two parents were lost to follow-up. Three aspects of course acceptability were examined: course content, course structure, and course utility.

a. **Research Question 2.1: Course Content**

The participants reported high satisfaction with the course (Table XXVII).

TABLE XXVII
FINAL COURSE EVALUATIONS

Variable	Min	Max	M	SD
Overall Course Rating: The course…	4	5	4.84	0.37
…objectives were clear.	4	5	4.59	0.50
…materials were clear and well written.	4	5	4.69	0.47
…assignments were appropriate for this class.	4	5	4.78	0.42
…increased my interest in the subject.	4	5	4.75	0.44
…corresponded to my expectations.	3	5	4.56	0.56
Weekly Course Content Rating				
1. Introduction to relationship- and capacity-building practices	3	5	4.56	0.56
2. Introduction to the IRM	4	5	4.50	0.51
3. Applying the IRM to everyday interactions	4	5	4.63	0.49
4. Responding to strong emotions and challenging behaviors	3	5	4.56	0.56
5. Applying the IRM to participation-based challenges	4	5	4.69	0.47
Overall Instructor Rating: The instructor…	4	5	4.94	0.25
…demonstrated knowledge of the course content.	4	5	4.97	0.18
…was effective in communicating the content of the course.	4	5	4.84	0.37
…encouraged feedback from the attendees.	4	5	4.94	0.25
…showed genuine concern for the needs of the attendees.	4	5	4.94	0.25
…was enthusiastic about the course.	4	5	4.97	0.18

Some therapists provided unsolicited feedback that the course exceeded their expectations in their final course evaluations and follow-up interviews. While reflecting on their experience of the course, one therapist explained:

> I feel like in general in EI; I'm a very family-centered therapist...I'm always looking for parent participation. I'm always doing parent education…I'm always doing some sort of collaborating with the parent in the session…trying to make it about them and their child. And so, I remember thinking I'm not the therapist that needs this…I'm going to take this course because it's free and it's right by my house…and I need CEU credits. But…I didn't realize how valuable the course was going to be…I remember thinking, "I'm not the therapist that needs to take the course. The therapist that would never take this course was the therapist that needs to take it."…But it was so valuable and just made me think in ways that I don't normally think, and…I realized that there was so much more to the course than what I was expecting (Physical Therapist 16).

In addition to overall satisfaction, therapists and parents felt that the course content was relevant and immediately applicable to their day-to-day experience:

> I could practically apply it [information] immediately…I feel like now that I'm in practice…I'm like constantly problem-solving, and I never have the opportunity just to sit down and soak in new information…all of the information I learn is hands-on, [and] sometimes I do like a lecture format where…someone just teaches you something that you've…never heard before… but with that said, I think I got more out of it than I expected to…because it was really focused, hands-on investment, and kind of picking apart my own practice (Occupational Therapist 9).

> It was very practical and applicable to me…I think I was concerned that it was just going to be practical for therapists, and I didn't feel like it was. I feel like it was very applicable for all who were present…all of us can really [relate to] just feeling stuck, feeling like we can't…we want to communicate with our children, and yet…there's…as a barrier, I don't know…we keep getting stuck in the same patterns (Parent 1).

b. **Research Question 2.2: Course Structure**

Participants were highly satisfied with the course structure and the learning activities selected for the in-person meetings. All participants spoke about being highly engaged during in-class activities; the majority felt that the course would benefit from being expanded to allow more time for in-class activities and small groups discussions:

> I like the idea of [expanding the class to] 2.5 hours in-person. The table discussions were extremely valuable, but it never felt like there was enough time. I loved the online videos, one of the most engaging "online classes" I have ever taken. Also, I loved that for this topic, it was spread out over five weeks. It allowed time to process and try to practice in between and come back with questions (Anonymous Course Evaluation).

> I really liked the last session… when we had the small groups, and each one could share a situation that was difficult, and the whole team could try to work through it, it felt like that was really helpful…and I feel like almost…wanting more of that after the course, feeling like then things were making more sense, I was able to try to apply it more, and almost wanting more of that feedback and application…even a month later to check back in and have more examples of ways that things could have been handled differently (Parent 1).

A majority of therapists reported that this was their first experience with a flipped classroom format. Therapists reflected on the benefits and challenges of having to be familiar with the course content in preparation for the in-person discussions and activities. One therapist explained:

> I liked that it was almost pure application when we came in…That you just had to come in, ready to go with the concepts…It did feel more intense and a little bit scary too, because…it was hard for me not to feel like I wasn't going to miss something…that was it for me…really intense because it puts more responsibility on the student…you really have to step it up, and that's a good…I think that's a good thing. You have to engage more (Occupational Therapist 5).

Parents explained that this course was not only their first experience of being a part of a flipped classroom but also their very first experience taking a course-specific to EI. Overall, parents expressed satisfaction with the flipped classroom structure. One parent explained that although she felt “overwhelmed” with the vastness of the course content, the course structure supported her ability to stay accountable and engaged with the material:

> I actually had a very positive experience. It kept me accountable because with online courses, when you're going at your own pace within a certain timeframe, it's easy to slip into the mentality of, "Oh well, I'll just wing it and see what comes up" and with the class structure that you offered you couldn't do that…because if you did try to wing it you wouldn't make any sense…knowing that you are in a classroom with professionals and they can kind of tell if you're [faking it] or not (Parent 3).

In fact, the combination of feeling highly satisfied while simultaneously overwhelmed with the amount of material covered was reflected in both therapist and parent interviews:

> Maybe then I just got over that hump of being unfamiliar with something and, you know, diving, creating and trying to wrestle with it…like that is part of the learning process too… so…I don't know. Is that an area of improvement? Or is that just what had to happen? (Physical Therapist 22)

> I thought that the course ran really well. I remember the first week being a little overwhelmed like, "Uh, what did I get myself into?"…because there was so much information…but I thought the times that we did not meet in person…the videos were definitely thorough with explaining the concepts…the transcripts that were used, the verbiage that was used, and the cute little animations…that helped out a lot (Parent 3).

A combination of these experiences was likely a result of the transformative and experiential learning components integrated into the course curricula. The thematic content analysis generated three themes related to the participants' experience of the most memorable components of the learning process: 1) social learning, 2) experiential learning, and 3) reflective learning.

i. **Social Learning**

The most prominent theme across all interviews encompassed participants' appreciation for the opportunities to engage in social learning, and to be able to talk about shared experiences with others. Participants spoke about the perceived benefits of having an opportunity to collaborate and learn with a diverse group of therapists and parents:

> What I enjoyed the most were the stories that, that were shared. So, you're like, "Oh! I would have never thought this in a million years!" I felt the stories of the stuff that we talked about in the groups. That was a really, helpful, and I enjoyed it. It was really good…because I also get to see their point, or you know, see if they have another strategy…I felt like it helped (Parent 4).

In addition, many therapists spoke at length about the benefits of having an opportunity for interdisciplinary collaboration in a continuing education setting:

> I think that one thing too that I really got from the course, as a new occupational therapist, [is that] no matter how long they [therapists] have been practicing, they always…have room to grow and areas to improve…and it's just kind of nice to remember that you don't have to be perfect all the time and…there's always…learning to be done and…there's therapists that have been doing this forever and that were the same as me. They were like, "I always use the instructing mode!" It was like a breath of fresh air to hear some of that (Occupational Therapist 13).

> We had a lot of really great open discussions in the class…we all had kind of similar experiences so if someone else was sharing something that they had in a therapy session, it would not be unexpected that I would have something similar (Occupational Therapist 8).

Having the opportunity for social learning may have been particularly important to therapists due to feelings of isolation as a result of the current structure of the EI system of care. One therapist reflected on her discussion of feeling isolated: "I used the word isolating, and this therapist said, 'Yes! That's what it is, it's isolating!' and I think that there's quite a great majority of therapists that would feel that way" (Occupational Therapist 7). Another participant echoed this sentiment while reflecting on her experience of feeling alone despite being a part of an interdisciplinary EI team:

> I think as therapists… especially EI, we sometimes are like on an island, and we feel like if we're not doing it then who's going to do it…when there's, you know, at least one other person most of the time coming into this house that we could ask them to help carry over this strategy (Speech Therapist 6).

Parents also described feelings of isolation and limited opportunities to meet other parents that were going through the EI process with their children. All parents reflected on the benefits of being able to meet and network with other parents and adults in general:

> I actually … liked interacting with other adults…that helped me a lot actually…I really enjoyed it. I wished there was a little bit more like programs like that. So I could go and learn a little bit more (Parent 4).

> I really enjoyed that I got to sit next to the one parent…I loved meeting her, and wish I would've asked for her number, [laughs] I really enjoyed talking with her (Parent 1).

Reflecting on the small number of parent participants in the course, both therapists and parents expressed a hope that future courses would have more parents in attendance to create more opportunities for parents and therapists to network and connect with other parents in EI.

ii. **Experiential Learning**

Participants consistently reflected on the benefits of engaging in activities that provided opportunities for experiential learning. Parents and therapists reflected positively on being able to apply the course content to their everyday experience in and outside of EI as part of weekly reflection assignments and in-class activities. The most frequently mentioned experiential learning activity was the "IRM dice" game – which required the participants to use the IRM communication modes while helping another person find a solution to an everyday problem:

> That was really difficult, but also really interesting to see how like you could try and solve the problem while staying in that specific mode…I don't remember what mode it was, but I had to stick to a mode that I don't use very often, and I kept trying to jump to another mode…I remember you came by [and said,] "you're jumping, you're moving [between modes]."And so…it was just difficult for me to stay in modes that I'm not as familiar with and don't often use…It was very eye-opening…just seeing…when you were stuck using one mode the whole time. It was so fascinating trying to come up with a solution while staying in that same mode…that really stuck out to me. It was just such an interesting activity…I could have done that for an hour (Physical Therapist 16).

> I enjoyed everyone coming up with a problem and then rolling the dice and having to apply it because…we came up with kind of odd problems, and we didn't necessarily react well with the mode that was rolled…so it was good to see how people thought of how to approach [the problem] with that mode (Occupational Therapist 13).

iii. **Reflective Learning**

Participants perceived the benefit of having an opportunity to reflect upon their day-to-day experiences through discussion and assignments:

> So I knew going into this, at least a majority of us that were there because we believe in these methods…and we want to learn more about how to do it better. So I certainly feel like I already started out with having at least the same idea about the philosophies…but then learning more specifics about it, more things to consider. It was super helpful…I was like…"Oh…this is really cool – analyzing some things about myself that I just maybe didn't know, or didn't know how to name it (Developmental Therapist 12).

> Being able to review even our own current caseloads…relating some of those roles and dissecting some of the things…I haven't really done that in the past, so that helps deconstruct some things…whether what we did in class and through your feedback…it's just…cool and eye-opening. To see a different way of thinking…or maybe it wasn't too different…it's like everyday stuff…that I didn't really think to pause and think about the way that we should (Physical Therapist 22).

> I liked the course a lot…sometimes I'm working with my son, and I think…he's doing pretty good and I think it's because I'm trying stuff based on things we talked about in the course. I was just thinking about the discussion groups at the last session, and we're talking about stuff, somebody was talking about social stories, and I read something online about using that too, and I was like, "Oh! I heard about that in the course!" And you know, I felt like ahead of the game (Parent 2).

A reflection activity that was particularly memorable to the course participants was the video reflection, which was initially completed during Week 1 and again during Week 5. All therapists described the video as "uncomfortable" and difficult to watch; suggesting that, as intended, the video was effective in bringing about an emotional response, and thus, setting the stage for a disorienting dilemma. The majority of therapists attributed the feelings of discomfort to be able to relate to the therapist in the video:

> No one wants to be a bad therapist, right? But we all have moments when we're bad therapists…that video kind of like threw it in our face…I feel like all of us were watching this thing like…oh, man…this is not great therapeutic self, this is not great therapy and not great interpersonal relationship building… I think it's uncomfortable to watch because you're like, "oh, I wonder if I do that, I probably make that same mistake." I like to think of myself as being successful in my goal of being a good therapist, so it's uncomfortable to think of myself in those shoes (Occupational Therapist 9).

> I think it puts a mirror up to our own personalities maybe that's why it's uncomfortable. So, I think that when we first looked at it, that's what we were seeing…I think we have all experienced those [situations]…so yea, it's kind of like, ugh…it takes me back to those experiences!... Let's start again! I am going to go outside and come back in, and we are going to start this over [laughs] (Developmental Therapist 12).

Several therapists also attributed the discomfort to the therapist's lack of awareness of the parent's verbal and non-verbal cues:

> I guess it's hard to watch…[laughter] [therapist's] apparent lack of awareness…I'm sure there are real-life situations…with any therapist, myself included, where we are just missing those cues from parents…it was a real thing that could have happened…so even though people realized it wasn't a real therapy session, the fact that these are things that are happening…yeah, it brings up weird feelings (Occupational Therapist 23).

Consistent with the transformative learning theory, the therapists felt that the video was effective in supporting their ability to both apply and reflect upon the material covered in the course. Some therapists attributed increased reflectivity to the emotions evoked by the video:

> In some ways, it made me uncomfortable. It was just like ooh! [laughing] And so that was very, really good! You really evoked emotion! It really pointed out…what some of the relationship issues…it was a great springboard for talking (Physical Therapist 10).

> It was a great way to reflect on the modes…when a breakdown happens what you should do, or what would be more valuable in this situation…I think that whole remembering something when you get that emotional response, you know, in order for that to occur, and for you to remember something…it certainly…was a way to really reach in and impact people rather than just [show] another video (Occupational Therapist 7).

Several therapists also felt that the video raised reflection on their interactions with families in EI:

> Because we had to write down things that we thought were done well and things that could be improved on, I think just realizing some stuff that maybe…"Oh, I could probably improve on that too in my practice" and…"ooo, I probably should do that differently." I never did the whole videotaping myself, but…sometimes I kind of think…"What would you do if you were video tapped?"…One thing I think about a lot that I don't think I was so conscious about before is body language…because…you think about what you're saying and how you're saying it, but what is my like body language telling the child (Occupational Therapist 15)?

> It made me think… about my own practice and…how I can better respond to those situations…I think that I was thinking like, 'Oh, I would've done that differently' and I was just like, 'Oh it's just so clear to me that this parent's body language, the way that her tone of voice, everything, she's just not happy with how the session is going"…but it seemed like the therapist…was just not catching any of those subtle cues, so it was really awkward to see…and I was thinking, "Oh my goodness if a parent was responding to me that way I would try to…do something" (Speech Therapist 20).

> I was able to relate a lot to some of those things, and I kind of paused a couple of times even …the past couple weeks…when I felt like I was in those shoes… I think everyone was feeling…"oh my gosh, this happens to me!"…It was a lot of it like "whoa"…we've done all of that…pointing the finger right at me (Physical Therapist 22).

Parents, on the other hand, tended to remember the video as "comical," suggesting that parents were not just laughing at, but also with, the video. The parents spoke about the video as being more relatable than uncomfortable, suggesting that the session was reflective (at least in part) to their own experience of working with EI therapists:

> I felt like the parent wasn't not having it…you know…I remember my first time…when I had the…therapist coming in, I felt like that…"What am I suppose to do?"...I just thought it was funny. [laughs] I liked the video. I felt like the mom was just not having it…especially how she goes up. Like…"No, you need to stop." I just remember….how I felt at the very beginning, "Oh well, my kid is tried. So, he's not doing anything. He's not doing well. That's it." I felt like she did...wanting just to get up and leave (Parent 4).

> I felt like I connected with the most was…it was kind of comical for me…so, it's hard to fully connect with it but…the concepts of the mom kind of stating some things that were of concern and of being dismissed…and then her just like struggling with, "Oh, well, I don't even know what this service is, so like how do I even ask questions?" Or, how can she even find a way to express her concerns? Because they seemed to be on totally different wavelengths, as far as communicating with each other, I felt like I could relate to that to a degree (Parent 1).

One parent felt that it was painful to watch a disempowered parent in the video, and suggested that the example was a good illustration of uneven distribution of power within the parent-therapist relationship:

> It was painful to see, the mother…not empowered to say anything…to say what she really wanted to say…blowing the bubbles you asked, "Oh, is this okay?" and she said, "Uh, that's fine." And you could just kind of tell that she wasn't comfortable with that and you made a comment later, "Yeah, it gets everywhere and all over the place" and it's almost like the passive aggressiveness of it? Yeah…was a good video, a great example...how do you empower a parent…to get them to speak up (Parent 3)?

c. **Research Question 2.3: Course Relevance**

Content relevance to therapists and parents in EI was evaluated during the final course evaluation and follow-up interviews. In the final course evaluation, participants rated the likelihood that they would recommend this course to other therapists and parents in EI (Figure 13).

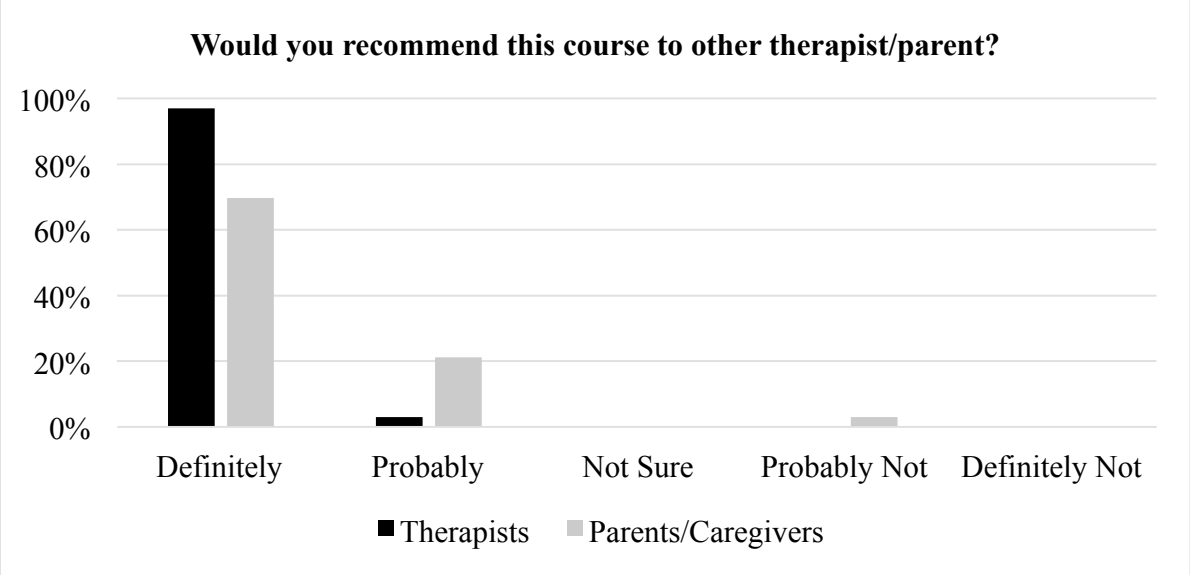

Figure 13. Frequency count of participants that would recommend the course to others.

The majority of course participants (n = 31; 96.8%) reported that they would "definitely" recommend the course to other therapists. One participant (3.2%) mentioned that they would "probably" recommend the course to other therapists; however, they did not provide any feedback or explanation that could inform future course development. The course participants saw the interpersonal focus of the course as a critical component of effective EI practice and felt that the course provided them with a new lens for examining their interactions with others:

> This [course] brought a new light to thinking about my interactions with different families. The process, although complex at first glance, makes sense when given the opportunity to break it all down (Anonymous Course Evaluation).

> I think EI is one of the most difficult settings in regards to having successful communication with clients and building rapport (many kids are nonverbal, and you must be in constant communication with children and parents). This course really helped me realize when I need to take a moment to re-evaluate my communication methods and switch modes (Anonymous Course Evaluation).

Twenty-three participants (71.9%) reported that they would "definitely" recommend the course to other parents and caregivers; seven participants (21.9%) reported that they would "probably" recommend the course. One participant (3.1%) was "not sure," and explained that while they "love the concept, and the ability to collaborate with parents" they felt that "the conversations were more geared toward providers" (Anonymous Course Evaluation). Another participant (3.1%) felt that they would "probably not" recommend the course to parents in the future, explaining:

> I feel like this is too high level for many of the families we work with. It would need to be brought down to be more family-friendly - also I feel it may be beneficial to have a parent session separate from the provider session, so providers feel more free to discuss feelings around challenging cases (Anonymous Course Evaluation).

This sentiment was also reflected in one of the four parent interviews. The parent felt that the therapists were so focused on instructing during the small group discussions that it made small group activities an overwhelming experience:

> Personally, I think parents should be left with parents - leave the therapists out of it because the heart of a therapist is to want to help, right? And when I'm struggling with this problem, and I'm at a table with three or four other therapists, they all have their two cents to say, and it's overwhelming…I think a lot of therapists were stuck in instructional mode. And when you have advice coming from three or four different people…depending on the size of your group…and …the empathy isn't balanced…and only another parent can empathize with you and commiserate and be like, "Yeah, my kid does that too, it sucks. But here's what works for me."…I mean, it was nice to be around different therapists, but only because of my background (as a coach)…I wanted to know what they thought and, you know, just kind of strategically listening for, "Okay, what are they saying? How are they viewing this?" But I can see as a mom…if I didn't already have a handle on [what's going on with my son]…how I could be overwhelmed. I think there was a woman I was sitting with she was a mom, and we were sitting with two other therapists, and they were going back-and-forth, back-and-forth, and she looked like she wanted to cry. She's just like…"I have tried all of that I don't know what else to do" (Parent 3).

The concerns regarding content accessibility and applicability for parent participants were likely due to the imbalance in the parent to therapist ratio in each class:

> I really loved having the parents in the class. I really loved having their input and just having their perspective for everything...because a majority of the group was therapists and it's over such a long period of time…I felt like we might have lost a few parents… I think there just needed to be like a little shift…maybe some of the examples are just a parent with their child… even learning like how we can help parents better engage with their child (Physical Therapist 75)?

> It might be beneficial to have [the parent course] separate from the providers… because there were definitely times where…I forgot…I can't imagine myself saying something…too insensitive, but I also like I feel like, as providers, we talk amongst each other about families differently than we do with families present… there were probably moments where I just forgot and…I'm sure that others did too… it would be nice…to make sure we don't feel like we have to hold back on…frustrations…real challenges that we are experiencing (Occupational Therapist 23).

> I think it would be great to have more parents involved too because I feel like they would connect with each other a bit more too rather than with just a couple of parents. If I were in the parents' shoes, I would have felt a little bit overwhelmed, or out of place, probably because there were so many therapists compared to parents. But I did definitely value them being there and sharing their experiences (Occupational Therapist 13).

Furthermore, content analysis of anonymous course evaluations suggested that there might have been confusion related to the role of the parents in the course. Specifically, therapists may not have been aware that parents were learning about improving their interactions with their children (as opposed to improving their interactions with EI therapists). For example, one participant commented, "I'm not sure how it would feel for families - since the therapist is responsible for the therapeutic relationship - I'm not sure what the family's responsibility should be that they should focus on in the class" (Anonymous Course Evaluation).

Overall, while there was a consensus that the course would benefit from future revision to ensure accessibility and applicability of the course content to parent-child interactions, therapists and parents felt that being a part of a diverse group of therapists and parents was an important contributor to the learning process:

> I think the other thing that stood out was just the fact of having the parents in the course with us. I haven't taken a course that that was the case and…just having their input there was really valuable (Physical Therapist 16).

> I found it very helpful to have parents in the room to hear about their experience. I didn't really get a chance to personally talk with any of the parents, so I don't know if they found it helpful because obviously, the IRM model is something you can use in your day-to-day relationships…it doesn't have to be anything that is therapy specific…I would hope they would find that useful too. But from the therapist perspective, I think, for me, it was really nice to have parents involved. The only course I have ever had parents involved in everything…it would be great to have more parents involved too because I feel like they would connect with each other a bit more too, rather than with just a couple of parents. If I were in the parents' shoes, I would have felt a little bit overwhelmed or out of place probably because there were so many therapists…but I did definitely value them being there and sharing their experiences (Occupational Therapist 13).

> I think I thought it was good…I think they are different perspectives, naturally, but I think it's good for both (therapists and parents) to hear each other…have that context to meet and hear those different perspectives…I thought that was really great, and I enjoyed the …the opportunity to network more…I enjoyed those getting to know some of the people there, and I would have appreciated more time to talk and meet others (Parent 1).

Furthermore, therapists felt that parent engagement in the class promoted their ability to have **"**a better understanding of what it's like in their [parent's] shoes" (Occupational Therapist 7):

> I would love for the parents just to have the floor sometimes. Because I think we don't often hear that or…I'll hear it from other parents talking about other therapists…[for example,] "I do not get along with this therapist" and…I don't know what to do other than to tell them to have a conversation with a service coordinator. I don't want to throw this person that I know (or don't know) under the bus, because I don't know what's being potentially misinterpreted (Developmental Therapist 12).

> Just hearing it from…an outside parent who is familiar with the situation…but isn't actually my client. Hearing it from them helps…I feel like they just offer a perspective that, I otherwise might, get a miss…In the home with our kids and their parents, we are focusing on so many different things that having…the discussion with the parents in this course…I wasn't worried about anything else that I might…[be] worrying about with my own clients (Speech Therapist 14).

4. **Objective 3 – Research Questions 3.1-3.3: Course Effectiveness – Therapist**

a. **Learning Plan**

Upon enrollment, all therapists identified the family as the key recipient of EI services and included at least one of the following core components of family-centered care in their definition of family-centered practice:

- Including the family in the therapy progress therapy
- Providing parent education
- Providing intervention within the natural environment and daily routines
- Identifying family priorities and working with parents toward their goals
- Empowering parents to carry out therapeutic strategies outside of therapy
- Working as a team with other therapists and parents

While reflecting upon the strengths of the family-centered approach in EI, all therapists discussed the benefits of increased parent participation, as well as increased parent confidence and ability to carry-over strategies outside of therapy. Several therapists also mentioned that, as a result of increased carry-over, there was an expectation of increased parent empowerment and improved child outcomes. Conversely, while reflecting on the challenges of family-centered care, many therapists described the complexities associated with working with a diverse group of families and parents:

- Differences in family backgrounds
- Differences in family priorities
- Lack of family participation
- Lack of family buy-in
- Perception on behalf of families of therapists as "experts."

Content analysis of individual learning plans indicated that therapists hoped to expand their knowledge related to 1) supporting family engagement, 2) implementing family-centered practices, and 3) improving family-therapist relationship and communication.

b. **Pretest Baseline**

Upon enrollment, therapists reported an overall high level of EI self-efficacy (Table XXVIII). Therapists reported a high frequency of therapeutic communication and low frequency of sub-optimal communication (Table XXVIII). Within the individual subscales of communication, therapists reported utilizing empathizing and encouraging communication most frequently, followed by instructing, collaborating, problem-solving, and advocating (Table XXVIII). The therapists reported a high frequency of behaviors on the MPOC-SP domains

related to Showing Interpersonal Sensitivity and Treating People with Respect (Table XXVIII). Comparatively, Providing Specific Information, and Providing General Information were less frequent (Table XXVIII). The therapists reported that parents were "somewhat" engaged in the sessions (Table XXVIII).

c. **Pretest and Posttest Survey Comparison**

A paired-samples t-test was conducted to examine whether there was a significant degree of change in the participants' pretest and posttest self-report ratings on the selected outcome variables. A statistically significant difference was found in the therapists' EISES scores, indicating a significant increase in therapists' EI self-efficacy (Table XXVIII).

Therapists reported an increase across all individual mode subscales of the CAM, with a statistically significant difference in the pretest and posttest scores for overall CAM, Encouraging subscale, Collaborating subscale, and Problem-Solving subscale (Table XXVIII). The change in the Instructing subscale approached but did not meet statistical significance (Table XXVIII). There was no statistically significant change for the Empathizing or the Advocating subscales (Table XXVIII). Therapists reported using encouraging and empathizing modes most frequently, followed by instructing, collaborating, problem-solving, and advocating.

There was a statistically significant change in one of the MPOC-SP domains: Treating People Respectfully (Table XXVIII). The Showing Interpersonal Sensitivity domain approached but did not reach significance (Table XXVIII). There was no significant difference in Providing Specific Information and Providing General Information domains (Table XXVIII). There was no significant change in the therapists PPEM scores (Table XXVIII).

TABLE XXVIII

PRETEST AND POSTTEST COMPARISON

Variable	Pretest		Posttest		Paired T-test			Cohen's D	Effect Size
	M	SD	M	SD	t	df	p		
EISES	5.12	0.64	5.36	0.59	-2.34	26	0.027	0.39	Medium
CAM	2.33	0.35	2.47	0.23	-3.09	26	0.005	0.47	Medium
Empathizing	2.67	0.32	2.75	0.34	-1.14	26	0.265	-	-
Encouraging	2.59	0.48	2.78	0.28	-2.67	26	0.013	0.48	Medium
Instructing	2.44	0.35	2.59	0.33	-2.00	26	0.056	-	-
Collaborating	2.38	0.48	2.53	0.35	-2.78	26	0.010	0.36	Medium
Problem-solving	2.25	0.48	2.45	0.39	-2.52	26	0.018	0.46	Medium
Advocating	1.65	0.68	1.72	0.60	-0.85	26	0.402	-	-
CASI	0.82	0.42	0.81	0.41	0.14	26	0.890	-	-
MPOC-SP									
Treating People Respectfully	5.46	0.90	5.82	0.85	-2.08	26	0.048	0.41	Medium
Showing Interpersonal Sensitivity	4.75	0.73	5.06	0.84	-1.85	26	0.075	-	-
Providing Specific Information	4.33	1.50	4.41	1.30	-0.26	21	0.801	-	-
Providing General Information	3.38	1.55	3.79	1.65	-1.10	24	0.282	-	-
PPEM	3.51	0.72	3.66	0.78	-1.33	26	0.195	-	-

d. **Reflection Assignments**

Comparative content analysis of Week 2 and Week 4 assignments confirmed that therapists demonstrated richer descriptions of the interpersonal interactions with clients and an increased tendency to use interpersonal reasoning in their reflections (Table XXIX and Table XXX). Of note, therapists demonstrated an increased tendency to identify: 1) barriers to communicating effectively, and 2) actionable steps to addressing those barriers:

> I often find myself in instructing mode in order to get the parent involved in the session and to make the information clear to the parent. I find it hard to empathize (not in general, but just be in that mode with this parent) because she doesn't disclose much about her feelings…I think I need to get more creative in empathizing mode to draw more information from the parent about how they are feeling, about the child's involvement in EI, as well as the weekly grind of [having] so many therapists come into the home (Occupational Therapist 2).

> The use of empathizing mode lightened them (parent) up a bit, and I felt like it increased our trust more, which overall helped out. I think they (parent) responded well to the instructing mode this time because if I told them exactly what to say/how to use a strategy, it was less overwhelming. I think I mix my communication modes too much still, and I would like to be more organized/intentional about using multiple communication modes during these situations (Speech Therapist 14).

> Initially, I attempted instructing mode to help the child understand the game. Honestly, then I do not remember what happened until we did the activity again, and thankfully, the pirate popped out and ended the interpersonal event. He became more agitated as there was an empathetic break. As I watch the videos today, I think I should have tried to start with empathizing mode to acknowledge why he was upset, and then try to transition to collaborating mode to determine how he wanted to proceed with the game (Physical Therapist 16).

Two major themes related to commonly experienced communication barriers in EI were generated following thematic analyses of the Week 2 and Week 4 assignments: 1) feeling "stuck" and experiencing difficulty switching from empathizing (Table XXIX), and 2) feeling "stuck" and experiencing difficulty switching from instructing (Table XXX).

The same themes were confirmed through a thematic analysis of the follow-up interviews. While therapists recognized the importance and the benefits of an empathic approach to care, they also recognized the drawbacks:

> I do think that to a certain extent that honest, genuine empathy is a really big, at least, strength of mine…parents recognize when you go and do feel invested, and that is a genuine tool in therapy…[also] recognizing…the limits and the boundaries and at what point it's not really helpful to get so emotionally invested that you can't be looking at a situation as rationally (Occupational Therapist 13).

> I think I've always been empathic, [laughing] to a fault. You know…in some respects, so it's difficult to put the boundaries and to try to move forward (Physical Therapist 10).

Similarly, therapists felt that while instruction was necessary to create structure and support family education, they found themselves struggling with letting go of control:

> Kind of realizing how often I used the instructing mode. I think it was during our very first session, we kind of talked about it … and I just kind of realized, "Oh my gosh, I always do that." I'm always trying to instruct instead of letting kids…figure things out on their own. … And then realizing that it's okay to let go of control when you're in a session. … And just that…I kind of have in my mind, "I'm the therapist, I'm the one that needs to be leading the session and making sure we are getting the things done that need to get done." … And kind of realizing that sometimes taking a step back and letting go of some of that control helps, not only to build report but also lets kids learn problem-solving skills and … just kind of lets them take control over what's important to them (Occupational Therapist 15).

TABLE XXIX

CASE COMPARISON OF REFLECTION ASSIGNMENTS: "I GOT STUCK IN EMPATHIZING…"

Occupational Therapist 5	Week 2	Week 4
What therapeutic communication mode(s) did you attempt most and least frequently during this interaction?	Collaborating, empathizing, encouraging.	I did not use advocating. I tried collaborating and problem-solving the most. I also empathized because I saw the dad was very concerned. I did a little instructing, especially at the end when I talked in hindsight about what I tried that worked…and how he could do something similar throughout the week.
What was the other person's response to the therapeutic communication mode(s) attempted by you?	Enjoyment at first, sense of playfulness and freedom to explore; but discouragement when could not accomplish the task she chose.	He responded well initially to my empathizing and problem solving/instructing (probably mixing modes here!) to get her down from the high chair. There may have been an empathetic break just before he took the phone call. I could tell he was impatient with playing and not focusing on feeding directly, but I also knew that if we pushed it, we would get more resistance from the child. I probably should have switched to instructing mode here because I knew what might work and I could tell he was looking for guidance, but I got stuck in empathizing and collaborating. It was much easier to use instructing when he came back, and there was already a successful outcome to point to.
What, if anything, would you like to try differently in the future?	Provide more instruction and problem-solving ideas sooner before she becomes too discouraged. She was only able to envision one type of "success" within this play task. I could have structured or guided task to provide more avenues for success resulting in more persistence within an initial task. And more sustained trust/acceptance of help with further tasks.	In retrospect, I needed to move out of empathy and collaborating mode. I kept defaulting to empathy falling into the trap of his anxiety, I think. I see now that he was feeling lost, and when I moved into instructing, he actually felt relief. I also know that I am less inclined to use instructing because fearing of being "bossy." It would have been better to have been able to instruct dad to guide the child toward eating instead of this occurring when he was out of the room.

TABLE XXX

CASE COMPARISON OF REFLECTION ASSIGNMENTS: "GIVING UP CONTROL OF THE SITUATION…"

Occupational Therapist 9	Week 2	Week 4
What therapeutic communication mode(s) did you attempt most and least frequently during this interaction?	I attempted the instructing mode during the interaction.	Most frequently - instructing, encouraging, and problem-solving. We would try to use non-verbal communication more than verbal as well, and also tried to be empathetic and understand why the child wanted to have control over how he was playing with the beads. Least frequently - advocating and collaborating. We could have used more empathizing, which could have led to collaboration with the child and letting go of control and playing with the beads in the way he wanted to, thus building better trust and less resistance/reluctance.
What was the other person's response to the therapeutic communication mode(s) attempted by you?	The child had a meltdown when both me and his mom tried to use the instructing mode. I think the collaborating or problem-solving mode could have worked better, allowing him to have more control over the situation and find a way to make the marker work himself. I also could try to use the empathizing mode with the collaborating or problem-solving mode, or even when he had the meltdown to let him know that we understand how hard or frustrating the task was for him.	He responded negatively to our modes of communication (instructing, encouraging), becoming upset and throwing beads.
What, if anything, would you like to try differently in the future?	After our discussion last week, I realized that in looking back at my interactions with the toddler, the instruction mode did not work for him. In my mind, I was trying to help, but I was using the mode that I felt most comfortable with instead of matching the mode that he needed.	Giving up control of the situation once we noticed the child getting frustrated and instead of using a collaborating (and non-verbal) mode would have been the most effective way to gain the child's trust and establish a more successful therapeutic relationship.

e. **Video Reflections**

Content analysis of pretest and posttest video reflections supported the hypothesis that following course completion therapists would: 1) shift from activity to an interpersonal focus, 2) demonstrate richer descriptions of interpersonal behaviors through increased use of IRM terminology, and 3) provide more targeted and constructive feedback aimed at improving the quality of the observed interaction (Table XXXI).

In the follow-up interviews, therapists described feeling as if they were viewing the video through a new lens during Week 5, noting a shift from activity to interpersonal focus:

> As I looked between the two of them, I said a lot of the same things, but, I feel like watching [the video] in week five was definitely different than what you get in one., I was trying to use some of those… ok…"How could she emphasize?" She's not empathizing. "How could she encourage this mommy?" She's not encouraging. "How can she problem solve with this mom?"…It felt different watching it week five because I was trying to…observe through some of those strategies (Speech Therapist 6).

Several therapists also felt that they were less "critical" in their reflections at the end of the course:

> I almost felt like I was more…critical the first time than I was the second time because there was so much other stuff that I was kind of aware of…as opposed to just pure observation of what the situation was… I feel like I saw it through different eyes…I had a different focus to look at…just more on the, on the interactions, and stuff (Physical Therapist 10).

> I mostly recognized that I was a lot easier on the therapist the second time I watched it - I wasn't as critical and completely let down by her lack of interpersonal skills the second time around, because I recognized more of what she was trying to get at - even when it wasn't working - I was like, "I see what you're doing there, but it's not working" and I could kind of feel like, yeah, I could see myself doing that and how it's not working…so that was my biggest take away (Occupational Therapist 9).

TABLE XXXI

PRETEST AND POSTTEST COMPARISON OF VIDEO REFLECTIONS

Week 1	Week 5
What went well during this interaction? Why?	
Occupational Therapist 17 • Adjusted to many expressed needs (bubbles in the eyes). • Divided attention between mom and baby (which may be necessary when modeling) included (rather, get in a flow with mom which would be better). • Responded to concern about getting cranky when overdoing it. • Open-ended question on biggest goal areas; better late than never. • Encouraging about reading cues.	Occupational Therapist 17 • Open ended question "What do you think is going on?" • Adjusted to concern of bubbles in eye. • Generalized that activity could be modified, had an activity focus/interpersonal focus. Open-ended about goals with examples allowed mom control (which she then wasn't ready for) but can be good to approach goals like that.
Developmental Therapist 12 • I like how you asked, "what do you think is happening now?" • I like that there was an attempt to calm the child first. • There was clearly an attempt to ask questions and get to know the child in some way.	Developmental Therapist 12 • Recognizing the child's need and identifying a calming activity. • Asking mom how she feels. • Giving mom an opportunity to lead the play.
Developmental Therapist 18 • "Little Guy" recognized word "Bubble". Therapist commented on mom's understanding of situational needs of child. This could have been a springboard for larger discussion of child's used of gestures and realization to communication needs. • Asked parent what she wanted to "work on." • Positive input regarding parent. Understanding of child's communication.	Developmental Therapist 18 • Good "questions" but sometimes "asked" at odd times? • Bubbles are a great activity but "permission" first seems therapist is attempting to establish some rapport. • Apologize for lateness, good encouragement.

TABLE XXXI (continued)
PRETEST AND POSTTEST COMPARISON OF VIDEO REFLECTIONS

Week 1	Week 5
What could be improved during this interaction? Why?	
Occupational Therapist 23 • Arrival - arrive on time. • Checking in with ax prior to starting (when bringing items into the house) as it may not be okay. • Work within routines (e.g., mom said he's hungry - allow him to eat). • Ask mom what typically helps the baby calm when fussy/upset.	Occupational Therapist 23 • Empathic break @ beginning due to showing up late (and not acknowledging this event immediately). • Checking in ahead of time about bringing materials. • Problem-solving re: other therapeutic strategies when mom mentions he may be tired/hungry (work within routines).
Occupational Therapist 9 • Therapist telling to get rid of dog (i.e., that's natural environment, and rude) • Therapist talking about everything but mom's concerns (sleep) • Reaching = sensory is not the priority • Unclear therapist answer to question about occupational therapy scope of practice/goal areas • Therapist not adjusting to parent expressing concern for bubbles as a mess, her being late. Mom's often aren't assertive but express more subtle requests to end/adjust an activity.	Occupational Therapist 9 • Therapist could respond more actively to parent's concerns. She could use a more direct approach to help parent make choices, express concerns, talk about what works for her and her baby. She could be more truly encouraging, rather than kind of a mode mismatch where she says encouraging words without the positive emotion. She did not use instructing mode or problem solving mode to provide possible solutions to problems, to explain the scope of therapy. She could offer a more structured session with more clear goal areas so that the mother knows what she should be working on.
Occupational Therapist 13 • Tone of voice when apologizing for being late. • Using more examples/client friendly words when explaining what occupational therapy is and what you can work on. • Using a more collaborative approach to work together (rather than therapist just teaching). • Ask more thoughtful questions	Occupational Therapist 13 • Mode incongruence - done didn't match + lacking pauses between mode switch (especially when apologizing for being late). • Parent seems to be emotionally disengaged at times. • Work on clear mode use and switch between modes by using pauses seems to mix modes because of lack of pauses (instruct what OT is but donut's use clear collaborating mode); parent might not be ready for celebrating + need to problem-solve.

TABLE XXXI (continued)
PRETEST AND POSTTEST COMPARISON OF VIDEO REFLECTIONS

Week 1	Week 5
If you were the therapist in this scenario, what would you want to happen next?	
Speech Therapist 20 • If I were the therapist, I would really want to try to build some better rapport with mom, as it is clear she was not happy during their interaction.	Speech Therapist 20 • I would like to try to build some better rapport with parent, using empathizing or collaborating modes. Additionally, it may be a good idea to provide mom with some written goals/strategies (come up with them together) or other community resources.
Physical Therapist 16 • After mom puts child down (ask if you can wait or if would prefer for you to leave) discuss family goals, child's routine for best time for therapy (and therapist be on time), and discuss that kids do not necessarily tolerate the entire hour, and it's ok to have a shorter session based on the child's cues. • Give two strategies and have the parent practice the exact strategy and make sure they understand activity for carryover.	Physical Therapist 16 • Ask if you should stay or leave while putting down for nap. • If staying wait and discuss routines, nap time, and being on time. Problem-solving to find appropriate time for therapy. • Empower parent do advocate for child and child's needs. • Collaborate to determine course of action for treatment plan.
Occupational Therapist 8 • As a parent, I would want someone to ask me what is important to me? Such as what are the difficult parts of my day? What is stressful? What does my day look like? What are the things I enjoy about my baby? • Next - perhaps having a discussion about times of day that might be better for the family or use time to help the parent with daily interactions with child. Family support can be given even if baby is asleep.	Occupational Therapist 8 • Next, I would expect the therapist to show she heard me by giving other time options. I would also expect her to begin session by asking if I had thought about goals or areas I'd like to work on. • As the therapist, I would expect the mother to be withdrawn at our next session (as this was her behavior today), therefore I would come prepared with a plan to encourage her for what she is doing well, attempt to collarbone with her on strategies she can use for the next week, & always empathize with her stress (and likely lack of sleep).

f. **Follow-up Interviews**

Four categories were generated as a result of thematic analysis of the follow-up interviews. As therapists reflected on their experience of the course content and it's application to their clinical practice, they highlighted a positive change in their interpersonal: 1) knowledge, awareness, reflexivity, and behavior.

i. **Interpersonal Knowledge**

Therapists consistently identified the change in their interpersonal knowledge, and ability to integrate the IRM language into their interpersonal reasoning:

> So I wasn't really using many modes…I knew I could empathize and I knew I could collaborate…but looking beyond and being more nuanced, I really wasn't. So now I'm at least trying to…use a few more of instructing and problem solving. Those, I think I've really ramped up. And…So I think in my practice, I always knew that…I was using what I had learned…so I have learned to…be an active listener, to be present to…to be empathetic, to affirm…that's the kind of language that I had in my head about my interactions with people. So I was not thinking about modes. I was not thinking, "I'm going into a problem solving mode or instructing mode," so it was absent (Occupational Therapist 5).

This acquisition of new knowledge supported the therapists' ability to put words to what they were already doing in practice: "I think I was more aware of the label of like what I am doing. I am a really empathic listener. I am just more aware that that's actually a thing versus like what I was feeling." (Developmental Therapist 11). Additionally, the IRM helped them reflect not only on singular interactions but sequences of interactions within interpersonal responding:

> I liked it when we were talking about…the sequence of mode use because that was something that I feel…explains what I do a lot…kind of stop and [evaluate] the situation…[there] may be a different mode that might help us get out of a situation. Or even move him forward in treatment or a situation (Occupational Therapist 23)?

Additionally, therapists felt that they were better at recognizing the difference between feeling and doing the actions associated with various family-centered practices:

> I am just so much more aware that there are differences between the communication modes…That I was before maybe putting everything into the basket of collaboration and problem-solving… That if problem-solving and collaboration were a goal then I was putting, you know, advocating, empathizing, and encouraging as strategies for that goal. Rather than kind of and seeing them as separate…I think that that's how it's changed me. Again, just having this more awareness in the moment and then maybe even thinking in the moment…"Okay, I need to switch." You know? Verses trying to keep going with the mode that isn't working or does not feel like it is working (Developmental Therapist 12).

> I do feel like I have used more…collaborating mode. I don't think I ever fully let go before…letting them take control, but I feel I do that more often than I have before. And then I try to be mindful of…making sure my facial expression, tone of voice, things like that and I think…using a lot of instructing mode and encouraging mode …trying to make sure it's more clean and pure rather than any kind of like mixing…I don't think I was using that very effectively before, so yeah, that was helpful. I think I thought I was collaborating more before, but I don't think I was doing it…I don't think I was fully getting it because I still had my own agenda in mind, and it's like oh look I am collaborating with a child when really, I am tricking them into what I want them to do…and I was successful at that [laughter] (Occupational Therapist 13).

ii. **Interpersonal Awareness**

In their reflections on their responses to pretest and posttest surveys, many therapists identified a heightened awareness of their behaviors and communication styles at the end of the course:

> I think that, I'm trying to think back to some of the questions…there were definitely some that I was like, "Okay if I'm going to answer this honestly it's probably not what I would like to say." But at the same time…nobody does everything perfectly, and we're still learning and growing…after going through the course, I feel like it was easier to answer all of them…it seemed like less like... I don't know…for the lack of a better word, judgmental in a way…when you haven't gone through the course, and you're just answering these questions and, you know, you have to be like, "Oh, I really don't do that and I probably should." You're probably just a little shamed in a way, but then like after the course I guess it was just like learning, "Okay, I don't do this, but I can start doing it now that I'm aware." So yeah, and I mean they're obviously like the same exact questions, so it's kind of funny that I did view them in a different light (Occupational Therapist 15).

Two themes were generated related to the therapist's raised awareness: 1) heightened awareness of self, and 2) heightened awareness of others.

Therapists described an increased awareness of their interpersonal preferences and behaviors, an increased recognition of the challenges associated with effective mode switching, and personal tendency to over-rely on their preferred mode:

> So before I would say I was pretty limited, I was really…not just empathizing, but that was the go-to…the minute you presented this stuff, [I was] like oh yeah!... I do that all the time. And a little bit of you know, advocating, problem-solving, things like that. Here and there…But I would say that I feel just having a name…before I was just thinking about it very abstractly, I didn't really have…the labels for it, so just now having these labels and thinking about it so clearly it's easier for me to incorporate more of them than I was prior to taking the course…Before I would just…not even be able to identify what I had been using or trying to do…I'm working on [laughs] more instructing definitely an area that I struggle with…[being] more direct with families in particular... so that's the one that I paid the most attention to…so…I'm using that…a lot more than I was…probably using the least prior to the class... and then more…collaborating too... I was doing a little bit of collaborating but…I feel like it was actually more empathizing…like we were just kind of talking out things (Speech Therapist 14).

> I'm more aware of, of those other modes…I think beforehand…I was always using, probably collaboration and empathy and instruction, and so now I'm aware of the other ones, in particular, the advocacy one…which…I probably haven't used as much, and so I'm more aware of those, and probably how to move a little bit more between them…and, you know, basically… also aware of the fact that it's more difficult to move between them…moving, you know, with the fluidity? I mean obviously you have to know each one of those, and where and when to use them, but also just how to be, you know, not to get stuck in one, I mean, and how to be more fluid. Flexible (Physical Therapist 10).

In addition to heightened self-awareness, therapists described a heightened perspective-taking and awareness of interpersonal behaviors of others. Several therapists described an increased tendency to take a step back and ask a question of "how would it feel to be this parent in these shoes right now?" (Speech Therapist 6). Other therapists described having a stronger capacity to "being and putting myself in the family's shoes with understanding …where I needed to shift gears because I needed to shift gears pretty quickly" (Physical Therapist 22). Therapists felt that they were paying closer attention to interpersonal cues of others (both verbal and non-verbal):

> It's been a lot easier for me to kind of start to notice when a client, or child, I guess, is starting to get frustrated. And instead of, continuing to push on, taking a second to think about, "Okay, what can I change right now to help ease their frustration?" … And it's something I think I did before but wasn't consciously thinking about it as much (Occupational Therapist 15).

> Being able to…pause and identify…I think I have been better able to re-evaluate…where the family is with their…body language, or…with their knowledge of what's going on…every family is so different and really engage where they are in terms of like their socio-emotional … state and, you know, how ready they are to receive each intervention that we talk about (Physical Therapist 22).

Although less frequent, several therapists went beyond reflecting on their one-on-one interactions with others, and brought up an increased awareness of interpersonal dynamics between parents and children:

> There was one case where I was really thinking about parent's mode use with the child and what was helpful was thinking about those - in my initial session, I thought through those twelve interpersonal characteristics with the child and briefly thought about how the parent interacted with them. It was really apparent to me that this child wants all control, and then the parent only uses instructing mode, which puts all of the control in the parent's hands. So the child never listens to the parent, it's always a fight because the child wants all of the control but the parent is taking all of the control so, I haven't yet dealt into talking through that with the parent and coaching her on her own mode use with her child, and I don't think I would go into the six modes, I think I would just use that concept of like who has the control and sharing that in our communication with kids. I don't know…I would just narrow it down largely (Occupational Therapist 9).

iii. **Interpersonal Reflexivity**

Therapists found themselves taking more time to reflect both in and on their clinical practice during and after the course:

> I think my go-to strategy is empathizing and problem-solving and what I've been trying to do is more collaborating and advocating so that I am not putting so much pressure on myself to try and be the only solution to…[the] issues parents have. So I'm constantly reminding myself of that, and that's been more in my own reflective practice…I think definitely since this course. I've been trying to apply that more in my session or following my session (Speech Therapist 6).

Thematic content analysis of the interviews generated two themes related to increased reflexivity: 1) reflection in action and 2) reflection on action.

Therapists described finding themselves more reflective in action, making more purposeful pauses during their interactions with parents and children, as well as taking more time to reflect on their interpersonal relating and it's impact:

> Sometimes for the better and sometimes…it is for the worse, because I am more aware and then I don't know what to do…I think definitely in that kind of collaborating aspect because I am just so much more aware of myself and am I actually trying to instruct or problem-solve rather than collaborate?... I just saw [a family] for the last time today…[and the child's] mom was talking to me…and was going through the process of still getting evaluated by the school district…we were kind of talking about…the hypothetical and what she was kind of thinking. And, I took great care in not pushing my opinion on her, that I felt that if they did recommend the classroom…I was hoping in my mind, as a therapist, that they would take that… even though she home schools [her other kids] just because I feel like he could benefit from the change of the environment…And so…when we were having the conversation I felt like I was very much in the back of my mind, hearing this, "Okay, don't talk, just listen" you know? Or "Ask questions, don't..." And then I did tell her that, you know, here are some things to consider and so then I was able to…kind of switch modes from maybe empathy and encouragement with a little bit of instruction of not, here's specifically what to do, but here is something to consider when you are making your decision. So, I felt like in that in that instance, I was just so much more hyper-aware of my wording or…the way I encouraged, or instructed, or collaborated or, you know, all of that… It was super successful… Because she even said this is really great information. This is such a great thing to take into consideration. And the wonderful thing, I think, at the end of it she decided, "You know even if he doesn't qualify for the classroom I still probably would try to find a little playgroup for him to go to once or twice a week." And I was like, "Oh yea, that's such a great compromise!"... right (Developmental Therapist 12)?

Therapists also saw themselves as being more reflective on action, and taking more time to reflect on the interpersonal events with parents and children after the session:

> I feel like now I'm trying to just be a little bit more reflective in the session versus trying to just instantly fix it. And if I can't come to a point of…you know, how I can change it in the current session…I take a step back as I'm…reflecting on the session or writing up my notes, and just thinking how could that have been done differently, or who could I talk to about this…Especially with the challenging situations (Speech Therapist 6).

iv. **Interpersonal Behavior**

Many therapists felt that they did not perceive a significant behavioral change and generally perceived change as challenging:

> Well I'll say this first…the easy conversations are always easy, right? The harder conversations are the ones that I feel I am getting better at…and by that I mean the ones that people are going through sorrow, or, are frustrated, you know, those kind of harder emotions…I feel like in those [situations] I am really being cognizant of what I'm saying versus just you know just responding reflexively (Occupational Therapist 8).

> I have a feeling that my habits are die-hard. You know? But I am trying to be more mindful and make sure that…I am using that therapeutic use of self…I am a bit more reflective in that way like after the fact and trying to be a little more analytical with the IRM in mind (Occupational Therapist 13).

> I never took the time to really learn IRM…I never really tried to use it. So that has been almost life-changing for me to try to begin to use this...not just as a theoretical idea, but as something that I do in everyday practice. So, honestly, I mean its every interaction almost that I have. And what's interesting though, for me is it's hard. It's still much harder for me to do it in practice. I know I'm trying, you know…it's not until I can sit with it and reflect and… see how I could've done something differently. So I still feel like, I don't know, I still feel frustrated…I feel hopeful; I guess is how I would put it. And that I'll be a better practitioner if I just keep trying. But, but yeah, but it's in the moment where like, you're not quite comfortable yet (Occupational Therapist 5).

> I think you gave us so many, um, wonderful handouts and so much information and it's great to read about it. But how do you take that and integrate it into your practice?... It's one thing to have that information and spit it back out on a test, and it's another thing to actually be able to integrate it and use it (Occupational Therapist 7).

> I'm not always good at…following through with it…but I'm at least thinking about different modes of communication I would say more than I was and I'm trying to adjust what I'm doing, to what they need me to be doing…It was very easy for me to just like fall into being an empathizer and kind of doing that piece during visits... so now I'm just...when something else would actually be more beneficial is the biggest thing that I think I am seeing the most, and seeing things differently than I was before… Yeah so being able to shift out to something that is more... directive or instructional with the parents (Speech Therapist 14).

> I think that the particular kids that I wrote about I have continued to kind of think about…and, in fact, they continued to…present challenges, you know, I think. And it was just like, "So what was it you said again?" [Laughing]…it's really hard to do, you know, to incorporate it … it's not automatic yet, at all, for me. And so it, it's difficult…in some ways, it feels almost a little more frustrating, because I realize, oh there are other things I should be doing, in addition to what I'm doing, you know, for therapy, in terms of the relationship (Physical Therapist 10).

While the therapists recognized that interpersonal change is hard, three themes were identified that highlighted the initial stages of change: 1) increased interpersonal intentionality through pausing, reflection, and taking the time to cope, 2) expressed interest in increasing intentionality and capacity to communicate outside of the empathizing and instructing modes, and 3) increased attempts to interact and collaborate with parents and therapists on the EI team.

All therapists spoke about taking more time to take a pause in an attempt to add intentionality in their mode use:

> I think I get a lot less frustrated because…it's easier for me to take that step back and think about, "Okay, what's going on? What isn't working? What is working? and instead of feeling like "oh, I'm, I'm just like failing," like I'm doing a bad job, being like, "okay maybe it's not necessarily that you are doing bad job, or being a bad therapist, but like something that I'm doing isn't working, so like how change I change that?" It's really helped in my frustration levels, and instead of being like, "oh, I'm not reaching this kid"…just realizing that you can do something to change that (Occupational Therapist 15).

> I would say that before I definitely mixed mode use all the time…And so now I don't, I'm definitely not good at it, but trying to take that like reflective pause for a second… Before...before switching modes...Instead of just moving through them… just trying to recognize that sooner and then making that switch sooner...I don't know that I necessarily realize when I'm mixing mode use sometimes…I don't know if I quite recognize all of that, but trying to...definitely more aware of it (Physical Therapist 16).

Therapists perceived themselves as being more mindful, and taking more time to cope with stressful moments in their practice (in a manner that is consistent with the initial steps of the interpersonal reasoning process within the IRM):

> I think just the reminder…about mindfulness as a therapist, and recognizing the moments when I get stressed out even during a therapy session when I'm like, 'oh my gosh, everything is happening, and I can't respond to anything because it's all crashing'…just taking kind of a minute to step back and say, "okay, this is what's happening, this is how I feel, and take a deep breath and continue." To not get quite so personally bogged down and let there be a separation between my therapy…and my…personal life, and having kind of a mindful separation there. That was helpful (Occupational Therapist 13).

> I think that the way that I'm responding- especially to, challenging situations has been… I think a little bit different. I'm just more mindful of…breakdowns and I try to prepare them in different ways. And also I think it's important to keep in mind, you know, other people, their need for control and for, the trust and things like that with them. Just more mindful of those things (Physical Therapist 22).

Perhaps as a result of this increased intentionality and taking the time to reflect and cope with challenging situations, therapists also felt themselves being more flexible in their mode use. Therapists most frequently identified themselves as trying to move beyond empathizing and instructing:

> I would say, I mean before I was very heavily relied on the instructing mode. … And I think empathizing too... You always kind of think, you try to empathize with them, but I think that I've also realized that that's a mode that, if I don't know what else to do, I can always fall back on that and just realize "okay, I'm probably not understanding how difficult the activity might be, or just maybe the kid is just not in the mood that day." And so kind of falling back on that, and also not just thinking that myself, but speaking it to the child and being like, "This is really hard or, you know."…And then after doing that kind of like moving into like either problem-solving or collaborating or … like encouraging if that's what I feel like they kind of need in the moment…I still use the instructing mode a lot, definitely, but just kind of being a little bit more aware like, "Okay, you are just using instructing. Let's try to use something else right now because it's not working" (Occupational Therapist 15).

> I try to think about the mode that I'm using and if that's being effective or not, and then I try to be more mindful and try to switch modes so I can better interact and help out with their problems or, you know, brainstorm ideas so we're having more effective communication during our sessions. I feel like before I would kind of just automatically jump into like instructing mode, and I feel like I find myself trying not to do that as much…I would say I definitely tried to use, collaborating mode a little bit more, rather than just jumping into problem solving or instructing. I try to collaborate with the families and the kids a little bit more during my sessions and then I will also- I also try to do advocating mode a little more just because I feel like that's an area that I kind of struggled [with]…I would kind of prefer to like, 'Oh! Well, you know…social work can

> handle that intervention"…whereas that's not necessarily…I could definitely help families, especially since I'm a speech therapist so connecting them with resources that will help with language development and communication overall…[I've been trying to] research more of just those opportunities in that community and…actually, print out those resources…and I visited, um, I visited two of those resource centers like there's a resource center for Autism (Speech Therapist 20).

Lastly, the therapists described a positive change in their interaction with both parents and other therapists on the EI team. In describing their interactions with families, many therapists described being more aware and cognizant of the parent as a separate individual:

> This mom…she's always physically present, but I don't feel like she's always, engaged and participating and, I just try to kind of take the pressure off of myself as far as getting her involved and making sure that she sees what I'm doing and making sure that she understands what I'm doing and I just kind of let it go, and I feel like…because I've kind of backed off that she's opened up a little bit more, I feel like she's a little bit more comfortable with me…I think I had tried to just, engage, and interact with her more as, a person and not just his mom. I've been trying to, you know, share something I did over the weekend and see if she would share something back or, talk about the weather or something where I feel like we can actually have a conversation and it's not just, how's he been doing with this or what is new in his world…I feel like I've had a better connection with her lately. So, just kind of recognizing that parents are also not just parents (Speech Therapist 6).

> I noticed that I was so much more comfortable interacting with a parent in a way that helped, um, clarify some issues we had about a little boy in the class and, uh, I felt the conversation went really-was really back-and-forth. And, um, and I did think afterward, because I was there with two other staff members and, both of them were not as communicative as I was during this session which was kind-of unusual because one was the teacher. And I thought afterward I- I thought it went really well, um, and I wondered if it was partly due to sort-of new- different thinking about communicating with parents… Because I tend to not be the one to speak up, personally, I'm more introverted and, I am aware of that, so I tend to not be the one to take the lead, um, and I didn't really didn't view myself as taking the lead so much in the situation yesterday and it- the conversation just flowed, um, pretty well…. I do think that I have more confidence in my ability to, um, respond, uh, in a way that, um, will be helpful or will fit the mode that's important. Not all the time, but I think that, um, it does, um, change my thinking and my responses (Occupational Therapist 7).

Therapists also found themselves establishing more opportunities to collaborate with other therapists on their EI teams:

> Oh, collaboration! I feel like I've been also a little bit more collaborative and that too! When I had to explain, where I first started a few of the cases, just trying to reach out to service plans and ask for contact information to start connecting right away with the team instead of waiting later. Because it gets, from my learning experience if I wait too late, sometimes it feels like you are in it alone. And that's what my experience with the social worker is that shared that it is never good to feel alone. It's good to be a team. Reach out early and often, and so I think I have been doing that more (Physical Therapist 22).

> I do have some kiddos that have, multiple therapists, so what I've been trying to do is to reach out more to them, either in a phone call or in email to try and collaborate more. So that I'm really working on, you know, some of the kids that I see have physical, occupational, speech, and developmental therapy…So I feel if I can collaborate with those other therapists and hear, what are you doing in your sessions? And I can be one of the people to carry over those strategies in my session; then it's a little bit less pressure on the parent to carry over four different therapists strategies. So, I've been trying to collaborate a little bit more. I mean…keeping in touch with them has always been something that I've tried to do. But more recently I've been trying to hear, what are you doing in your session? How can I help support these goals? Yeah, that, that type of thing…And actually…there was a six-month meeting that I had that was a phone conference with a parent, occupational therapist and a service coordinator and I asked the occupational therapist what are some of the things that she mentioned that his tolerance really decreased and his frustration was increased. And I was, you know, not really seeing the same thing in our sessions. So I'm, maybe I'm not challenging him enough. Give me, can I have some examples? And the service coordinator at the end was just. I've never been involved in a meeting where a therapist have been asking other therapists what have they been doing…And maybe it's because I'm more mindful of that now since this course or maybe I'm just, yeah, I'm not sure exactly why, but, yeah, this course is definitely made me think a little bit more about, outside of just me, my therapy (Speech Therapist 6).

5. **Objective 4 – Research Questions 4.1-4.3: Course Effectiveness – Parents**

Upon enrollment, all parents defined family-centered care as services that are aimed at helping both children and their families and equipping families to care for the specific needs of the child. Parents felt that the strengths of family-centered care include involvement of the whole family and increased carry-over of therapeutic recommendations outside of therapy.

When asked about the challenges, one parent described family-centered care as "distracting" for the child, two parents were not able to identify a challenge, and three described challenges related to the diverse needs of families. When asked to describe their learning goals for the class, all parents expressed wanting to learn new approaches to support 1) their ability to respond to challenges of parenting, and 2) their child's learning and development. Throughout the course, qualitative data suggested that parents found themselves reflecting upon the IRM as it related to the interpersonal challenges they experienced in their day-to-day interactions with their children.

a. **Interpersonal Challenges in Day-To-Day Interactions**

While describing challenging day-to-day interactions with their children, all six parents described their children as displaying three distinct interpersonal characteristics: 1) limited capacity to effectively assert their needs through screaming and crying, 2) high need for control and self-direction, and 3) tendency to respond to change and challenge with expression of anger or fear.

Content analysis of weekly reflection assignments suggested that throughout the course parents struggled with one of the two interpersonal events: 1) child's expression of strong emotion ("tantrums" or "meltdowns") that was coupled with a power dilemma, or 2) child's expression of strong emotion ("tantrums" or "meltdowns") that was coupled with a resistance and reluctance. In their description of power dilemmas, parents wrote about everyday events in which they controlled access to an activity or an object (such as a snack or a toy) desired by the child:

> This week, we shopped at Home Depot. Before going to the store, I explained why and what we are going to buy; two planters for our new trees. He even helped me pick out the planters and participated in the shopping experience. Then, it's time to check out, and he sees the impulse end-cap stocked with candy. He asked for candy, and I said no because it's too early for candy, and we have treats at home. Immediately, he collapses onto the floor and starts to scream (Parent 3).

> One day he was playing with his car, and it accidentally went underneath our sofa bed…He started to grunt and scream. At that moment, I was washing dishes, and I turned around to look at him and see what was going on. When I told him to give me one second to finish, he began to scream and ran towards me. Eventually, he started to pull on my pants and cry. I continued to give him eye contact and tell him to please give me one more second so that I could wash my hands. As I was doing so, his screaming, frustration and crying began to increase (Parent 5).

Alternatively, while describing resistance and reluctance, parents wrote about everyday events in which their child resisted or was reluctant to participate in an everyday routine or a task:

> Yesterday we went down to the car (3rd floor), and when we got there I realized I had forgotten to grab the big bag of library books to take it to the library, so we had to turn around and go all the way back up to the 20th floor to grab the bag. This was not well received! He got super mad that we had to turn around after getting to the car and having me realize that I did not grab the bag. He yelled and screamed the entire time we had to walk back to the elevator (Parent 2).

> One issue that I have been having with my toddler is that he doesn't want to wear his jacket (in the winter). He cries (tantrums) until he manages to take off the jacket. Luckily he will let us put on a sweater on him. This happens every single time that we're going to go out, and it's cold, and he needs a jacket (Parent 4).

While describing their response to these challenging events, parents initially described themselves as either: 1) letting go of control and unintentionally becoming passive in their communication, or 2) attempting to regain full control of the situation by giving directions.

b. **Applying the Intentional Relationship Model in Day-To-Day Interactions**

Reflecting on their experience in the course, parents described the benefits of having a "new perspective" on their interactions with their children through the IRM lens. One parent expressly referred to this new perspective as the most memorable aspect of the course:

> When we worked through the [doctor's] office visits with my son, and all the different things that were at play, I feel like that really stood out as far as being very practical, giving me a completely different perspective in having a little more compassion for myself and how hard it was…. I liked that. Also…I think the understanding of the mismatched mode…I think being able to see that from a different perspective where as continue to try to use a certain mode thinking like, well, "this is the right way to do it", but it's not connecting with my child. It just seem like it might not necessarily be a bad approach; it's more it's not the right one at that time with the kid (Parent 1).

Thematic analysis of the reflection assignments and follow-up interviews indicated five possible components related to the process of interpersonal perspective transformation: 1) taking baby steps toward change, 2) taking time to cope through purposeful pauses, 3) striving for empathic understanding, 4) striving for flexible and multimodal communication, and 5) wresting with the grey area of being a therapist versus parent.

i. **Taking Baby Steps Toward Change**

Parents that completed the follow-up interview agreed that while they were striving for change, it was a slow process:

> Today we went to the store together and when we got home…I had to grab the grocery cart to bring down to the car to get the rest of the groceries…He got mad again, and once we got down to the car, he was calmer, but boy did he give me an earful...During this entire time of crying, I tried to be cool, and calm, and say what we were doing…Today went marginally better than yesterday. Baby steps? [I tried] empathizing, encouraging, and instructing modes. Seeing this here makes me want to try other modes too, but these were the big three in these interactions with my son. I think he was able to calm down faster than if I…said nothing at all…I mean...it's a work in progress, right (Parent 2) ?

> I feel like we've grown a lot. My son got really sick, so we had to go [to the doctor] multiple times…and I feel like just even looking at those visits. There is an improvement in how we have problem-solved with him and collaborated with him more as well as using empathy – I feel like we're moving in a new direction which is very hopeful. I dread it…but it's, much, much better. I mean…it's still hard, but not nearly as hard (Parent 1).

ii. **Taking Time to Cope Through Purposeful Pauses**

While responding to a challenging interpersonal event with their child, parents expressed feeling "flustered" and needing to react quickly to resolve the situation

using the instructing mode. While reflecting on these experiences, parents spoke about the perceived benefit of taking a pause and coping with the situation prior to responding:

> I feel like I pause more and I feel like that as well is really helpful…I've been much too quick to fill the space with words rather than pause and try to fully hear…I feel like [taking a pause] slows down our communication, which has been really good…I'd say [it allows for] much more empathy, much more collaborating, and problem-solving. I think those have grown for sure. I definitely have more growth to continue (Parent 1).

> Take a breather and think before acting. If I can think of different therapeutic modes prior to responding so fast to any situation, I may be able to solve the situation a lot better (Parent 5).

iii. **Striving for Empathic Understanding**

Content analysis of reflection assignments and follow-up interviews suggested that striving for an empathic understanding might be one of the initial steps toward interpersonal change that moves the person beyond the instructing mode. Consistently, parents referred to wanting to better understand their child's behavior through empathy:

> I would like to empathize with him. Maybe let him understand that I know he is frustrated because he can not verbally explain what he needs and that I understand he is upset because he could not reach his toy. I am not sure if his frustration was due to him not being able to verbally tell me what's wrong, because his car was under the sofa and he wanted it right away, or both (Parent 5).

In the follow-up interviews, all four parents described increased intentionality and shifting from instructing to the empathizing modes:

> I don't know if I was meeting him where he needs to be as much as I do now… When he gets mad its kind of hard for him to figure out what it is that he wants, its something that he's frustrated about that he can't say. And I kind of catch him before he gets to that point of total frustration lately...I mean I can't always catch it, and there are times when…you are just guessing almost…and I don't know if I'm meeting him where he is [laughs] but at the same time…it's more organized…we were at a therapy session recently, and they had these big crescent-shaped mats that he likes playing on, and he started to get mad about something, and it was like me guessing about the stuff around the room that he likes to do already…he couldn't say "I want to put both these crescents together, so they make a circle and then put a beanbag chair in the middle of that" [laughs]. And it helped that I saw him to do this before…but yeah I mean a lot of it is looking around, knowing what

> he's done in the room before it wasn't like a new room or a new place or experience. Just context clues (Parent 2).
>
> My son came back, crying from the bathroom with my husband and…I asked him what happened? What is wrong? He said, 'the dryers scare me' and I said, 'Oh, I'm sorry the dryers scare you, did you have to wash your hands?...I'm sorry, I know the dryer can be scary.' You know, that whole empathizing and, 'It's going to be okay.' Prior to class, I think I would have reacted, 'Oh, it's fine, get over it.' You know?... I think before it was more instructional…And now, it would be more, empathy and collaborating (Parent 3).
> When my son has his little meltdowns, and I'm trying to comprehend what's going on, you know, and…I can connect and try to comprehend him a little more… Back then, I would of just [said], "come on hurry up, hurry up." You know? I wouldn't have explained, "we are going to go over here, we are going to do this, and we are going to have a good time, and then I don't know we'll see, okay."…I wouldn't have explained the process that we were going to go, or what we were going to do. It was just "hurry up; we're going to go here" (Parent 4).

iv. **Striving for Flexible and Multimodal Communication**

In their reflection assignments, parents frequently reflected on the modes that they should have tried but were not able to at the moment:

> I think I was using the instructing mode the most and the least, or not at all, was advocating. The one I should have used but did not was collaborating… I could have tried to collaborate with him by asking him what he would have preferred to eat. I could have also empathized with him by stating, "oh, I'm sorry you do not like this food," then problem-solving by saying "ok, this is what we have available in the refrigerator, we can make this or that, or both. What would you like me to make so that you won't be hungry?" (Parent 5).

One parent illustrated the complexity of trying to respond in a flexible and multimodal manner:

> My son was fully engaged [in cooking] until I mentioned the blender. He started to repeat himself over and over, "blender, loud!!" he covered his ears and told me, "no blender." I held him and agreed that it would be loud, that he could cover his ears and I would tell him before I turned it on. I also told him it would only be for a little bit. He continued to repeat himself talking about the blender in a more rapid and scared manner; he jumped off his chair and ran to the living room. He stayed with my husband and covered his ears while I turned it on. After we reassured him many times that it was all over, he returned and re-engaged in the activity. At first, he was a bit more tentative, but then (after multiple times of asking if we were going to use it again) he forgot about it and enjoyed the task. A few other times in the night he brought up the blender and that we had turned it on. We would agree with him, and then say it was all done. [I used] empathy, encouragement, collaboration, and instruction. I validated his fear, held him close. Encouraged him that it would only be a little while, and I would let him know before I

> started it. We also encouraged him after it was used, that we would not have to use it again tonight. He received the physical touch and was calmer than the other instances when he is afraid. He was able to take steps to meet his needs, covering his ears, leaving the room, and receiving verbal input throughout the process. He was able to re-engage in the activity soon after and re-establish trust after a brief amount of time where he was again relaxed and laughing…I think using more collaboration would be helpful. Giving him more control in a fearful situation would help build his confidence in facing future fearful situations. I am not sure that the encouragement was very effective (Parent 1).

v. **Wrestling With the Grey Area of Being a Therapist Versus Parent**

Lastly, throughout the course, all parents brought up the struggle of wresting between knowing what falls under the therapeutic and the parenting roles. As one parent eloquently explained:

> I caught myself constantly evaluating myself like okay…you're using too much instruction, too much collaborative, too much empathy, too much this, this- not enough of that, like. I had to remind myself that I'm not his therapist…I did have to wrestle with that grey area of…there's a time and a place for everything, and my job is not to be his therapist… cause after a while it was like a game to me, and that wasn't fun anymore, and it's like, okay, I do really need you to go to bed right now. [laughter] No collaborative, no, just do it! Just do it! [laughter]. I guess I felt like learning IRM definitely up-levels parenting, but I had to be very careful with not becoming his therapist…or like this isn't a way to redefine your parenting style. It's just…there's more tools to help so you can get through the day-to-day (Parent 3).

This parent felt that her capacity to remain intentional in her communication was influenced heavily by her own mental space and feeling overwhelmed with day-to-day challenges of parenting:

> If I'm not overwhelmed with the day, or if I have taken proper steps for "self-care" and I have positioned myself where I can handle the normal mental load and the mental load of "I can't find my Polar Express train…" Yes, I can do that, I know the proper steps to do that, and how to empathize and instruct and move things along but again, you know, when it comes to managing my own behaviors when I'm in the middle of my own internal tantrum (Parent 3).

Another parent echoed the same sentiment as she explained feeling the pressure from therapists to use instructing beyond her what she felt comfortable doing at home:

> I want to do instructing…yesterday I was speaking with one of his therapists, and they were like, "I thought you were still doing stuff at home with him"…and it was like, I mean kind of…it's just been busy and it's been more of a hangout time when we come home. And at the time, I was like, "Oh yeah!"…Well, this is what I should say and what…she wants to hear. But in reality, it's just stuff that you can fit in when you're not too tired, or he's tired or…you know…We tried playing with play dough the other day and everybody was just done and, you know…(Parent 2).

c. **Pretest and Posttest Comparisons**

i. **Application of the Intentional Relationship Model in Video Reflections**

Across pretest and posttest video reflections, all six parents demonstrated a strong focus on the interpersonal dynamics between the therapist and the parent, identified therapists' behavior as dismissive of parent's and child's concerns, and emphasized wanting the therapist to better utilize the instructing mode in their communication with the parent. Common examples of communication strategies that are encompassed in the instructing mode included:

- Descriptive terms were used that not understood by the mother. When the mother stated she was overwhelmed, the therapist missed the opportunity to explain more (Parent 1).
- I'm a visual learner so seeing things written down rather than talked about…I kept thinking how much I would have liked seeing things written down (Parent 2).
- As a parent, I would have wanted a clear plan of action and goals that could help support my concerns about the child (Parent 3).
- I would like for it to try to do some activities. If it doesn't work, then call it a day. But for sure try to be ready for next (Parent 4).

- Examples of therapy the parent can do with a baby at home on her own and why it's important (Parent 5).
- As a parent, more actual hands-on activities for the child's progress (Parent 6).

Comparative content analysis of the pretest and posttest reflections indicated that in addition, increased utilization of IRM terminology, all six parents placed a heavier emphasis on the importance of responding to the child's and the mother's needs through increased shifting to the empathizing and collaborating modes:

> Not validating the mother's concerns or reading non-verbal cues that mom does not want to have bubbles in the house…Mom says the baby is tired and hungry, but the therapist says 20-30 minutes more, demonstrating a lack of validation, not collaborating or problem-solving with mother…Used encouraging mode when mother was already disengaged (Parent 1).

> The mom had an issue with it, and the therapist seemed to ignore it and continue instead of perhaps trying something else (Parent 6).

In addition, two parents also specifically highlighted the therapist's inability to effectively identify and respond to parents' non-verbal cues in their posttest reflections:

> Empathizing to open up mom's capacity to communicate. Mom's non-verbal communication mismatched her verbal communication. The therapist could be prepared with additional ideas to use for the child that are agreeable with mom, baby's schedule, and what works within the limitations of the home (Parent 3).

> The mom was upset that the therapist was late and that the baby was sleepy. I think the communication between the therapist and mom could have improved to make the session better/comfortable. The therapist did apologize, but it seemed like mom didn't find it truthful (Parent 5).

ii. **Parental Self-Efficacy and Participation in Early Intervention**

There was no evidence suggesting any change related to parent's EI self-efficacy or participation in the assignments or the follow-up interviews. Visual comparison of parent's self-reported EI self-efficacy indicated that three parents showed a trend toward increased EIPSES scores, and three parents showed a trend toward decreased EIPSES

scores. Visual comparison of parent's self-reported participation and engagement in EI, indicated that three parents showed a trend toward increased PPEM scores, two showed the same PPEM scores, and one showed a trend toward decreased PPEM scores.

V. DISCUSSION

This dissertation aims to expand the existing knowledge base on the role of therapists' communication in the delivery of family-centered care and parent engagement in EI. Two studies were conducted to achieve this aim. Study I was an exploratory, descriptive study of:

- Study I: An exploratory, descriptive study of therapists' and parents':

  a) EI self-efficacy and previous EI experience and training;

  b) Perspectives on parents' participation, therapists' use of family-centered practices, and therapists' therapeutic communication and sub-optimal interaction (as defined by the IRM).

- Study II: A pilot descriptive study of the feasibility, acceptability, and preliminary effectiveness of an IRM-based curriculum for a combined audience of therapists and parents in EI.

A. Therapists' and Parents' Self-Efficacy, Experience, and Training in Early Intervention

Therapists' and parents' EI self-efficacy (EISES and EIPSES), experience (demographic questionnaire), and training (demographic questionnaire) were evaluated to gain a better understanding of the participants' background characteristics that were directly applicable to their EI experience. The strength of associations between these variables was examined to gain a better understanding of how these variables may be connected in practice.

1. Therapists' Early Intervention Experience and Training

Therapists reported high levels of exposure to training specific to family-centered care. Therapists' exposure to training in the use of therapeutic communication was mixed, and the majority of therapists were not familiar with the IRM. The majority of therapists reported

receiving pre-professional training in family-centered care and therapeutic communication during their graduate education. A smaller number of therapists reported post-professional training through one-on-one supervision and training from an employer or continuing education. The length of time a therapist spent practicing in EI had a stronger association with the amount of training in family-centered care as compared to the amount of training in therapeutic communication. Compared to developmental, physical, and speech therapists, occupational therapists reported greater exposure to training in therapeutic communication and familiarity with the IRM.

Based on these findings, it can be speculated that professional development in EI places a stronger emphasis on describing the core constructs of family-centered practice, as opposed to offering therapists an opportunity to expand the interpersonal skill base necessary for effectively implementing family-centered approaches in practice. Furthermore, while the topics of family-centeredness and therapeutic communication span across professional disciplines, this topic may not gain equal attention across all professions and may be more prominent in pre-professional education as opposed to post-professional education.

High frequency of training in family-centered care is anticipated and expected in EI, provided that the EI system: 1) places a strong emphasis on family-centeredness in its policies and recommended practices, and 2) requires continuing education that is EI specific and goes beyond the requirements for continuing education established by the professional licensing standards in Illinois.

Given the importance of therapist-parent communication for successful implementation of relationship- and capacity-building practices encompassed in family-centered care, it would also be expected that the topic of maintaining effective and therapeutic communication would be

prominent. The findings from this study suggest that continuing education on family-centeredness may not be addressing the role of interpersonal variables that are integral for establishing a therapeutic relationship and have the power to enable to inhibit the families' capacity to remain actively engaged in the therapeutic process. To the author's knowledge, empirical evidence on the frequency and quality of continuing education opportunities available in EI has not been published to date. Given the author's general knowledge, anecdotal evidence, and personal experience with EI continuing education, it is speculated that continuing education specific to promoting family-centered practices in EI: 1) remains limited to describing general theoretical underpinnings of family-centeredness, and 2) may not directly cover practical strategies necessary for effective knowledge translation of family-centered theory into practice.

2. **Therapists' Early Intervention Self-Efficacy**

Across the four disciplines, therapists reported feeling confident in their competence as an EI provider. As such, therapists identified feeling comfortable with their knowledge of child development, professional ability to make informed clinical decisions, and utilize strategies for responding to challenging clinical situations. The therapists' EI self-efficacy (EISES) had a weak association with the number of years a therapist spent practicing and the amount of training in family-centered care; there was no association between therapists' EI self-efficacy and training in therapeutic communication. It can be speculated that the present training, although ample in quantity, may not offer sufficient skill-building to support the translation of family-centered theory into everyday clinical practice.

The limited quantity and quality of existing training opportunities specific to clinical application of recommended EI practices may make it less likely that the therapists' EI experience and training has a positive impact on therapists' EI self-efficacy. Previous studies

found that therapists' may be more confident than competent in their ability to deliver recommended EI practices and family-centered care (Bruder & Dunst, 2015; Bruder, Dunst, & Mogro-Wilson, 2011). In light of this finding, it is possible that the therapists' high EI self-efficacy may not be an accurate predictor of the therapists' clinical competence as an EI provider. A growing body of evidence highlights a lack of sufficient pre-professional (Bruder & Dunst, 2005) and post-professional (Campbell, Chiarello, Wilcox, & Milbourne, 2009) training that targets explicitly recommended EI practices (Bamm & Rosenbaum, 2008; Bruder, 2010; Espe-Sherwindt, 2008). Furthermore, evidence on the efficacy of these training is rarely investigated, and it remains unclear whether these professional development opportunities lead to behavioral change or raise the therapist's confidence in the topic.

Self-report is heavily influenced by the therapists' capacity to be aware and accurately reflect on their practice. One of the best ways to support critical reflexivity within a learning environment is through the integration of social (with an emphasis on cognitive apprenticeship) and transformative (with an emphasis on critical assessment of assumptions) learning opportunities. However, to the authors' knowledge, these strategies are inconsistently integrated into continuing education at this time. Existing limitations in the quality of professional development curricula may exacerbate the challenges in gathering accurate self-report. Due to methodological limitations, this assumption could not be tested within the scope of this study. Existing evidence increasingly suggests a gap in the quality and effectiveness of continuing education for promoting best practices in EI, and additional research examining the contributors to therapists' EI self-efficacy is warranted in the future.

3. **Parents' Early Intervention Experience and Training**

The majority of parents reported zero hours of training specific to the EI process of care; a small proportion reported that they received some training from an EI therapist or a service coordinator. This is particularly concerning given that parents reported receiving services from multiple providers, and all families had a dedicated service coordinator whose principal responsibility is to support the parent's ability to navigate the EI system. Given the data collection methods selected for this study, it is unclear whether the training was not provided or if it was delivered in a manner that was inaccessible to the families.

While these findings should be interpreted in light of the methodological limitations, they are consistent with a previously published perception that: 1) parents may not be adequately informed of the full scope of services they are eligible to receive in EI (James & Chard, 2010; Turnbull et al., 2007) and 2) there remains a dearth of support and services that are strictly dedicated to promoting family outcomes outside of one-on-one, direct intervention from an EI provider (G. King, Williams, & Hahn Goldberg, 2017; Turnbull et al., 2007). This begs the question of whether or not the system is designed in a way that prevents parents and caregivers from accessing professional development opportunities that could benefit them and their child.

4. **Parents' Early Intervention Self-Efficacy**

While parents reported feeling confident in their parenting, parents' EI self-efficacy (EIPSES) was not associated with the length of their participation in EI or any previous training specific to the EI process of care. This finding is concerning given that EI policies specifically stress the importance of enabling parents' capacity to support the child's development and growth. The combination of this finding and the finding that therapists showed the lowest frequency of communication modes that intentionally shifted power to the family

(advocating, problem-solving, and collaborating), begs the question of whether or not therapists integrate opportunities for capacity-building in their interactions with parents in EI. Given the sampling limitations, however, this finding may also be due to methodological limitations of this study.

5. Summary of Findings: Supporting Therapists and Parents Through Continuing Education

While EI policies and guidelines have embraced family-centered values, professional training may not be sufficient enough to help therapists translate their professional values into clinical practice. Existing training opportunities specific to EI in Illinois may not sufficiently target therapists' interpersonal competencies necessary for supporting therapeutic communication in practice. Findings from this study suggest that 1) therapists experience higher frequency and exposure to training in family-centered care as opposed to training in therapeutic communication, and 2) parents experience limited frequency and exposure to training specific to EI outside of direct, one-on-one, treatment sessions with EI providers. For both participant samples, there was a lack of a strong association between EI self-efficacy, experience, and training.

While therapists' interpersonal competence and ability to communicate effectively with children and families in pediatrics have been consistently established as drivers of client engagement (D'Arrigo, Copley, Poulsen, & Ziviani, 2019; King, 2009) and positive outcomes (Karver et al., 2006; King, 2017); efforts to operationalize and evaluate the impact of therapists' interpersonal competence on the process and outcomes of family-centered care remain scarce (Di Rezze et al., 2014; King, 2017).

Present research findings offer evidence in support of a growing need to integrate additional opportunities specific to translating family-centered theory into clinical practice. In addition, evidence supports the ongoing need to increase parents' and caregivers' access to educational supports and resources outside of direct, one-on-one intervention in EI (G. King et al., 2017; Turnbull et al., 2007). Parents and caregivers have been argued to play a role as both the providers and the recipients of professional education opportunities in EI (Buysse & Hollingsworth, 2009). Future studies investigating continuing education in EI should evaluate ways of expanding existing educational opportunities in a manner that supports both therapists and parents as critical stakeholders and recipients of training specific to EI process and outcomes and care.

B. State of Parent Participation, Family-Centered Care, and Therapists' Communication in Early Intervention

Findings from this study suggest that while parents are engaging in EI sessions by participating in therapeutic activities and asking questions, there remain opportunities to maximize parent engagement beyond what is being reported by therapists and parents in EI. Therapists and parents reported that therapists generally exhibited behaviors that were consistent with family-centered care; however, therapists more heavily relied on strategies that were specific to relationship building (showing interpersonal sensitivity and treating people respectfully) than capacity building (providing specific and general information). Consistent with these findings, therapists most frequently used communication strategies that were most consistent with encouraging and empathizing modes, followed by instructing, collaborating, problem-solving, and advocating.

1. Perceptions of Therapists' Communication

Only a small fraction of therapists reported feeling completely satisfied with their communication across the six IRM modes. Therapists most frequently identified room for improvement in their use of collaborating (letting go off control), problem-solving (guiding parent's ability to come up with a solution to a challenging situation or a problem), instructing (parent education and creating structure within the session), and advocating (empowering parent's access to people and resources in the community) modes. Conversely, the majority of parents reported that they were generally satisfied with the therapists' mode use. When areas for improvement were identified, parents' wanted to experience more instructing and problem-solving modes while working with therapists in EI. As such, parents may have been most consistently concerned with a limited amount of capacity building and information sharing (as opposed to relationship-building) during their one-on-one interactions with therapists.

a. Frequency of Therapeutic and Sub-Optimal Interaction

From therapist and parent perspectives, therapists in EI most frequently used the empathizing and encouraging modes, followed by instructing, collaborating, problem-solving, and advocating. Both participant groups reported that sub-optimal interaction was infrequent. These trends in therapists' mode use are consistent with previous research that suggests that therapists may: 1) inconsistently incorporate parent teaching into EI sessions (Sawyer & Campbell, 2012) and, 2) over-utilize direct instruction in their interactions with parents while underutilizing problem-solving approaches that shift power to the family (Barton & Fettig, 2013; Colyvas, Sawyer, & Campbell, 2010; Friedman, Woods, & Salisbury, 2012; Salisbury, Woods, & Copeland, 2010).

The findings from this study expand the existing evidence-base on therapist-parent interaction in EI by going beyond the examination of instruction and problem-solving approaches and highlighting the frequency of communication across the continuum of communication strategies defined by the IRM. These findings highlight potential strengths and opportunities for growth related to therapists' competency to remain flexible, intentional, and multimodal in their communication while working with parents in EI. Therapists and parents agreed that therapists demonstrated high frequency of empathizing (gaining an empathic understanding of the parent's experience and needs) and encouraging (offering positive reinforcement and fostering hope) mode use, which is consistent with the strengths-based approach that is encompassed in family-centered care. Although less frequent, frequency of instructing (creating clear structure, direction, and providing parent education) communication offers evidence that therapists are incorporating information sharing into their sessions, however, these interactions may not have the full capacity-building potential necessary for family empowerment.

Based on the finding that collaborating, problem-solving, and advocating modes were least frequently used, it can be speculated that within a therapeutic relationship there is a stronger emphasis on therapist-driven decision-making as compared to parent-driven decision making. It is possible that these missed opportunities to shift power from the therapist to the parent using collaborating (supporting parents' autonomy within the decision-making process), problem-solving (supporting the parents' capacity to make informed decisions through Socratic questioning and by outlining options), and advocating (supporting the parents' awareness and access to people and resources in the community) modes are contributing to the gap in the therapists' capacity to translate family-centered theory into EI clinical practice.

One of the objectives of this research was to examine potential contributors to therapists' mode use; however, findings from regression analyses were inconclusive. Although significant, results from the multiple linear regressions indicated that accounting for the therapists' length of practice and EI self-efficacy predicted only a small fraction of variance in the therapists' frequency of therapeutic communication (CAM) and sub-optimal interaction (CASI-SF). The number of years practicing was the only significant predictor of therapists' CAM ratings; therapists with greater clinical experience in EI also reported a higher frequency of overall and individual mode use. Therapists' EI self-efficacy (EISES) was the only significant predictor of sub-optimal interaction; therapists with higher EI self-efficacy reported a lower frequency of sub-optimal interaction.

There was no significant association between therapists' exposure to training in family-centered care, training in therapeutic communication, and self-reported mode use. This finding is likely a result of the previously discussed limitations in the quantity and quality of available professional development opportunities in EI. Training specific to promoting therapists interpersonal competencies remain rare and are under-investigated in the research. Furthermore, training that has attempted to promote therapists' capacity to implement family-centered principles in practice have not been successful at increasing therapists interpersonal sensitivity and skills (Gillian King et al., 2011), and were inconsistent in leading to behavioral change (Campbell & Sawyer, 2009). Additional research is necessary to uncover the factors that positively contribute to the therapists' interpersonal capacity to communicate in a multimodal and flexible manner in EI. Increasing the quality and specificity of training available by targeting communication and interpersonal aspects of the therapeutic relationship may shift the associations between these variables in the future.

2. Perceptions of Therapists' Use of Family-Centered Practices

Therapists (MPOC-SP) and parents (MPOC-20) reported frequent use of family-centered practices in EI; however, both participant groups reported higher frequency of behaviors associated with the relationship-building aspects of care (Treating People Respectfully and Showing Interpersonal Sensitivity domains on the MPOC-SP; Respectful and Supportive Care and Enabling and Partnership domains on the MPOC-20) than behaviors associated with the information-sharing aspects of care (Providing Specific Information and Communicating/Providing General Information on the MPOC-SP and MPOC-20). These findings are consistent with the trends reported in previous studies that used the MPOC to evaluate the frequency of family-centered behaviors in pediatrics (Cunningham & Rosenbaum, 2014).

a. Association Between Therapists' Use of Therapeutic Communication and Family-Centered Practices

While controlling for therapists' EI experience, training, and self-efficacy (EISES), therapists' use of therapeutic communication (CAM) was found to be the most significant predictor of the frequency of family-centered practices. Therapist-parent interactions are critical for ultimate effectiveness of family-centered care, and several interpersonal barriers to family participation have been identified in EI (Bamm & Rosenbaum, 2008; Bruder, 2010; Kuo et al., 2012; Turnbull et al., 2007). This supports recent findings on the importance of therapists capacity to remain responsive (D'Arrigo, Copley, Poulsen, & Ziviani, 2019) and adaptable to the parents' needs in order to support parents' autonomy, relatedness, and competence (D'Arrigo et al., 2017).

The Instructing mode (CAM) was the only significant predictor of the therapists' ratings on the Showing Interpersonal Sensitivity and Providing Specific Information domains on the MPOC-SP. These findings suggest that therapists that demonstrate a strong capacity to use the instructing mode in their interactions with parents are more likely offer parent education and demonstrate behaviors that confirm their sensitivity to the parents' needs and preferences. The Encouraging mode \ (CAM) and sub-optimal interaction ratings (CASI-SF) were the most significant predictors of the therapists' ratings on the Treating People Respectfully domain of the MPOC-SP. As such, therapists that used high levels of positive reinforcement and encouragement, and low levels of sub-optimal interaction, were more likely to demonstrate behaviors that respected families' needs, preferences, and situations. The Advocating and Collaborating modes (CAM) were the most significant predictors of the therapists' ratings on the Providing General Information domain of the MPOC-SP. This finding suggests that therapists capacity offer families general information that goes beyond the child's individual and developmental needs requires the therapist to utilize more approaches that 1) facilitate families' access to supports and resources in the community (advocating mode), and 2) let go of control and shift power within the therapeutic relationship to the family (collaborating mode).

In light of limited training opportunities specific to promoting therapists' capacity to use therapeutic communication in practice, the findings mentioned above should be interpreted with caution. It is possible that the findings are limited by the frequency of mode use, and the strength of associations reported in this study may change as therapists incorporate higher levels of collaborating, problem-solving, and advocating mode use into their communication with parents and caregivers in EI. Given the fundamental difference in the theoretical underpinning behind the MPOC (measure of family-centered behaviors), the CAM (measure of therapeutic

communication), and the CASI-SF (measure of sub-optimal interaction), there was no existing hypothesis related to how the family-centered behaviors included in the MPOC should and could be mapped on to the different communication modes.

Of interest, however, is whether intervening on the therapists' capacity to communicate in a more multimodal and flexible manner could positively impact the frequency of family-centered practices in EI (and more generally in pediatrics). While this speculation could not be tested within the scope of the present study, the influence of mode use on therapists' capacity to adhere to family-centered practices should be investigated in the future.

3. **Perceptions of Parents' Engagement**

While measure used for capturing parent engagement in EI (PPEM) did not measure the degree of passive and active parent engagement in the sessions, neither parents nor therapists reported maximal levels of parent engagement in this study. From both perspectives, parents were "quite a bit" to "somewhat" engaged in EI sessions. These results support the previously reported findings that while families are participating in EI services, they may be more passive than active in their role (Dunst, Bruder, & Espe-Sherwindt, 2014).

While there is a definite shift toward supporting greater family involvement in EI treatment planning and implementation, there remains room for improvement in how actively and frequently parents are involved in the process of EI treatment planning and intervention. Existing research suggests that therapist-parent interactions are most frequent during initial goal setting and treatment planning, and tend to decrease during treatment implementation stages (An et al., 2018). Future research should examine both the frequency of therapist-parent interaction as well as a possible change in therapists' mode use across time.

From the therapists' perspective, therapist experience and training in EI, utilization of family-centered practices (MPOC-SP), and frequency of therapeutic communication (CAM) accounted for a large proportion of variance in the levels of parent engagement (PPEM). In the model that accounted for therapists' overall frequency of mode use (average CAM score), parent engagement was most significantly associated with training in family-centered care, training in therapeutic communication, and the average rating on Treating People Respectfully domain of the MPOC-SP. In the model that accounted for therapists' use of each of the six modes (Advocating, Collaborating, Empathizing, Encouraging, Instructing, and Problem-solving subscales of the CAM), parent engagement was most significantly associated with therapist's training in family-centered care and EI self-efficacy (EISES).

Several factors could have contributed to the lack of stability across the two models, including sampling and data collection approaches selected for this study. With this limitation in mind, across the two models, the amount of training in family-centered care was the most stable predictor of parent engagement. Although this finding highlights the importance of ongoing training opportunities specific to promoting therapists competency in delivering family-centered care in practice, it remains unclear precisely what within this training is leading to a positive association. It is possible, for example, that this association may be due to the course content covered in the training or the preferences and values of the therapists that seek out more training in this area of practice.

The strength of association between parent engagement, and: 1) therapists' training in therapeutic communication, 2) therapists' family-centered behaviors captured in the Treating People Respectfully domain on the MPOC-SP, and 3) therapists' EI self-efficacy (EISES) approached but did not consistently meet significance. Given the theoretical and empirical

backing behind this association, the link between these variables should be investigated in future studies with more robust sample size.

From the parents' perspective, parent's self-reported engagement in EI (PPEM) was only significantly associated with parent's EI self-efficacy (EIPSES). Parent's self-reported engagement in EI and EI self-efficacy were not associated with parent' perception of therapists' utilization of family-centered practices (MPOC-20) or communication (CAM or CASI-SF). Provided the small sample size and convenience sampling of parent participants, conclusions related to this finding cannot be drawn at this time. However, it can be speculated that this finding may be highlighting potential ineffectiveness in existing EI intervention approaches in supporting parent's EI self-efficacy. This finding is consistent with the growing evidence-base on the limited amount and frequency of therapist-parent interactions and the tendency for parents to take on a role of a passive observer (as opposed to active participant) in the EI process of care.

4. Summary of Findings: The Role of Therapists' Communication in the Delivery of Family-Centered Care and Parent Participation in Early Intervention

Therapists and parents reported a high frequency of family-centered practices and therapeutic communication approaches in EI. Both groups also reported a low frequency of sub-optimal interaction. However, potential gaps in effective implementation of family-centered practices were identified. Expressly, therapists' were noted to rely more heavily on empathizing, encouraging, and instructing modes (as opposed to collaborating, problem-solving, and advocating) of communication and demonstrate more behaviors within the relationship-building domain (as opposed to the information-sharing domains). Taken together, these findings suggest

that therapists may be inconsistently integrating the full breadth of family-centered strategies designed to support family autonomy and empowerment within the EI process of care.

Coaching is one of the most prominently recognized strategies for family capacity building in EI (Schwellnus, King, & Thompson, 2015) and requires the therapist to intentionally shift the power dynamic within a therapeutic relationship from the therapist to the parent. Therapists' over-reliance on empathizing, encouraging, and instructing modes may limit therapists' capacity to effectively integrate coaching methodologies into their treatment sessions. Provided that the present research study did not aim to investigate coaching practices in EI, this assumption cannot be tested within the scope of this study. However, future studies should examine the benefits of providing targeted training on the use of intentional communication (such as through an IRM-based curriculum) in supporting therapists' capacity to adhere and implement intervention-focused approaches such as coaching.

From the therapists' perspective, parent engagement was found to be most significantly associated with therapists' training in family-centered care, EI self-efficacy, and use of family-centered practices. Controlling for therapists' background characteristics, therapists' use of family-centered practices was only significantly predicted by their use of therapeutic and sub-optimal interaction. Thus, suggesting that while therapeutic and sub-optimal interaction does not have a direct influence on parent engagement, it does have the potential to enable and inhibit the therapists' capacity to practice in a family-centered manner. Therapists' use of therapeutic communication strategies was only associated with therapists' length of clinical practice (greater length of practice associated with greater therapeutic mode use); while the frequency of sub-optimal interaction was only negatively associated with therapists' EI self-efficacy (higher EI self-efficacy associated with lower sub-optimal interaction).

Previous qualitative research confirmed that therapist-parent relationship and therapists' responsiveness are critical contributors to parent engagement in pediatric rehabilitation (D'Arrigo, Copley, Poulsen, & Ziviani, 2019). Furthermore, the interpersonal aspects of the therapist-parent-child relationship have been recognized to play an essential role in the therapist's capacity to offer parents and caregivers: autonomy support, relatedness support, and competence support (D'Arrigo, Ziviani, Poulsen, Copley, & King, 2017). Empirical evidence examining ways in which interpersonal aspects of care support or inhibit parent engagement remain scarce.

The present study expands the existing evidence base by identifying both strengths and opportunities for growth in relationship to therapist-parent interaction in EI. Additionally, the study offers preliminary evidence of the associations between the therapists' use of communication, family-centered practices, and parent engagement. While the sample size was not large enough to investigate mediation and moderation effects, the hypothesized relationship between the variables of interest examined in this study is depicted in Figure 14. The strength of associations between these variables should be further investigated in future research with a larger sample of therapist and parent participants.

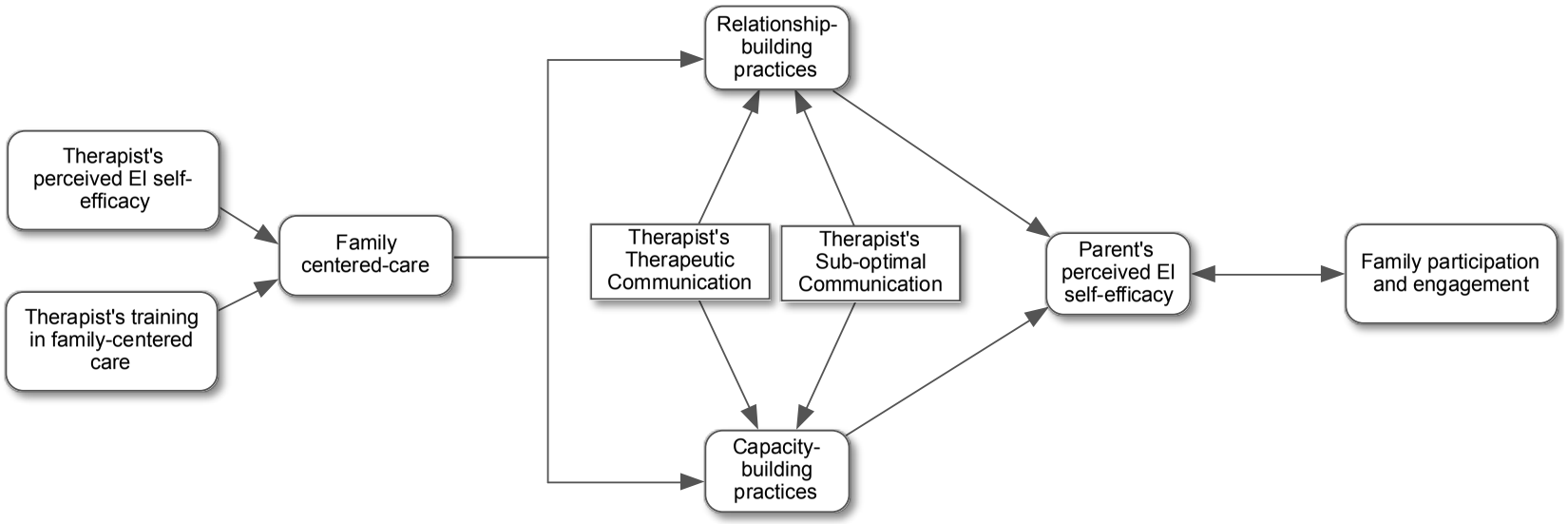

Figure 14. Proposed model of the association between variables of interest.

C. Feasibility and Acceptability of the Intentional Relationship Model Curriculum

Provided the growing emphasis on the importance of therapists' interpersonal competence in promoting family-centered practices, family participation, and positive treatment outcomes, Study II aimed to explore the feasibility and acceptability of a five-week IRM-based course that specifically aimed at improving therapists and parents interpersonal competency in EI.

Course feasibility and acceptability was evaluated according to the criteria established by Orsmond & Cohn (2015) using a combination of quantitative and qualitative approaches, including observations and field-notes, final course evaluation, and semi-structured follow-up interviews.

1. Feasibility

Feasibility of curriculum delivery was evaluated through field notes, percent of participant enrollment and retention, percent of online and in-person session completion, and observed level of participation during the small and large group activities integrated into the course.

a. Participant Recruitment

Course feasibility was supported by evidence of good participant enrollment and retention in the study. However, participant enrollment and retention was much stronger for therapists, as compared to parents. Therapist enrollment and retention in the study provides evidence that therapists are interested in and actively seek out opportunities for professional development specific to expanding their interpersonal competence. Thus, therapists do not only value the importance of therapist-parent interaction in EI but also take actionable steps in developing their capacity to communicate with parents and caregivers more effectively.

Unlike therapists, parent enrollment presented a significant challenge during the recruitment stage. One of the primary barriers to participant enrollment was the PI's inability to disseminate the information about the course to parents and families receiving EI services in Illinois. Lack of access to EI parent networks and support groups presented a significant barrier to parent enrollment. Parent participant enrollment was heavily dependent on the snowball sampling approach, and the limited access to parent networks narrowed the reach of research enrollment materials.

It is also possible that the recruitment materials did not accurately target parent needs, which may have negatively impacted the parents' interest and motivation to participate. Since training opportunities are not widely available to parents and caregivers in EI, therapists and parents may have been reluctant to pass on the information about the course to other families. Furthermore, the novelty of this training opportunity may have increased parent reluctance to get involved and see potential benefits in attending the course. Lastly, the lack of childcare created a barrier to parents' capacity to take time off for an EI training opportunity outside of the home. It is possible that while parents are interested and could benefit from more opportunities for continuing education, the system is set up in such a way that creates both physical (e.g., lack of support and resources that are required for parents to be able to attend community-based opportunities and continuing education) and social (e.g., attitudes of other therapists and parents) barriers to parents' access to continuing education.

Future research efforts should consider and address the novelty of continuing education opportunities for parents and caregivers, and incorporate recruitment supports that would facilitate parent interest such as parent testimonials or learning objectives that specifically target common parenting concerns. The recruitment materials used for this study should be reviewed

and revised in light of parent and therapist testimonials to better target the needs of parents and caregivers of young children in EI. Furthermore, additional avenues for participant recruitment should be explored in order to maximize the reach of snowball sampling and lower the need for strong commitment and assistance from other EI professionals during the participant recruitments stages of the study.

b. **Participant Retention**

All participants completed the pretest-posttest questionnaires, and the data collection methods selected for this study did not present a significant barrier to participant retention. The five-week, hybrid course structure did not appear to present a significant challenge to participant retention. All participants completed the required assignments in preparation for classroom activities and demonstrated active participation in small and large group discussions. However, a substantial number of participants required make-ups for missed sessions.

Future research efforts should account for the need for one-on-one make-ups and ensure that sufficient resources are available to support participants who are not able to attend all in-person sessions. As part of this study, one-on-one make-ups were offered via Skype, which was well received by the participants. The possibility of integrating one-on-one, telecoaching sessions should be considered in the future as an active teaching component that would be available to course attendees upon registration. One-on-one telecoaching from a subject matter expert can support learners' knowledge retention by providing additional opportunities to clarify areas of uncertainty and help connect the material covered to the learners' day-to-day experience.

2. **Acceptability of the Intentional Relationship Model Curriculum**

Curriculum acceptability was evaluated using a combination of quantitative and qualitative approaches that encompassed data from field notes, final course evaluation, and one-

month follow-up interview. The therapist and parent participants reported high satisfaction with the course content and the course instructor. Both groups reported that the course exceeded their expectations overall, as well as the applicability and utility of the course content (specifically, the IRM framework and terminology) outside of the classroom. Although continuing education opportunities are widely available in EI, therapists expressed that this course was unique in its emphasis on the IRM. Parents were not aware of any other continuing education opportunities specific to EI and expressed a high level of satisfaction from being able to attend a course specific to EI.

a. **Course Content**

Therapists and parents expressed a high level of satisfaction with the course and reflected the benefits of having to "wrestle" with the course content. Thus, while many participants expressed "feeling overwhelmed," they agreed that the course structure supported their ability to remain engaged and accountable for understanding the content covered.

There were few concerns raised related to the accessibility of the content covered, suggesting that the content was delivered in a manner that supported a diverse group of learners. While several therapists were uncertain regarding parents' ability to fully benefit from the course content and integrate the material covered into their day-to-day experience; this assumption was disconfirmed during the parent interviews. In fact, both participants groups reported similar feelings of being challenged and likely experienced the content as overwhelming due to the novelty of examining day-to-day interactions through an interpersonal lens within a flipped classroom environment (which heavily utilized social and transformative learning approaches).

Furthermore, the majority of therapist participants and all parent participants had limited knowledge of the IRM before the course. Strong emphasis on the IRM as a theoretical backdrop

behind everything that was discussed in the course required all participants to acquire and utilize a new framework and language that is not often used in everyday interactions (either by therapists and parents). While therapists and parents enjoyed the new perspective, being able to learn and apply the new terminology (modes, interpersonal characteristics, inevitable interpersonal events, etc.) proved to be challenging to all participants in the course. The use of IRM-specific terminology was something that was echoed as overwhelming even by those participants that were previously exposed to the IRM as part of their graduate or work experience.

Provided that the course development was heavily grounded in social and transformative learning theories, participant's report of feeling challenged was anticipated and offers evidence in support of the transformative learning process. The feelings of discomfort and having to "wrestle" with new information were likely the active ingredient that contributed to positive outcomes related to participants' knowledge acquisition and outcomes. This notion of discomfort as a starting point for perspective transformation is consistent with the critical assumption of transformative learning that states that transformation begins with a disorienting dilemma (Mezirow, 1991).

With that in mind, future studies should examine additional ways to support learners in and outside of the classroom. As previously mentioned, the use of telecoaching may be an effective way of supporting learners by offering them direct access to a subject matter expert and one-on-one instruction on the topic outside of class. Furthermore, future efforts of curriculum dissemination should account for potential challenges with knowledge acquisition, and incorporate additional supports and resources to support participants' ability to reference and use IRM-based terminology without having to rely on memory and recall. For example, the course

attendees can be encouraged to purchase or borrow an IRM text as a reference or be provided with a comprehensive glossary of all IRM-based terminology covered in the course during the first class meeting. Furthermore, future courses should consider incorporating a web-based assignment that participants complete in preparation for week one. For example, all participants could be asked to view an introductory video to the IRM as a preparatory assignment for the first in-person meeting.

b. **Course Structure**

Participants expressed high levels of satisfaction with the course structure and delivery. In the follow-up interviews, therapists and parents spoke at length about their positive experience of adult learning elements incorporated into the course structure and the ability to learn from a mixed audience of therapists and parents in the course.

i. **Experiencing the Principles of Adult Learning in Continuing Education**

For therapists and parents, this course was the first experience of a flipped classroom continuing education course that incorporated a mixed group of therapist and parent learners. Furthermore, all parents reported that this course was their first experience of attending a course-specific to EI and only opportunity to learn with (rather than from) EI therapists. While continuing education opportunities for EI therapists are widely available in Illinois, the majority of therapists felt that continuing education was generally didactic, and the courses did not utilize the flipped classroom structure. Therapists with previous experience with learning within a flipped class environment reported that this experience took place as part of their graduate education as opposed to post-professional continuing education. Taken together, these findings confirm the ongoing need to expand the: 1) educational opportunities available to

families in EI outside of one-on-one direct interactions with the therapists (Buysse & Hollingsworth, 2009; G. King et al., 2017), and 2) continuing education opportunities for therapists to better adhere with best practice recommendations for adult learners (Odom, 2009).

Therapists and parents were highly satisfied with the course structure and the learning activities selected for in-class and online sessions. While the amount of information covered, paired with the requirement for independent learning, was experienced as overwhelming, participants felt that the course structure facilitated their ability to remain accountable and engaged with the course content. Provided that participants reported limited exposure to flipped-classroom environments in the past, this finding is likely due to the limited experience with such classroom set up and the novelty of social and transformative learning experience. There was no evidence of participants' disengagement with the course content, and all participants demonstrated active engagement in and outside of the in-person sessions. The majority felt that the length of the course could benefit from being expanded to support more opportunities for large and small group activities. While the finding that the course was both enjoyable and overwhelming may seem to contradict, it is consistent with the adult learning assumption that adult learners enjoy the experience of being a challenged as long as the learning is situated within their immediate experience. Furthermore, this finding is consistent with the assumptions of transformative learning, and the need to challenge learners existing assumptions to provoke change (Kitchenham, 2008; Mezirow, 1991; Phillippi, 2010).

Consistent with the existing empirical and theoretical assumptions in the adult and transformative learning literature (Kitchenham, 2008; Mezirow, 1991); three contributors to the transformative learning process emerged from the therapist and parent interviews: 1) social learning, 2) experiential learning, and 3) reflective learning (Figure 15).

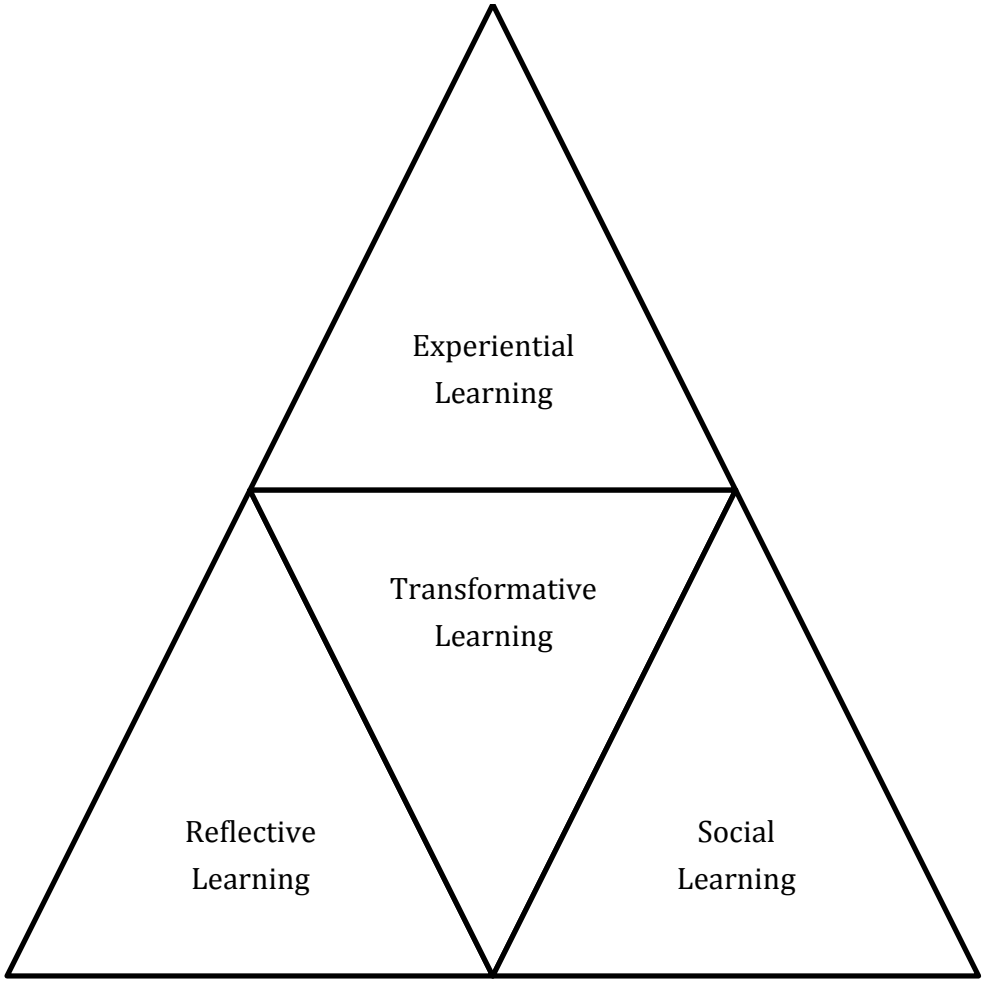

Figure 15. Key components of transformative learning during the course.

The most prominent theme across all interviews encompassed participant's appreciation of ample opportunities for social learning. Participants appreciated the opportunity to learn with and from others during large and small groups discussions, as well as weekly reflection feedback provided by the course instructor. Participants felt that conversations with others both validated their individual experiences and provided them with opportunities to collaborate and problem-solve while tackling a personally relevant problem. This finding supported the expectation that the course would promote opportunities for a cognitive apprenticeship, by offering opportunities for situated learning, legitimate peripheral participation, and guided participation (Dennen & Burner, 2008).

The need for social learning may have been particularly crucial to course participants' due to the experience of feeling "isolated" as therapists and parents in EI. Therapists spoke about the benefit of being able to learn from others from different disciplines and embraced the opportunity to learn more about the parents' experience and "being in parents' shoes." Similarly, parents felt the benefit of meeting and learning from other parents, as well as therapists that were not a part of their EI team. Due to a low number of parent participants in the present study, therapists and parents expressed a hope that future courses would have more parents in attendance and there would be more opportunities for parents to network and connect with other parents.

The above-mentioned social learning opportunities likely supported and translated to the behavioral changes noted related to increased therapists' reports of increased collaboration with families and other therapists in EI as a result of the course. The critical role of social learning highlights the benefits and importance of integrating the face-to-face components, which made interdisciplinary and social learning opportunities possible in the classroom. With that said,

future courses should also consider exploring the benefits of online interactions and telecoaching mentioned above. These additional online discussions could improve the accessibility of course content and offer an opportunity for more in-depth, one-on-one interaction and relationship building outside of the in-person meetings. Furthermore, while this was not evaluated within the scope of this research, formal opportunities for establishing a Community of Practice as part of the course should be investigated in the future.

In addition to social learning, participants expressed appreciation for hands-on and experiential learning in and outside of the classroom. Therapist and parent participants reflected positively on being able to apply the course content (specifically the IRM framework) to their everyday life and felt that the course material extended beyond their day-to-day experience in EI. Participants also perceived the benefit of having an opportunity to reflect upon their day-to-day experiences through in-class discussions and online assignments. These reflective components appeared prominently in the participants' reflections on their increased knowledge and awareness of their behaviors as a result of the course.

The components mentioned above of adult learning contributed positively to the participants' perspective transformation, and the ability to view their day-to-day interactions in a new and previously unexplored way using the IRM lens. When reflecting on the most significant course components, participants consistently spoke about learning opportunities that encompassed all three elements of learning and resulted in self-discovery (for example, the dice activity). Interviews confirmed that the course was effective in integrating moments of discomfort (for example, the pretest/posttest video of therapist-parent interaction) that likely acted as a disorienting dilemma and prompted increased self-examination and critical re-evaluation of learners past experiences and assumptions.

Previous research suggests that firmly held attitudes may be a pivotal barrier to facilitating change in clinical practice (Campbell & Sawyer, 2009), and transformative learning opportunities can support perspective transformation in professional development (Cahil & Bulanda, 2009). The findings from the present study further support the importance of integrating transformative learning approaches to challenge learner's existing beliefs and promote critical reflection and discourse that can support behavioral change.

ii. **Learning from a Mixed Audience of Therapists and Parents**

Combining therapists and parents in the same classroom was a new experience for both therapists and parents enrolled in the course. Although both groups were generally satisfied with this approach, nuanced differences in perspectives on delivering the course to the mixed group of therapists and parents were noted.

The majority of therapists and parents felt that learning in a mixed group was a positive and beneficial experience for both participant groups. However, many also expressed concerns related to the power dynamics between therapists and parents in the room. Many parents reflected on therapists' being "stuck in instructing" during the course; which shifted the focus from collaboration and learning with each other, to therapists attempting to tell the parents what to do and attempts to “fix” the parents’ problems. While speculative, these dynamics may be reflective of what happens within the therapist-parent interaction in EI. Furthermore, these findings may highlight potential complexities within a working relationship between the therapist and the parent that is not consistently acknowledged or discussed in EI.

Future efforts to deliver material to a mixed audience of therapists and parents should heavily examine ways to address these power dynamics in order to ensure that both participant groups can actively and fully participate in the critical reflection process through discourse with

others. According to the adult learning theory, true critical discourse can only take place when two people hold equal power (Phillippi, 2010). As such, the "teacher" (or in the instance of EI, a therapist) must be actively aware of any hierarchical power dynamics that could potentially impact the relationship between them and the learner (the parent) (Phillippi, 2010). Overall, the findings from this study support the benefits and the necessity of continuing to offer courses to both therapists and parents in the future. However, alternative classroom structure and composition methods should be considered to ensure that the group dynamics between therapists and parents are acknowledged and balanced. Some examples of potential adjustments to classroom structure include:

- Ensuring that each small group has the same number of therapists and parents, with at least two parents present;
- Offering opportunities for small group work that separates therapist and parent participants into individual workgroups (without the other group present), or;
- Shifting the conversation in the course to only focus on parent-child interactions to ensure that the conversation is consistently geared toward parents and opportunities for therapists to support parents needs in EI.

c. **Advancing the State of Early Intervention Continuing Education**

Theoretically grounded and evidence-informed professional development can support the utilization of recommended practices and improve implementation to family-centered care in EI. The curriculum evaluated in the present study is unique in that it uses best-practice recommendations for adult learning in continuing education and is theoretically grounded in a comprehensive model for examining and developing the therapeutic use of self using the Taylor's IRM (2008).

Odom (2009) called for a push toward "enlightened professional development," which encompasses teaming and team building, coaching and consultation, participation in communities of practice (CoP), online instruction, and access to web-based curricula. To the author's knowledge, this study is one of the first to examine the impact of delivering a course to a mixed audience of therapists and parents and in EI. Present findings suggest that the course was experienced as beneficial to all participants; however, several potential challenges should be considered and addressed in future course development. Concerns were raised regarding the 1) power-dynamics between the therapist and parents in the room (therapists were perceived to dominate the discussions and over-instruct in their interactions with parents in the group), and 2) accessibility of course content to parent participants that may not have a therapeutic background. These elements need to be carefully considered in future curriculum development or future studies that consider a mixed audience of therapists and parents.

E. Effectiveness of the Intentional Relationship Model Curriculum

Effectiveness of the five-week, IRM-based curriculum developed for this study was evaluated using a combination of quantitative and qualitative approaches. Separate analyses were conducted for therapist and parent samples of participants.

1. Therapists' Perspective

Based on the participants' responses to open-ended enrollment questions, all therapists enrolled in the course demonstrated a baseline understanding of family-centered theory, buy-in to the family-centered approach, and recognition of the importance of family participation for carrying over of therapeutic recommendations outside of treatment sessions. Individual learning plans indicated that therapists hoped to expand their knowledge related to 1) supporting family engagement, 2) implementing family-centered practices, and 3) improving

family-therapist relationship and communication. This finding suggests that despite a strong knowledge base and previous exposure to family-centered theory, therapists may continue to seek out additional skills and resources that would promote their competence in practicing in a family-centered manner. This further supports the previously mentioned speculation that while more general professional development specific to family-centeredness may be prevalent in EI, courses that specifically target clinical implementation of family-centered care may be limited.

While reflecting on the challenges of family-centered care many therapists described the complexities associated with working with families, including differences in backgrounds and priorities, lack of participation and buy-in, and perception of therapists as "experts." The challenges described were consistent with previously published findings that families may expect a more traditional, or expert, approach to care (Hebbeler & Gerlach-Downie, 2002; Leiter, 2004).

a. **Perception of Change in Interpersonal Knowledge, Awareness, Reflexivity, and Behavior**

Therapists' perspective on the impact of the course was evaluated using a qualitative methods approach, which encompassed content analysis of follow-up interviews. In their reflections on the course, therapists described a change in their interpersonal: 1) knowledge, 2) awareness, 3) reflexivity, and 4) behavior. The proposed interaction between changes in interpersonal knowledge, awareness, reflectivity, and behavior is depicted in Figure 16.

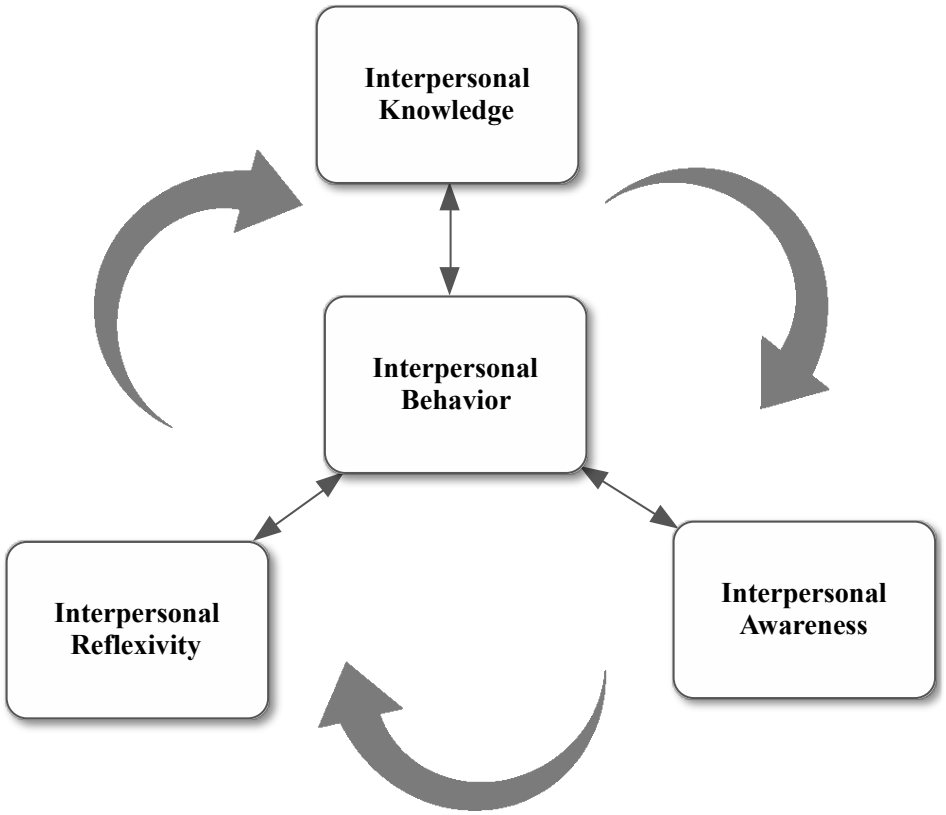

Figure 16. Interaction between knowledge, awareness, reflexivity, and behavioral change.

Therapists described an improved ability to integrate the IRM framework and language into their interpersonal reasoning. This acquisition of new knowledge supported the therapists' ability to put words to what they were already doing in practice, as well as recognize the difference between feeling and doing the actions associated with various family-centered practices (such as empathy, collaboration, and problem-solving). Additionally, the newly acquired IRM lens helped therapists' apply the interpersonal reasoning process as they reflected not only on their use of individual modes of communication but also the impact of mode sequences on their ability to remain intentional and effective in their communication.

Therapists identified a heightened sense of awareness of their interpersonal behavior as well as the interpersonal behavior of others. Therapists described an increased awareness of their interpersonal preferences and behaviors, an increased recognition of the challenges associated with effective mode switching, and a tendency to over-rely on their preferred mode. Additionally, therapists described heightened perspective-taking and awareness of the interpersonal behaviors of others (both parents and children in EI). Consistently, therapists described themselves as paying closer attention to interpersonal cues of others (both verbal and non-verbal). Although less prominent, the course also appeared to be effective in promoting therapists' reflexivity on the interpersonal dynamics within the therapist-parent-child triad; several therapists reflected upon their role in promoting positive parent-child interactions using the IRM.

In addition to being more interpersonally aware, therapists described themselves as taking more time to reflect, suggesting increased reflexivity both in and on their clinical practice. Therapists' specified being more mindful in their interactions, and an increased capacity to cope with interpersonal challenges by taking a step back, reflecting on the other person's experience, and being able to put themselves into the other person's shoes. Therapists described this process of increased reflexivity both during and outside of the treatment sessions. As such, the course appeared to support therapists' ability to reflect on interpersonal challenges as they are unfolding in the session, as well as take time to utilize interpersonal reasoning to plan for their interactions in the future.

Therapists unanimously described the process of changing their interpersonal approach as a time-intensive and challenging process. Although therapists felt that they did not perceive a significant change in their interactions before and after the course, they noted several positive

behavioral changes that suggest that course might have been more effective than what was experienced by the participants. As a result of the course, all therapists described making the first step toward behavioral change by taking the time to pause in an attempt to add intentionality in their mode use. The therapists also experienced themselves be more: flexible in their mode use, fluid in their capacity to shift their communication beyond instructing and empathizing modes, and better integrate collaborating and problem-solving modes into their interactions with parents and children in EI. Therapists found themselves using more mindful empathy in their interactions and taking more time to cope with stressful moments in their practice (in a manner that is consistent with the initial steps of the interpersonal reasoning process within the IRM). Future research should explore the therapists' capacity to translate the content covered in the curriculum to clinical practice through matched-pairs design or by integrating opportunities to observe and rate therapists' interactions with parents and caregivers through video.

b. **Evidence of Change in Interpersonal Reasoning**

The theme of increased capacity to integrate and use interpersonal reasoning in clinical interactions was further confirmed through content analysis of the pretest-posttest reflection assignments. At the end of the course, therapists demonstrated: 1) richer descriptions of the interpersonal interactions with their clients (suggesting a shift from activity to interpersonal focus), 2) increased capacity for interpersonal reasoning specific to barriers to effective communication, and 3) increased capacity to identify solution-focused and actionable steps to addressing communication barriers in practice.

When responding to challenging interpersonal events, therapists initially described themselves as "stuck" and unable to switch from empathizing or instructing. As the course progressed, therapists described an increased capacity to reflect upon actionable steps that would

support their ability to switch to collaborating or problem-solving modes. Therapists described themselves as gaining a "new lens" in their practice, supporting the hypothesis that the IRM would provide increased clarity and understanding of interpersonal elements of the therapeutic relationship. Several therapists also felt that they were less "critical" in their reflections at the end of the course, highlighting the possibility of increased empathic understanding and ability to reason through what happened rather than overlying on their emotional response. As such, these findings offer support for the IRM training in promoting the therapists' interpersonal capacity to 1) remain intentional, mindful, and empathic toward themselves and others in their social interactions, and 2) use interpersonal reasoning to guide their responding to inevitable interpersonal events that may pose a barrier to the development and maintenance of the therapeutic relationship in EI.

c. **Evidence of Change in Communication Practices**

Pretest-posttest survey comparison indicated that there was a significant increase in overall communication (CAM). Specifically, therapists' reported an increased frequency of communication within the Encouraging, Collaborating, and Problem-Solving subscales of the CAM as a result of the course. The change in the Instructing subscale approached but did not meet significance. The course was heavily focused on the importance of becoming more interpersonally mindful, flexible, and being able to let go of control during inevitable interpersonal events.

The pattern in the frequency of mode use did not change, and therapists continued to relay on encouraging, empathizing, and instructing more frequently than collaborating, problem-solving, and advocating. As such, while the course was effective in promoting therapists' confidence as an EI provider and the ability to communicate in a more diverse manner, it did not

change therapists' pattern of communication. This finding is not surprising, given that patterns of interaction may be a result of therapists' long-standing preferences and habits that may require additional time and reflection to change in practice. Future research should consider integrating observational methods into the research design to support the investigation of both the overall frequency and the quality of interaction within the child-therapist-parent triad.

d. **Change in Early Intervention Self-Efficacy, Delivery of Family-Centered Practices, and Perceived Parent Engagement**

Pretest-posttest survey comparison indicated that there was a significant increase in the therapists' self-reported EI self-efficacy (EISES), suggesting that therapists felt more confident in their role as an EI provider. In addition, there was a statistically significant change in one of the MPOC-SP domains, Treating People Respectfully; however, the Showing Interpersonal Sensitivity domain approached but did not reach significance. There was no significant change in the therapists PPEM scores. Examining these findings in light of Study I, suggests that while the course was not effective in promoting robust change in therapists' perception of their ability to use family-centered practices and support parent engagement in the sessions, it did have an impact on the elements that are likely to influence these variables in the long term.

Furthermore, these findings suggest that the course was most effective in promoting therapists overall confidence and capacity to utilize relationship-building practices in the short term. Provided the course length and the interpersonal focus of the IRM, this finding is not surprising. The IRM views the therapeutic relationship as a process that: 1) supports the client's engagement, and 2) provides a space where the client's emotional reactions in response to the therapeutic process can be addressed (Taylor, 2008). As such, the IRM views client- and family-

centeredness as an outcome in it of itself, and increasing client engagement is not seen as an ultimate goal of the IRM. Consistently, Taylor (2008) emphasizes that "if a therapist used only this model, the essential work of…therapy would not occur" (p. 47) and the IRM should be used to complement other strategies that are directly targeted at facilitating positive client outcomes and active engagement in rehabilitation.

With this in mind, improved communication and relationship-building practices can be assumed to have an indirect impact on the therapists' ability to utilize capacity-building practices and as such promote increased parent engagement; however, this type of change would likely be anticipated in the long-term. Future research should integrate follow-up using the surveys or more in-depth interviews to explore the possibility of long-term behavioral change. However, a more intensive course structure that encompasses multiple follow-ups may also be necessary to result in a greater impact. Furthermore, course content may need to be revised to go more specifically into intervention methods that can complement IRM from the clinical intervention and practice perspective. Doing so would support therapists' immediate capacity to intervene on the participation level directly.

e. **Perceived Change in Teaming and Collaboration with Parents and Therapists in Early Intervention**

Therapists perceived that they were better able to collaborate and work with not only parents but also other professionals on the EI team. There are two likely contributors to this finding. First, the course specifically targeted therapists' capacity to be able to interact and work well with others, even during emotionally charged or otherwise unexpected interpersonal events. Second, the course structure deliberately combined an interdisciplinary team of professionals and parents in EI. The opportunity to work and learn with others in and

outside of the participants' discipline, likely increased both interest and comfort with working with others. Given the growing emphasis on interprofessional teaming in EI, the benefits of interdisciplinary professional development opportunities (that indirectly target interdisciplinary collaboration) should be investigated in the future. As such, while combining a mixed audience of therapists and parents in EI continuing education may present a novel set of challenges and require additional considerations for ensuring a supportive dynamic between participants, these opportunities may be critical in supporting change beyond what has been accomplished in the past.

f. **Promoting Therapist's Interpersonal Competence Through Continuing Education in Early Intervention**

The present findings expand the existing knowledge base on the effectiveness and benefits of integrating the IRM into professional education in order to support therapists' interpersonal competence in utilizing the interpersonal reasoning, remain critically aware of and reflective on the interpersonal dynamics within clinical interactions, and promote positive interpersonal behaviors that can enable and support the therapeutic relationship. This study builds on the previously published research that looked at the benefits of the IRM in entry-level curricula (Hussain et al., 2018) and professional development (Gorenberg, 2013), by offering a manualized curriculum that can be used with an interprofessional audience of EI therapists. The existing curriculum should be further evaluated and expanded to target a wider audience for therapists and healthcare professionals in other settings in the future.

2. **Parent Perspective**

Participants' perceptive on the impact of the course was evaluated using a mixed-methods approach, which combined: 1) content analysis of weekly reflections, 2) content

analysis of follow-up interviews, 3) pretest-posttest analysis of participant's responses to an EI self-efficacy assessment (EIPSES), and 4) pretest-posttest analysis of participant's responses to an EI engagement assessment (PPEM).

Participants responses to the open-ended enrollment questions, suggested that parents' key learning objective was to learn new approaches to support: 1) their ability to respond to challenges of parenting, and 2) their child's learning and development. This finding suggests that parents were going into the course with clear expectation related to the knowledge gained, and were interested in generally expanding their parenting skills and ability to support their child's learning and development beyond the strategies that were already presented to them in EI.

Findings related to parents self-efficacy (EIPSES) and engagement (PPEM) were mixed. Provided that only six parents completed the course, this finding is likely due to the small sample size, and further research with a more robust sample of parents is necessary in order to examine the benefits of the course from a quantitative perspective. However, this finding may have also been due to the additional variables that impact parents self-efficacy and participation including 1) the child's developmental and intervention needs, 2) social support available in and outside of EI, and 3) the capacity of EI therapist's to support the parent as part of the EI process. It is possible that even if the parents did feel more efficacious and interested in being more actively engaged, extraneous variables could have presented a significant barrier to change.

Despite the limitations in quantitative findings, qualitative analysis suggested that the course supported the parents' ability to examine their everyday interactions through an interpersonal lens, and helped parents establish new ways of responding to interpersonal events.

a. **Examining Everyday Challenges Through an Interpersonal Lens**

All parents enrolled in the course described their children as demonstrating three distinct interpersonal characteristics during challenging interpersonal events: 1) limited capacity to effectively assert their needs through expression of strong emotion (screaming and crying), 2) high need for control and self-direction, and 3) tendency to respond to change and challenge with expression of anger or fear. Several factors could be contributing to this finding. First and foremost, this behavior is developmentally appropriate and expected for children between two and three years old, which was the age demographic of the children in the study. Furthermore, per the parents' report, the children in this study were referred and receiving EI services due to global developmental and speech delays, thus further stressing existing challenges with self-expression. Lastly, the course description specifically identified that the course objective was to support the development of strong relationships, and as such the parents interested in the course likely experienced challenges in communicating and responding to their child's needs at home.

The key challenges that parents experienced in their day-to-day interactions with their children included responding to their expression of strong emotion ("tantrums" or "meltdowns") that were coupled with either a: power dilemma (power struggle over decision making or a control an activity), or 2) resistance and reluctance (resistance or reluctance to participate in an everyday routine or a task). While responding to these inevitable interpersonal events, parents initially described themselves as either: 1) letting go of control and unintentionally disengaging from the interaction, or 2) attempting to regain full control of the situation by over-relying on instruction. These behaviors likely led to sub-optimal interaction of passivity (dismissing child's needs, physically or emotionally distancing self from the child) or over-instruction (talking of the

child, focusing too much on the child's problems rather than their emotional experience of the interaction, or having expectations that were too high for the child's developmental capacity).

b. **Experiencing New Ways of Responding to Everyday Interactions**

At the end of the course, parents described having a "new perspective" on their interactions with their children. As parents reflected on this perspective transformation, they described four key components: 1) taking baby steps toward change, 2) taking time to cope through purposeful pauses, 3) striving for empathic understanding, and 4) striving for flexible and multimodal communication.

All parents agreed that change was a slow process, however, as a result of the course, they found themselves taking more time to cope with challenging events by taking time to cope and empathize with their child's experience. Rather than defaulting to passive non-responsiveness or instruction, parents found themselves taking more time to come up with new response patterns, and build their capacity to be more flexible and multimodal in their interaction. Specifically, parents showed an increased interest in being able to respond to their child's needs using the empathizing and the collaborating modes.

c. **Wrestling with the Grey Area of Being a Child's Parent Versus Therapist**

While parents felt the benefits of this new perspective, this perspective transformation also came with a cost. Parents described themselves as struggling with balancing their role identification as a parent, and a unique skill set that is often perceived as something that is held by a therapist. Despite the evidence that this course was well-received by parents, this type of training may create role confusion, and require parents to do frequent mental switching related to their role within a single EI session. This is something that may also be inherent in

one-on-one therapeutic interactions as therapists shift toward incorporating more opportunities for parent coaching on therapeutic interventions. As such, therapists need to be intimately aware of potential role confusion and address this matter directly in their interactions with sessions.

The lack of EI specific training may be further contributing to this finding. Specifically, parents and caregivers may find themselves in a situation where they are placed in a system that expects high levels of parent participation without clear direction or clarification on the expectations related to their role on the EI team. Adding additional parent training opportunities may support parents by clarifying their role and expectations within the EI system and the EI interprofessional team.

d. **Supporting Parents' Through Early Intervention Continuing Education**

The preliminary findings gathered in this study suggest that parents in EI are interested and motivated to participate in continuing education opportunities and do benefit from access to supports and resources outside of direct one-on-one interaction with EI providers. A number of research studies have been examining the need for additional family-centered supports and services that go beyond direct, one-on-one, service provision from an EI therapist (G. King et al., 2017; Turnbull et al., 2007), however, to the authors knowledge this is the first study to trial this approach in EI. The course was delivered in a manner that is consistent with the framework provided by King, Williams, and Goldberg (2017), and integrated specific components to:

- Address parent-specific needs related to remaining intentional in addressing their child's interpersonal needs;

- Support parents in their ability to deliver therapeutic recommendations outside of session through specific training and education that is grounded in a theoretical framework, and;
- Support parent's ongoing information and education needs by offering parents an opportunity to participate in a structured learning environment.

Families have been identified as critical partners in EI and can play a vital role as both recipients and providers of professional development training (Buysse & Hollingsworth, 2009). This study expands on this assumption by providing evidence that continuing education can promote parents ability to support their child's growth and development by targeting parent-child interactions.

F. **Limitations**

The sampling strategies selected for Study I and Study II pose a limitation to study findings, and the sample size was not sufficient to test more complex models examining the possibility of moderation and mediation effects between different variables of interest. Additionally, convenience and snowball sampling likely contributed to the self-selection of participants who are interested and willing to devote their time to participate in research on improving family-centered care in EI. Social desirability may have further biased participant's responses to be more positive. Furthermore, sampling was limited to only therapists and families in EI to control for the confounding factor of individual differences in EI program implementation across states. As such, the findings reported in this study may not be generalizable to all EI therapists and parents in the US.

While the instruments selected of this study have been validated and evaluated for their reliability, they have not been previously utilized or psychometrically evaluated within an EI setting. As such, several threats to reliability related to instrumentation should be considered, including regression toward the mean for the pre- and post-testing, carryover and testing effects,

and individual respondent bias. Given the sensitivity of the topic covered, it is highly likely that individual responses to the survey questions will be influenced by social desirability bias, and the Hawthorne effect (i.e., desire to perform better due to being observed). This would lead to over-reporting of positive behaviors (CAM and MPOC and PPEM) and under-reporting of sub-optimal behaviors (CASI). Furthermore, participants self-report are considerably limited to the degree of self-awareness and critical reflexivity of the respondent. As such, present findings are limited by the degree to which participants were able to accurately self-report on their practices and interactions with families and therapists in EI.

Potential limitations of using non-experimental research design, selected for this research, should also be considered. Confounding factors that could not be controlled for in this study include existing participant biases, previous training and knowledge related to EI, Participants past experiences, and participant's general self-efficacy. Given the pretest-posttest design of Study II, additional threats to validity include the lack of a control group. Furthermore, a significant number of therapists that qualified to participate in the study did not complete their enrollment, and information related to why they did not choose to participate was not collected.

Furthermore, qualitative findings should be interpreted with potential participant and researcher bias in mind. Acquiescence and social desirability biases may have let to participants to provide a much more positive review of their experience in the course than they would have if someone external to the course completed the interviews. While interview questions were framed in an open-ended manner, participants may have had the pressure to respond in the more positive light given that they had an established relationship with the principal investigator as a result of their participation in the course.

Since the principal investigator conducted all data collection and coding, there is also a risk of wording and confirmation bias. Despite the author's best attempt to phrase interview questions in a neutral manner while avoiding any words or statements that could introduce bias, it is possible that the wording of the interview questions and interview probes may have prompted to respond in a manner that was more favorable of the authors' stance of the course success. Furthermore, since the author conducted all coding, it is possible that the authors' previous assumptions, knowledge of the IRM, and transformative learning process influenced the emergent themes gathered from the content and thematic analyses.

G. **Recommendations for Future Research**

With the above-mentioned limitations in mind, the robustness of participant samples in Study I and Study II (mainly related to the therapist sample) coupled with a previously unexplored area of research, offers support for the strength of the present findings as contributors to the existing body of research on the role of therapist-parent communication in EI. There are several opportunities for future research to investigate:

- Quality and quantity of interactions within the therapist-parent-child triad, and the impact of these interactions of the process and outcomes of EI.
- Relationship- and capacity-building practices that contribute to active parent engagement and the role of communication as a mediator or a moderator within this process.
- Background characteristics that contribute to therapists' and parents' EI self-efficacy, including previous life and EI experience and training.

- Continuing education and training that support therapists' and parents' interpersonal competence in being able to remain intentional and effective in their communication while responding to challenging interpersonal events.

Much remains unknown related to the quantity and quality of therapist-parent interaction in EI. The findings from this study suggest that therapists may rely on empathizing, encouraging, and instructing modes of communication much more frequently than collaborating, problem-solving, and advocating modes. However, due to the self-report nature of this study, it is unclear if the frequency of communication reported by the therapists and parents accurately represents clinical practices, and if the interactions described are of high or low quality. Future research should utilize a matched therapist-parent pair design to investigate both the quantity and the quality of the interaction and examine the potential discrepancy between therapist, parent, and observer report. Findings from such research could further inform our current understanding of the gaps in the delivery of family-centered practices in EI and potential areas in need of future intervention through professional development and training opportunities.

This type of research design could also investigate the potential role of therapist-parent communication in supporting parent's active engagement in the sessions from both relationship- and capacity-building perspectives. From therapist and parent perspectives, parents were found to be consistently participating and engaged in EI. However, the frequency of participation suggests that parent participation may be passive, and there is room for improvement. Future studies could further explore the dynamic interaction between therapist-parent communication, family-centered practices, and parent participation in the EI process. Examining data from surveys, interviews, and clinical observations could further inform our understanding of how the

level parent engagement evolves as well as potential enablers and barriers to this process from the interpersonal perspective.

Additional research is also warranted on the contributors to therapists' and parents' EI self-efficacy. Study I found that there was a consistent lack of association between the variables collected for this research and therapist's and parents' EI self-efficacy. While therapists and parents reported high levels of EI self-efficacy, factors associated with increased EI self-efficacy from therapist and parent perspectives remain unclear. However, findings from Study II suggested that the five-week curriculum was effective in promoting EI self-efficacy for therapists. Provided the existing evidence on the importance of self-efficacy in promoting positive clinical outcomes, it is imperative that future research explores potential contributors to the process of EI self-efficacy development. Increased clarity related to these contributing factors would enable better targeting of educational training and intervention in the future.

While educational opportunities for parents were found to be limited in EI, the IRM-based curriculum was found to be well-received and beneficial for participating parents. Future research should explore both: 1) the benefits of IRM-based curriculum for parents and caregivers in EI and other rehabilitation settings, and 2) additional opportunities for parent education outside of direct, one-on-one, treatment sessions with rehabilitation professionals.

Additionally, coupled with the previous evidence on this topic, findings from Study I and Study II highlight the need for increased opportunities and access to high quality continuing education that targets therapist-parent communication. Provided the breadth of impact that therapist-parent interactions can have on parent participation and clinical outcomes, evidence-based strategies for supporting therapists' confidence and competence in communicating in a

manner that is consistent with relational- and capacity-building practices in EI is critical for ensuring quality care in EI.

Educational opportunities for therapists lacked the training that is specific to the use of therapeutic communication in practice. Provided the positive findings related to the feasibility, acceptability, and effectiveness of an IRM-based curriculum for therapists and parents in EI, future research should examine additional opportunities for delivering this content to therapists in EI and other rehabilitation settings. Additionally, given the growing emphasis on incorporating of coaching into rehabilitation practices, future research can explore the benefits of delivering a two-part course that targets therapist's interpersonal competence through IRM-based approaches and capacity building through coaching.

H. **Conclusion**

The findings from the present study suggest that a discrepancy may exist between how academics and clinicians perceive family-centered practices. Literature suggests that while clinicians have embodied the values of family-centered practice, clinical translation of these practices continues to present a challenge in EI. Anecdotally therapists' consistently identify themselves as family-centered, and do not perceive themselves as not upholding family-centered values in their clinical practice and interactions with families.

Findings from this research highlight a potential reason for this discrepancy. Therapists and parents reported that while therapists frequently used encouraging, empathizing, and instructing modes of communication, collaborating, problem-solving and advocating modes were much less frequent. As such, there is a possibility that therapists may be over-relying on communication modes that maintain the power within the therapeutic relationship in the hands of the therapist, and therapists may be reluctant to let go of control and shift power to the family.

While the empathizing, encouraging, and instructing modes are consistent with certain aspects of relationship- and capacity-building practices in family-centered care, they are not exhaustive of the breadth of communication that could benefit families. Therapists and academics may be viewing the same phenomenon from two different lenses. Clinicians may perceive themselves as family-centered due to frequent use of empathy, encouragement, and instruction, while academics may perceive clinicians as non-family-centered due to the low frequency of collaborating, problem-solving, and advocating. Creating a common language and operational definitions around different types of communication, and theoretically grounded strategies for implementing and evaluating family-centered behaviors will help bridge this gap in understanding in the future.

Based on the findings from Study II, it is clear that therapists are actively seeking new ways of addressing challenging interpersonal events in EI, and benefit from theoretically grounded training that specifically targets the interpersonal components of the therapeutic relationship. Furthermore, while parent enrollment posed a challenge, both therapists and parents expressed a high level of satisfaction for an opportunity to learn together.

Training opportunities remain limited (and possibly nonexistent) for parents in EI. Furthermore, for therapists, the training available do not appear to sufficiently impact the therapist's capacity to practice in a family-centered manner. It is likely that the training currently available are not inadequate in promoting therapists' competency due to the general nature and lack of adherence to best-practice recommendations for adult-learning and perspective transformation that is necessary to shift well-established practice patterns in clinicians.

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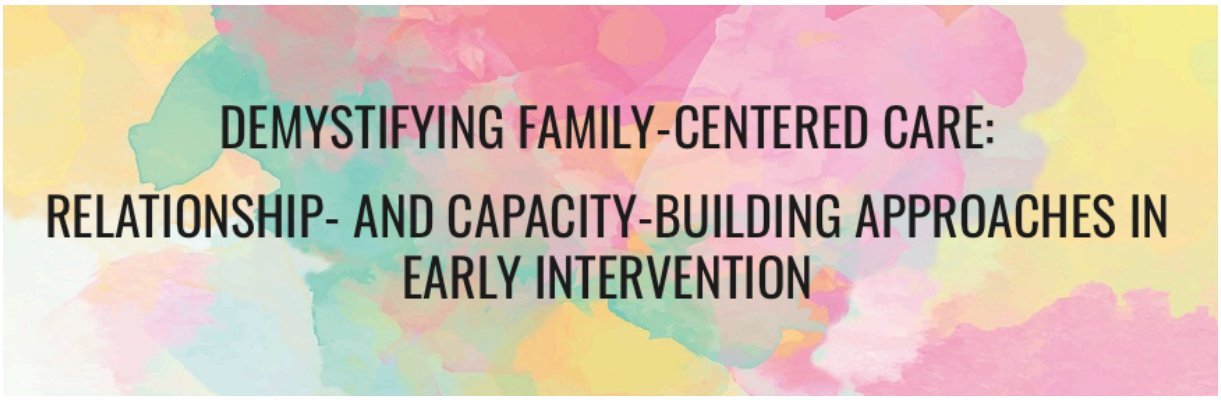
APPENDICES

APPENDIX A

Course Curriculum



Developed by

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APPENDIX A (continued)

The curriculum is delivered as a blended online and in-person five-week course. The in-person meetings are delivered in an accessible classroom at University of Illinois at Chicago (UIC). Tables are arranged in small groups, and placed at a diagonal to facilitate both large and small group discussion. Online components are delivered via Google Sites. All assignments are submitted through REDCap.

Registration & Pretest Surveys

Week 1 - Introduction to relationship- and capacity-building practices in EI

Week 2 - Implementing *relationship-building practices* in EI

Week 3 - Solution-based approaches for resolving *interpersonal challenges* in EI

Week 4 - Implementing *capacity-building practices* in EI

Week 5 - Solution-based approaches for resolving *participation-based challenges* in EI

Pretest Surveys

APPENDIX A (continued)

This course is developed as part of a PhD project that examines the feasibility and preliminary effectiveness of a curriculum-based short-course aimed at promoting the use of evidence-based, relationship- and capacity-building approaches in Early Intervention (EI). This course is guided by:

- The Intentional Relationship Model (IRM) (Taylor, 2008), which provides a theoretical framework for understanding and operationally defining specific components of the patient-provider relationship.

- The social constructivist theory (Vygostky, 1978), which defines the process of learning as a dynamic interaction between the learner and their social environment.

APPENDIX A (continued)

Early Intervention (EI) is a widely utilized program that offers multidisciplinary services to families with young children between zero and three years of age. To qualify for EI, the child must have a diagnosed disability or be otherwise at risk for a significant developmental delay. Family-centered care is considered to be a best-practice standard of care for all pediatric services including EI. Family-centered care recognizes that parent-child interactions are an important contributor to child outcomes and the Division for Early Childhood (DEC) (2014) defines family-centered care as:

> *Practices that treat families with dignity and respect; are individualized, flexible, and responsive to each family's unique circumstances; provide family members complete and unbiased information to make informed decisions; and involve family members in acting on choices to strengthen child, caregiver, and family functioning. (p. 10)*

To learn more about EI in Illinois visit:

- The "Introduction to Early Intervention" video was published by the Early Intervention Training Program (EITP)**: https://youtu.be/aQ_TUd5TEEM**
    - For more videos go to: http://go.illinois.edu/EITPvideos

APPENDIX A (continued)

- American Academy of Pediatrics - Illinois Chapter: http://illinoisaap.org/early-intervention-ei/
- Early Childhood Technical Assistance Center (ECTA): https://www.healthychildren.org/English/health-issues/conditions/developmental-disabilities/Pages/Early-Intervention.aspx
- Early Intervention Training Program (EITP): https://eitp.education.illinois.edu/
- HealthyChildren.org: https://www.healthychildren.org/English/health-issues/conditions/developmental-disabilities/Pages/Early-Intervention.aspx
- Illinois Department of Human Services (DHS): http://www.dhs.state.il.us/page.aspx?item=31889
- Illinois Early Intervention Clearinghouse: http://eiclearinghouse.org/
- Zero to Three: https://www.zerotothree.org/

REFERENCES

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APPENDIX A (continued)

FORMAT

- 2 hours - In-person

DESCRIPTION

- Session begins with an introduction to the course instructor and course participants. Time is dedicated to orient the participants to the course format and content. The content presented aims to reinforce the vision and mission of EI by offering participants an overview of relationship- and capacity-building practices encompassing family-centered care.

OBJECTIVES

- Review the main objectives and structure of the course
- Introduce core concepts behind relationship- and capacity-building practices in EI
- Evaluate the strengths and challenges of using relationship- and capacity-building practices in EI

REMINDERS

- Complete the pretest questionnaire prior to Week 1

AGENDA

1. Lecture and Discussion

- Introductions - Introduction to the course, the course leader, and the course participants. Course leader and course participants introduce themselves in a round-robin manner; everyone shares one childhood memory and how long they have been receiving or providing services in the EI system. ***(15 min)***

APPENDIX A (continued)

- Activity - The participants complete a visual thinking activity that focuses on promoting increased observation skills and awareness of different perspectives awareness. Participants will have 1 minute to examine the picture "The Family" by Gustav Klimt. The participants are asked to respond to the question "What do you see in this picture?" with an additional probe "What makes you say that?" Emphasis will be placed on variety of perspectives and validity of different perspectives and subjective (and perceived objective) experiences. (***10 min***)
- Course Overview - Course content overview and introduction to course format and action planning activities integrated into the course curriculum. ***(15 min)***

2. Video Reflection - Participants review a video case scenario (Video 1) and complete a corresponding reflection worksheet. ***(20 min)***

- What went well during this interaction? Why?
- What could be improved during this interaction? Why?
- If you were the parent/caregiver OR therapist in the scenario, what would you want to happen next?

3. Lecture and Discussion - The facilitator provides an overview of key concepts covered in the course **(60 min)**:

- Family and Child Engagement in Rehabilitation
- Principles of Learning: The Just Right Challenge
- Mindfulness & Empathy
- The Intentional Relationship Model
    - Six Therapeutic Communication Modes
    - Interpersonal Reasoning Process
- Research Overview: Therapist-Child Communication and Child's Participation

4. Final Reflection:

- What is your biggest takeaway from this session?
- Based on what we discussed today, what do you want to learn more about?

VIDEOS

- **Brené Brown On Empathy**
    - YouTube: https://www.youtube.com/watch?v=1Evwgu369Jw
- **It's Not About The Nail**
    - YouTube: https://www.youtube.com/watch?v=-4EDhdAHrOg

MATERIALS

- Week 1 PowerPoint - Course Overview
- Week 1 PowerPoint - Introduction to Relationship- and Capacity-building

RESOURCES

- **The Intentional Relationship Model Clearinghouse:** http://irm.ahslabs.uic.edu/

APPENDIX A (continued)

- **Intentional Relationships & Child Development:**
  - *Video: "Brain Development"*
- **Flipped Classroom:**
  - Video *"What is a flipped class?"*
  - Article *"Flipping the Classroom"*
  - Video *"Speed Learning: How To Learn Anything In Half The Time"*

- **Appreciative Inquiry:**
  - Article *"What is appreciative inquiry?"*
  - Article *"Appreciative Inquiry: 4 Steps To Creating Your Dream Future"*
- **Social Learning & "Zone of Proximal Development" by Lev Vygotsky**
  - Video *"Vygotsky's Zone of Proximal Development"*
  - Article *"Constructivism"*
- **Flow Theory by Mihaly Csikszentmihalyi**
  - Video *"Flow by Mihaly Csikszentmihalyi"*
  - Article *"Mihaly Csikszentmihalyi: All About Flow & Positive Psychology"*
- **"The Goldilocks Rule" by James Clear**
  - Article *"The Goldilocks Rule: How to Stay Motivated in Life and Business"*
  - Article *"How to Stay Motivated by Using Goldilocks Rule"*
- **Mindfulness**
  - Article *"Mindfulness in Early Childhood"*
  - Article *"Executive Summary: How Can Mindfulness Support Parenting and Caregiving?"*
  - Article *"How Can Mindfulness Support Parenting and Caregiving? A Literature Review"*
  - Article *"Mindfulness for Parents"*
  - Article *"Mindfulness for Early Childhood Professionals"*
  - Video(s) *"How to Help Kids Develop Mindfulness"*

REFERENCES & RESEARCH

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Taylor, R. R. (2008). *The intentional relationship: Occupational therapy and use of self.* Philadelphia: F.A. Davis Co.

APPENDIX A (continued)

FORMAT

- 2 hours - Online

DESCRIPTION

- The session aims to provide participants with an overview of the Intentional Relationship Model (IRM) (Taylor, 2008). Participants watch a four animated videos that offer a general overview of the model, including:
    - Interpersonal characteristics
    - Inevitable interpersonal events
    - Therapeutic communication modes

OBJECTIVES

- Apply the three core components of the Intentional Relationship Model (IRM)
- Evaluate personal strengths and challenges related the use of relationship-building practices in everyday life

REMINDERS

- Bring this week's reflection assignment to the in-person meeting during Week 3

AGENDA

1. Assignment - Introduction to the Intentional Relationship Model (IRM)

- **Video 1** - Introducing the IRM ***(22 min)***
- **Video 2** - Interpersonal Characteristics ***(24 min)***
- **Video 3** - Inevitable Interpersonal Events ***(25 min)***
- **Video 4** - Therapeutic Communication Modes ***(25 min)***

2. Reflection Assignment

3. Optional Activity - Video record yourself during an activity or task where you are interacting with another person. The videos will only serve the purpose of helping you reflect on your communication style. You will **NOT** be asked to share the videos with anyone in class. As you watch the video, evaluate your interaction using the Intentional Relationship Model:

APPENDIX A (continued)

- Describe 1) the interpersonal characteristics of the other person, 2) the inevitable interpersonal events that occurred (if any), and 3) the therapeutic communication modes attempted by you.
- How did the other person respond to the different modes used by you? Were some modes more effective than others? How could you tell?
- What, if anything, would you do differently in the future?

4. Final Reflection:

- What is your biggest takeaway from this session?
- Based on what we discussed today, what do you want to learn more about?

IRM ASSESSMENTS

You may use the IRM assessments below to guide your interpersonal reasoning during the "Week 2 Reflection" assignment:

- **Client Characteristics Checklist** - for evaluating another person's interpersonal characteristics
- **Clinical Assessment of Modes (CAM)** - for evaluating your therapeutic mode use with another adult
- **Pediatric Clinical Assessment of Modes (PCAM)** - for evaluating your therapeutic mode use with a child

RESOURCES

- **The Intentional Relationship Model Clearinghouse:** http://irm.ahslabs.uic.edu/
- **Active Listening**
  - Article + Video *"Active Listening: The Art of Empathetic Conversation"*
  - Article + Video *"Active Listening"*
  - Article *"Become a Better Listener: Active Listening"*
- **Empathy**
  - Video *"The Importance of Empathy"*
  - Article *"Understanding Empathy: What is it and Why is it Important in Counseling"*
  - Article *"How Empathy Can Help Empower Patients"*
- **Empathy, Engagement, and Intentionality while Communicating with Children**
  - Article *"How you talk to your child changes their brain"*
  - Article *"Was That Intentional? Helping Young Children with Communication Delays Send Purposeful Messages"*
  - Article *"How to Build a Positive Relationship With Your Child"*

REFERENCES & RESEARCH

Taylor, R. R. (2008). *The intentional relationship: Occupational therapy and use of self.* Philadelphia, PA: F.A. Davis.

APPENDIX A (continued)

FORMAT

- 2 hours - In-person

DESCRIPTION

- The session aims to provide participants with an opportunity to engage in a collaborative discussion about ongoing challenges in providing/receiving EI. Participants review and discuss case examples developed in preparation for the class in small and large group. The group collectively brainstorms strategies for resolving the conflicts or challenges described.

OBJECTIVES

- Apply the three core components of the Intentional Relationship Model (IRM) while analyzing everyday interactions in:
- Video case scenarios
- Real life examples
- Evaluate personal strengths and challenges related the use of relationship-building practices in everyday life

REMINDERS

- Bring reflection and action plan activities completed during Week 2 to the in-person meeting

AGENDA

1. Activity - Strengths, Opportunities, Aspirations, and Results (SOAR) ***(15 min)*** - In large group, participants discuss the strengths and challenges of adhering to key principles of EI and family-centered care. In pairs, participants complete the "Learning Plan" worksheet. In large group, the participants share their reflections as they collaboratively develop the "Strengths, Opportunities, Aspirations, and Results (SOAR)" worksheet with guidance from the facilitator.

2. Discussion and Activities - Applying the Intentional Relationship Model (IRM) ***(105 min)***

- Review of the Intentional Relationship Model ***(15 min)***
- Interpersonal Characteristics ***(15 min)***

APPENDIX A (continued)

- Interpersonal Events ***(15 min)***
- Evaluating Successful and Unsuccessful Communication ***(15 min)***
    - **Activity:** Therapeutic Communication Dice
- Applying the Interpersonal Reasoning Process ***(15 min)***
    - **Activity:** Video Reflection of Inside Out Video Clips
- Week 2 Reflection Assignments ***(15 min)***
- Research Overview: Therapist-Child Communication and Child's Participation ***(15 min)***

3. Final Reflection:

- What is your biggest takeaway from this session?
- Based on what we discussed today, what do you want to learn more about?

MATERIALS

- Week 3 - Applying the Intentional Relationship Model to Everyday Interactions
- Soar Worksheet
- Interpersonal Characteristics Grid
- Interpersonal Events Grid
- IRM Observation Cheat Sheet

RESOURCES

- **The Intentional Relationship Model Clearinghouse:** http://irm.ahslabs.uic.edu/
- **Communication Strategies 101**
    - Article *"The Words and Phrases to Use — and to Avoid — When Talking to Customers"*
- **Communication Lessons from Improv**
    - Video *"A Lesson on Improv Technique, with Chris Gethard"*
    - Video *"Improv lesson from Tina Fey"*

REFERENCES

Taylor, R. R. (2008). *The intentional relationship: Occupational therapy and use of self.* Philadelphia: F.A. Davis Co.

APPENDIX A (continued)

FORMAT

- 2 hours - Online

DESCRIPTION

- The session aims to provide participants with opportunities to apply the IRM by learning about IRM-based interpersonal strategies for managing strong emotions, challenging behaviors, and interpersonal events. Participants are invited to evaluate their personal strengths and challenges of applying these strategies while addressing a participation challenge.

OBJECTIVES

- Apply the three core components of the Intentional Relationship Model (IRM) to guide your interpersonal reasoning while responding to:
    - Strong emotions
    - Challenging behaviors
    - Interpersonal events
- Evaluate personal strengths and challenges related the use of relationship-building strategies to support participation and engagement in others

REMINDERS

- Bring this week's reflection and action plan activities to the in-person meeting during Week 5

AGENDA

1. Assignment - Applying the Intentional Relationship Model (IRM)

- **Video 5** - Responding to Strong Emotions ***(30 min)***
- **Video 6** - Responding to Challenging Behaviors ***(32 min)***
- **Video 7** - Interpersonal Reasoning Process ***(29 min)***

2. Assignment - "Week 4 Reflection." Consider using the following resources to guide your reflection:

APPENDIX A (continued)

- *The Intentional Relationship Model Cheat Sheet:* Summary of IRM terminology
- *The Interpersonal Characteristics Cheat Sheet:* Summary and definitions of interpersonal characteristics as defined by the IRM. You may use this worksheet to help you identify which modes you are most successful with when responding to different interpersonal characteristics, and which modes you would like to further strengthen in the future.
- *The Interpersonal Events Cheat Sheet:* Summary and definitions of interpersonal events as defined by the IRM. You may use this worksheet to help you identify which modes you are most successful with when responding to different interpersonal events, and which modes you would like to further strengthen in the future.

3. Optional Activity - Watch *"Inside Out"* and think about the different interactions between characters in the movie from the Intentional Relationship Model perspective. Look for successful and unsuccessful mode use as you watch the character's respond to different:

- Interpersonal characteristics
- Interpersonal events
- Strong emotions
- Challenging behaviors

Based on my search, the movie is not available for *free* streaming anywhere. You can rent *"Inside Out"* here:

- iTunes and Google Play
- YouTube
- Amazon

4. Optional Activity - Video record yourself during an activity or task where you are helping another person. The videos will only serve the purpose of helping you reflect on your communication style. You will **NOT** be asked to share the videos with anyone in class. As you watch the video, evaluate your interaction using the Intentional Relationship Model:

- Evaluate 1) the interpersonal characteristics of the other person, 2) the inevitable interpersonal events that occurred (if any), and 3) the therapeutic communication modes attempted by you.
- How did the other person respond to the different modes used by you? Were some modes more effective than others? How could you tell?
- Were all modes successful? If not, did you see any mode incongruence, mixed mode use, or mode mismatch?
- What, if anything, would you do differently in the future?

5. Final Reflection:

- What is your biggest takeaway from this session?
- Based on what we discussed today, what do you want to learn more about?

IRM ASSESSMENTS

You may use the IRM assessments below to guide your interpersonal reasoning during the "Week 2 Reflection" assignment:

APPENDIX A (continued)

- **Client Characteristics Checklist** - for evaluating another person's interpersonal characteristics
- **Clinical Assessment of Modes (CAM)** - for evaluating your therapeutic mode use with another adult
- **Pediatric Clinical Assessment of Modes (PCAM)** - for evaluating your therapeutic mode use with a child

MATERIALS

- N/A

RESOURCES

- **The Intentional Relationship Model Clearinghouse:** http://irm.ahslabs.uic.edu/
- **Mindfulness During Challenging Times:**
  - Video *"Mindfulness is a Super Power"*
  - Article *"Mindfulness and Being Present in the Moment"*
  - Article *"Mindfulness for Children"*
- **Intentional Communication During Challenging Times**
  - Video *"Brené Brown on Blame"*
  - Video *"Four Horsemen of the Apocalypse"*
- **Positive Parenting**
  - Article "*Nine Elements That Power Positive Parenting*"
  - Article "*Why You Should Stop Yelling at Your Kids*"
- **Challenging Behaviors in Young Children 0-3**
  - Video "*Challenging Behaviors*"
  - Article *"Don't Expect Toddlers To Behave Consistently — They Literally Can't"*
- **Challenging Behaviors & Transitions**
  - Article *"Why Do Kids Have Trouble With Transitions?"*
  - Article "*Reducing Challenging Behaviors during Transitions: Strategies for Early Childhood Educators to Share with Parents"*
  - Article *"How Can We Help Kids with Transitions"*
  - Article *"Easing a Toddler's Daily Transitions"*
  - Handbook *"Supporting Transitions: Using Child Development as a Guide"*

REFERENCES & RESEARCH

Taylor, R. R. (2008). *The intentional relationship: Occupational therapy and use of self.* Philadelphia, PA: F.A. Davis.

APPENDIX A (continued)

FORMAT

- 2 hours - Online

DESCRIPTION

- The session aims to provide space for final discussion, action planning and development of a community of practice based on what has been discussed in the curriculum. The week begins with a reflection of participant's individual learning objectives developed upon course enrollment. The facilitator address any outstanding questions or concerns related to the course material. This provides an opportunity for participants to reflect on what they have learned as well as what they still hope to learn more about during the final in-person meeting. The session concludes with a mini lecture related to evaluation of participation from a motivation component.

OBJECTIVES

- Evaluate personal strengths and challenges related the use of relationship-building practices while responding to strong emotions and challenging behaviors

REMINDERS

- Bring reflection and action plan activities completed during Week 4 to the in-person meeting
- Complete the posttest questionnaires in REDCap as soon as possible after the in-person meeting.

AGENDA

1. Activity & Discussion - Responding to Strong Emotions and Challenging Behaviors

- Interpersonal Reasoning Process and Responding to Challenging Emotions ***(15 min)***
    - **Activity:** Video Reflection of Inside Out Video Clips
    - The Intentional Relationship Model Cheat Sheet
- Interpersonal Reasoning Process and Responding to Challenging Behaviors ***(15 min)***
    - **Discussion:** Strong Emotions and Challenging Behaviors Grid

APPENDIX A (continued)

2. Posttest Questionnaires

3. Activity - Video Reflection

4. Final Discussion - Promoting Participation

5. Course Evaluation

MATERIALS

- Week 5 - Applying the Intentional Relationship Model to Everyday Interactions Part II
- The Intentional Relationship Model Cheat Sheet
- Strong Emotions And Challenging Behaviors Grid

RESOURCES

- **The Intentional Relationship Model Clearinghouse:** http://irm.ahslabs.uic.edu/
- **Self-compassion**
  - Article + Video "*Why We Need to Practice a Little Self-Compassion*"
  - Article "*Why Self-Compassion Works Better Than Self-Esteem*"
  - Article "*Why Self-Compassion Beats Self-Confidence*"
  - Article "*How to Cultivate More Self-Compassion*"
  - Article "*5 Steps to Develop Self-Compassion & Overcome Your Inner Critic*"
- **Vulnerability**
  - Video "*The Power of Vulnerability*"
  - Article "*Brene Brown: How Vulnerability Can Make Our Lives Better*"
- **Motivation**
  - Article "*How to Motivate People: 4 Steps Backed by Science*"
  - Article "*How to Motivate Children Through Purpose*"
- **Responding to Challenging Behaviors**
  - Article "*The Discipline Dilemma: Guiding Principles for Finding an Approach that Works for Your Individual Child and Family*"
  - Article "*5 Tantrum-Taming Secrets from a Family Therapist*"
  - Article "*A Quick Time In Tutorial to Transform Toddler Misbehavior*"
- **Medical Perspective on Challenging Behaviors**
  - Article "*Understanding Autism, Aggression, and Self-Injury: Medical Approaches and Best Support Practices*"

REFERENCES & RESEARCH

Dunleavy, L. (2017). Behavior modification and the intentional relationship: Combining perspectives for managing challenging behaviors. *SIS Quarterly Practice Connections*, *2*(4), 7–9. Retrieved from: https://www.aota.org/Publications-News/SISQuarterly/Developmental-Disabilities/11-17-behavioral-change.aspx

Taylor, R. R. (2008). *The intentional relationship: Occupational therapy and use of self.* Philadelphia, PA: F.A. Davis.

APPENDIX B

Demographic Questionnaire – Therapist

Please tell us about ***yourself***:

1. Age: _____

2. Gender:
   - ☐ Male
   - ☐ Female
   - ☐ Other

3. Race/Ethnicity
   - ☐ American Indian or Alaska Native
   - ☐ Asian
   - ☐ Black or African American
   - ☐ Native Hawaiian or Pacific Islander
   - ☐ Hispanic or Latino
   - ☐ White or Caucasian
   - ☐ Other: _____

4. Annual household income:
   - ☐ Less than $20,000
   - ☐ $21,000-$40,000
   - ☐ $41,000-$60,000
   - ☐ $61,000-$80,000
   - ☐ $81,000-100,000
   - ☐ More than $100,000

5. Professional discipline
   - ☐ Developmental Therapist (DT)
   - ☐ Occupational Therapist (OT)
   - ☐ Physical Therapist (PT)
   - ☐ Speech and Language Pathologist (SLP)
   - ☐ Other: _____

6. Employment in your professional discipline:
   - ☐ Full-time
   - ☐ Part-time

APPENDIX B (continued)

7. Indicate the degree that you earned in order to become a DT, OT, PT, SLP, etc.?
   - ☐ Certificate
   - ☐ Associates
   - ☐ Bachelors
   - ☐ Masters
   - ☐ Professional Doctorate (e.g., DPT or OTD)
   - ☐ Other: _____

8. Indicate the highest degree you have earned in any field:
   - ☐ Certificate
   - ☐ Associates
   - ☐ Bachelors
   - ☐ Masters
   - ☐ Professional Doctorate (e.g., DPT or OTD)
   - ☐ PhD or other academic doctorate (e.g., EdD, DrPH)
   - ☐ Other: _____

9. How long have you been practicing in your professional role?
   - ☐ Less than 1 year
   - ☐ 1 to 5 years
   - ☐ 6 to 10 years
   - ☐ 11 to 20 years
   - ☐ More than 20 years

10. How long have you been practicing as a therapist in Early Intervention?
    - ☐ Less than 1 year
    - ☐ 1 to 5 years
    - ☐ 6 to 10 years
    - ☐ 11 to 20 years
    - ☐ More than 20 years

11. Do you hold an EI initial evaluator credential?
    - ☐ No
    - ☐ Yes

12. How many families to you currently provide direct services to through EI? _____

13. In which state do you provide EI services? _____

APPENDIX B (continued)

14. In which settings do you provide EI services: *(select all that apply)*
    - ☐ Home
    - ☐ Daycare
    - ☐ Community
    - ☐ Early Intervention clinic or a center
    - ☐ Other: _____

15. How much training have you had related to providing family-centered care?
    - ☐ None *(if none, skip to question 14)*
    - ☐ 1 to 5 hours
    - ☐ 6 to 10 hours
    - ☐ 11 to 15 hours
    - ☐ 16 to 20 hours
    - ☐ 21 to 25 hours
    - ☐ More than 25 hours

16. In which settings have you been exposed to and received training related to providing family-centered care? *(select all that apply)*
    - ☐ Undergraduate coursework
    - ☐ Graduate coursework
    - ☐ Continuing education
    - ☐ Structured onsite (workplace) training
    - ☐ One-on-one supervision or consultation through your employer
    - ☐ Group supervision or consultation through your employer

17. How much training have you had related to family capacity-building?
    - ☐ None *(if none, skip to question 16)*
    - ☐ 1 to 5 hours
    - ☐ 6 to 10 hours
    - ☐ 11 to 15 hours
    - ☐ 16 to 20 hours
    - ☐ 21 to 25 hours
    - ☐ More than 25 hours

18. In which settings have you been exposed to and received training related to family capacity-building? *(select all that apply)*
    - ☐ Undergraduate coursework
    - ☐ Graduate coursework
    - ☐ Continuing education
    - ☐ Structured onsite (workplace) training
    - ☐ One-on-one supervision or consultation through your employer
    - ☐ Group supervision or consultation through your employer

APPENDIX B (continued)

19. How much training have you had related to therapeutic use of self or therapeutic communication?
- ☐ None *(if none, skip questions 18 and 19)*
- ☐ 1 to 5 hours
- ☐ 6 to 10 hours
- ☐ 11 to 15 hours
- ☐ 16 to 20 hours
- ☐ 21 to 25 hours
- ☐ More than 25 hours

20. In which settings have you been exposed to and received training related to therapeutic use of self or therapeutic communication? *(select all that apply)*
- ☐ Undergraduate coursework
- ☐ Graduate coursework
- ☐ Continuing education
- ☐ Structured onsite (workplace) training
- ☐ One-on-one supervision or consultation through your employer
- ☐ Group supervision or consultation through your employer

21. What is your level of familiarity with, or knowledge of, Taylor's Intentional Relationship Model (IRM)? *(select all that apply)*
- ☐ I am not familiar with IRM
- ☐ I have read Taylor's book on IRM
- ☐ I have visited Taylor's IRM website
- ☐ I took a course on IRM
- ☐ I attended a seminar or workshop on IRM
- ☐ Other: _____

APPENDIX C

Demographic Questionnaire – Parent

Please tell us about ***yourself***:

1. Age: _____

2. Gender:
   - ☐ Male
   - ☐ Female
   - ☐ Other

3. Race/Ethnicity
   - ☐ American Indian or Alaska Native
   - ☐ Asian
   - ☐ Black or African American
   - ☐ Native Hawaiian or Pacific Islander
   - ☐ Hispanic or Latino
   - ☐ White or Caucasian
   - ☐ Other: _____

4. Annual household income:
   - ☐ Less than $20,000
   - ☐ $21,000-$40,000
   - ☐ $41,000-$60,000
   - ☐ $61,000-$80,000
   - ☐ $81,000-100,000
   - ☐ More than $100,000

5. Employment:
   - ☐ Full-time
   - ☐ Part-time
   - ☐ Unemployed
   - ☐ Retired
   - ☐ Other: _____

6. Indicate the highest degree you have earned:
   - ☐ Certificate
   - ☐ Associates
   - ☐ Bachelors
   - ☐ Masters
   - ☐ Professional Doctorate (e.g., DPT or OTD)
   - ☐ PhD or other academic doctorate (e.g., EdD, DrPH)
   - ☐ Other: _____

APPENDIX C (continued)

7. How much training have you received related to Early Intervention and the various roles of therapist's on your Early Intervention team?
   - ☐ None *(if none, skip to question 9)*
   - ☐ 1 to 5 hours
   - ☐ 6 to 10 hours
   - ☐ 11 to 15 hours
   - ☐ 16 to 20 hours
   - ☐ 21 to 25 hours
   - ☐ More than 25 hours

8. In which settings have you been exposed to and received training related to Early Intervention?
   - ☐ Self-taught (e.g., brochures, books, websites, webinars, social media)
   - ☐ Received support from other parents that have gone through Early Intervention
   - ☐ Group training or workshop
   - ☐ One-on-one training from the service coordinator on the Early Intervention team
   - ☐ One-on-one training from one or more therapists on the Early Intervention team
   - ☐ Other: _____

Please tell us about ***your child***:

9. How old is your child *(in months)*? _____

10. What is your child's gender?
    - ☐ Male
    - ☐ Female
    - ☐ Other

11. What is the reason for your child's referral to the Early Intervention system?
    _____

12. In which state does your child receive EI services? _____

13. How long has your child been receiving services through the Early Intervention system?
    _____

APPENDIX C (continued)

14. Which services does your child currently receive: *(select all that apply)*
- ☐ Service coordination
- ☐ Developmental therapy (DT)
- ☐ Occupational therapy (OT)
- ☐ Physical therapy (PT)
- ☐ Speech therapy (ST)
- ☐ Other: _____

15. Where do you receive Early Intervention services: *(select all that apply)*
- ☐ Home
- ☐ Daycare
- ☐ Early Intervention clinic or a center

Other: _____

APPENDIX D

Weekly Course Reflection

Week #

1. Reflecting on today's class, what was your biggest take away?

2. Reflecting on today's class, what topic(s) do you still wish to learn more about?

3. Reflecting on today's class, what suggestions and comments do you have that could help us make this course better?

APPENDIX E

Course Evaluation

1. What overall rating would you give the ***course***?

Poor Fair Good Very Good Excellent

2. Indicate your level of agreement with the following statements ***related to this course***:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The course objectives were clear	☐	☐	☐	☐	☐
The course materials were clear and well written	☐	☐	☐	☐	☐
The assignments were appropriate for this class	☐	☐	☐	☐	☐
The course increased my interest in the subject	☐	☐	☐	☐	☐
The course corresponded to my expectations	☐	☐	☐	☐	☐

3. Indicate your level of satisfaction with the following ***topics covered in this course***:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Week 1 – Introduction to relationship- and capacity-building practices in EI	☐	☐	☐	☐	☐
Week 2 – Introduction to the Intentional Relationship Model (IRM)	☐	☐	☐	☐	☐
Week 3 – Applying the IRM to everyday interactions	☐	☐	☐	☐	☐
Week 4 – Responding to strong emotions and challenging behaviors using the IRM	☐	☐	☐	☐	☐
Week 5 – Applying the IRM to participation-based challenges in EI	☐	☐	☐	☐	☐

APPENDIX E (continued)

Add any notes or suggestions related to the topics covered in this course below:

4. What overall rating would you give the ***instructor***?

Poor Fair Good Very Good Excellent

5. Indicate your level of agreement with the following statements ***related to the course instructor***:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The instructor demonstrated knowledge of the course content	☐	☐	☐	☐	☐
The instructor was effective in communicating the content of the course	☐	☐	☐	☐	☐
The instructor encouraged feedback from the attendees	☐	☐	☐	☐	☐
The instructor showed genuine concern for the needs of the attendees	☐	☐	☐	☐	☐
The instructor was enthusiastic about the course	☐	☐	☐	☐	☐

6. Would you recommend this course to other ***Early Intervention providers***?

Definitely Not Probably Not Not Sure Probably Definitely

Please describe:

7. Would you recommend this course to other ***families receiving Early Intervention***?

Definitely Not Probably Not Not Sure Probably Definitely

Please describe:

8. Please provide any comments or suggestions that might help improve this course in the future below.

APPENDIX F

Study Feasibility Checklist

Reference:

Orsmond, G. I., & Cohn, E. S. (2015). The distinctive features of a feasibility study: Objectives and guiding questions. *OTJR: Occupation, Participation and Health*, *35*(3), 169–177.

1. Sampling and Participant Recruitment Feasibility

A. Number of potential eligible members of the targeted population are accessible for recruitment purposes:
    a. Length of the recruitment period:
    b. Number of potential participants invited to participate in the study:
    c. Number of participants enrolled in the study:
    d. Number of participants dropped-out from the study:
    e. Number of participants withdrawn from the study:

B. Feasibility and suitability of the eligibility criteria:
    a. Barriers to recruitment:
    b. Reasons for refusal or ineligibility:

C. Relevance of the curriculum to the intended population?
    a. Do potential study participants show evidence of need for the intervention?
    b. Are the characteristics of the study participants consistent with the range of expected characteristics as informed by the research literature?
    c.

2. Appropriateness of Data Collection Methods and Outcome Measures

A. Feasibility and suitability of the data collection procedures?
    a. Is there evidence that participants understand the questions and other data collection procedures?
    b. Ceiling effects:
    c. Floor effects:
    d. Frequency of missing or incomplete responses:
    e. Frequency and description of otherwise unusable data:

B. Feasibility and suitability of the amount of data collection?
    a. Length of time required to complete the pre- and post-test surveys:
    b. Perception of participant burden required to complete the pre- and post-test surveys:

C. Do the measures appear to be performing in a consistent way with the intended population as compared to measurement information available in the research literature?
    a. Evidence for reliability and validity of existing assessment instruments:
    b. Evidence for potential need to remove, add, or revise existing data collection instruments:

APPENDIX F (continued)

3. Acceptability and Suitability of The Curriculum

A. Retention rates of participants successfully enrolled in the study:

B. Adherence rates to study procedures, intervention attendance, and engagement?
    a. Does the intervention fit with the daily life activities of study participants?
    b. Do the participants have enough time and capacity to complete the intervention?
    c. Does the intervention involve a reasonable amount of time or does it create a burden for the participants?
    d. To what extent is the intervention acceptable and appealing to participants?

C. What is the level of safety of the procedures in the intervention?
    a. Are there any unexpected adverse events?

4. Appropriateness and Practicality of Study Implementation

A. Does the research team have the administrative capacity, expertise, skills, space and time to conduct the study and intervention?
    a. Number and level of training of people required to carry-out to offer the curriculum:
        i. One facilitator: trained in EI, family-centered care, IRM, and adult learning principles
        ii. One aide/observer: familiar with the material and structure of the curriculum
        iii. Two volunteers: trained in supervising young children with disabilities

B. Can we conduct the study procedures and intervention in an ethical manner?
    a. To what extent does staff comply with the approved human participants' protocol?
    b. How effectively are adverse events during implementation identified, documented, and reported?

C. What is the study budget?

D. What technology, equipment, and software are necessary to conduct the study (including collection, management, and analysis of data): REDCap, SPSS

APPENDIX G

Global Fidelity Checklist

1. The facilitator consistently adhered to the curriculum scope and sequence
   - ☐ Yes
   - ☐ No – describe:

2. The curriculum was consistently delivered according to the specified frequency and duration
   - ☐ Yes
   - ☐ No – describe:

3. The facilitator systematically collected and addressed any ongoing concerns of the course participants
   - ☐ Yes
   - ☐ No – describe:

4. The facilitator consistently followed key principles and teaching practices of the curriculum
   - ☐ Yes
   - ☐ No – describe:

5. The facilitator focused on the specific goals identified in the lesson plan
   - ☐ Yes
   - ☐ No – describe:

6. The facilitator used the teaching strategies identified in the lesson plan
   - ☐ Yes
   - ☐ No – describe:

7. The facilitator used the recommended materials identified in the lesson plan
   - ☐ Yes
   - ☐ No – describe:

8. The facilitator followed all the steps or activities identified in the lesson plans
   - ☐ Yes
   - ☐ No – describe:

APPENDIX H

Individual Fidelity Checklist

Facilitator Observation:

1. The facilitator consistently followed key principles and teaching practices of the curriculum
   - ☐ Yes
   - ☐ No – describe:

2. The facilitator focused on the specific goals identified in the lesson plan
   - ☐ Yes
   - ☐ No – describe:

3. The facilitator used the teaching strategies identified in the lesson plan
   - ☐ Yes
   - ☐ No – describe:

4. The facilitator used the recommended materials identified in the lesson plan
   - ☐ Yes
   - ☐ No – describe:

5. The facilitator followed all the steps or activities identified in the lesson plans
   - ☐ Yes
   - ☐ No – describe:
6. The facilitator used the recommended materials identified in the lesson plan
   - ☐ Yes
   - ☐ No – describe:

7. The facilitator followed all the steps or activities identified in the lesson plans
   - ☐ Yes
   - ☐ No – describe:

Facilitator/Participant Interactions

8. Evidence of supportive facilitator to participant interactions
   - ☐ Yes
   - ☐ No – describe:

9. Evidence of supportive participant to participant interactions
   - ☐ Yes
   - ☐ No – describe:

APPENDIX I

Enrollment Survey and Learning Plan

Please rate your preferred session date and time below. Session placement will be determined on a 'first come first served' basis. We will do our best to ensure that your first choice is accommodated in this process.

After completing the course registration and the demographic questionnaire, you will receive a link to the course pretest questionnaires along with the final confirmation of the course date, time, and location. You will receive an email containing course portal login closer to Week 1 of the course.

Please direct any questions to epopov3@uic.edu.

---

1) Confirm your participant type:
- ☐ Parent/caregiver
- ☐ Therapist

2) Requesting Continuing Education Units:
- ☐ Yes
- ☐ No

REMINDER: If you choose to receive a continuing education certificate, your first name, last name, and email address may have to be reported to the Early Intervention Training Program (EITP) and the Provider Connections offices for monitoring purposes.

3) Please rate your preferred date and time:

	Thursday 6:00 PM - 8:00 PM 10/4, 10/18, 11/1	Saturday 10:00 AM - 12:00 PM 10/6, 10/20, 11/3	Saturday 1:00 PM - 3:00 PM 10/6, 10/20, 11/3
1st choice	☐	☐	☐
2nd choice	☐	☐	☐
3rd choice	☐	☐	☐

4) Where did you learn about this course?

5) How do you **define family-centered practice** in Early Intervention?

6) What are the **strengths** of using a family-centered approach in Early Intervention?

7) What are the **challenges** of using a family-centered approach in Early Intervention?

8) What do you hope to learn while attending this course?

APPENDIX J

Video Reflection Assignment

1. What went well during this interaction? Why?

2. What could be improved during this interaction? Why?

3. If you were the [parent/caregiver **OR** provider] in this scenario, what would you want to happen next?

APPENDIX K

Weekly Reflection Assignment – Week 2

1) Describe a recent interpersonal event (or a challenge) that you have experienced while working with [your child, another family member, or a friend] OR [parent, caregiver, or child in Early Intervention].
Make sure to include the:

- Interpersonal characteristics displayed by your child
- Interpersonal event(s)

2) Thinking about the experience you described above, rate your communication with that person by answering the questions below:

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
I advocated for the person by introducing them to others with a similar experience or connecting them additional resources that will enable them to have equal access and opportunities in life.						
I collaborated with the person by giving them control, supporting them in being able to make their own choices, or letting them decide on what happens next in the interaction.						
I empathized with the person by asking them questions, using active listening, or observing their response to the interaction in order to try to understand their thoughts, feelings, or needs.						
I encouraged the person by being positive, use positive reinforcement, or instilling hope.						
I instructed the person by being directive, creating structure, or providing information and feedback.						
I problem-solved with the person by outlining different options, analyzing potential consequences of choices, or asking strategic questions to guide their thinking.						

3) What therapeutic communication mode(s) did you attempt during this interaction?
4) What was the other person's response to the therapeutic communication mode(s) attempted by you?
5) What, if anything, would you like to try differently in the future?

APPENDIX L

Weekly Reflection Assignment – Week 4

1) Describe one challenge that is related to [your child's] OR [a parent's, caregiver's, or child's] ability to participate in everyday activities or therapeutic tasks that you frequently experience [at home, in the community, or during Early Intervention appointments] or [in Early Intervention].
Make sure to include the:

- Description of the setting, location, and activity
- Expected behavior for that activity or a task
- Actual behavior during that activity or a task
- Interpersonal characteristics displayed by your child
- Interpersonal event(s)

APPENDIX L (continued)

2) Thinking about the experience you described above, rate your communication with that person by answering the questions below:

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
I advocated for the person by introducing them to others with a similar experience or connecting them additional resources that will enable them to have equal access and opportunities in life.						
I collaborated with the person by giving them control, supporting them in being able to make their own choices, or letting them decide on what happens next in the interaction.						
I empathized with the person by asking them questions, using active listening, or observing their response to the interaction in order to try to understand their thoughts, feelings, or needs.						
I encouraged the person by being positive, use positive reinforcement, or instilling hope.						
I instructed the person by being directive, creating structure, or providing information and feedback.						
I problem-solved with the person by outlining different options, analyzing potential consequences of choices, or asking strategic questions to guide their thinking.						

3) What therapeutic communication mode(s) did you attempt most and least frequently during this interaction?
4) What was the other person's response to the therapeutic communication mode(s) attempted by you?
5) Were some modes more effective than others? How could you tell?
6) What, if anything, would you like to try differently in the future?

APPENDIX M

Strengths, Opportunities, Aspirations, and Results (SOAR)

	Internal	**External**
Present	Strengths	Opportunities
Future	Aspirations	Results

APPENDIX N

Follow-up Interview Script - Therapist

Demystifying Family-Centered Care:
Relationship- and Capacity-Building Approaches in Early Intervention
Follow-up Interview Script

Introduction (5 minutes)

Hello! Thank you for agreeing to participate in this follow-up interview. The purpose of this interview is to help me gain insight about your experience as a participant in the course and the research study. The information gained from this interview will help me improve the quality of the course and the research in the future. By the end of this interview, I hope to learn more about:

1. Your overall experience of the course content;
2. Your overall experience of the course structure, and;
3. Your thoughts on ways that this course could be improved in the future.

My role here today is that of an interviewer. I will ask questions, listen, and help clarify any questions that you may have for me. I promise to be respectful of your time and keep the interview to a total of 30 minutes. If we are talking in detail about one question, I may stop the conversation short in order to ensure that we do not run over time.

I will be audio-recording our discussion today because, of course, I cannot memorize everything covered. Parts of our conversation may be used for research. The information published could include general themes gained from the interviews, and quotes that apply to those themes.

To ensure anonymity and privacy of everyone involved in this study, I ask that you refrain from using any names, dates, or locations. This interview will be de-identified, coded, and transcribed for research purposes. If you do mention any names, dates, or locations they will be removed from the audio-file and the final interview transcript.

What questions do you have for me before I begin recording?

If you are ready, I am going to begin recording now.

Remember: There are no right or wrong answers. I have provided you with a list of my questions that you can use as guide during our conversation.

Course Content (10 minutes)

We will begin by talking about the course content.

1. What are the three most memorable moments for you from the course?
2. Since we last spoke, has anything happened in your practice that reminded you of something that you learned in the course?
3. Do you find that you see any of the interactions with your clients (children or parents) in a different light than you did prior to attending the course? Can you provide an example?
4. When you are experiencing a challenging situation while working with a client (children or parents), do you find that you view, or respond, to the situation in a different way than you did prior to attending the course? Can you provide an example?
5. A large portion of the course focused on different interpersonal communication modes, how would you describe your mode use before and after taking the course?

APPENDIX N (continued)

Course Structure (10 minutes)
Now, let's shift our conversation to course structure.

1. This course was delivered as a flipped classroom experience. Have you taken a similar course in the past? What was it like taking a flipped course?
2. I realize that some of the survey questions were personal in nature, what was the experience of filing out the survey questionnaires like for you? Did you notice a difference before, and after the course?
3. During Week 1 and Week 5 you saw a video of me interacting with a client, what do you remember about that video? What was the experience of watching that video like for you?

Suggestions for Improving the Course (5 minutes)
We are at the end of the interview. To wrap up, I want to know more about what suggestions you have for improving this course in the future.

1. The following question has two parts. If you were to improve the course, what would you change about the course:
    a. Content (for example, topics and information covered)
    b. Structure (for example, length and duration of the course)

Thank you!
Thank you so much for your time and your participation in this interview! Is there anything else that you would like to add or feel that we missed?

APPENDIX O

Follow-up Interview Script - Parent

Introduction (5 minutes)
Hello! Thank you for agreeing to participate in this follow-up interview. The purpose of this interview is to help me gain insight about your experience as a participant in the course and the research study. The information gained from this interview will help me improve the quality of the course and the research in the future. By the end of this interview, I hope to learn more about:

4. Your overall experience of the course content;
5. Your overall experience of the course structure, and;
6. Your thoughts on ways that this course could be improved in the future.

My role here today is that of an interviewer. I will ask questions, listen, and help clarify any questions that you may have for me. I promise to be respectful of your time and keep the interview to a total of 30 minutes. If we are talking in detail about one question, I may stop the conversation short in order to ensure that we do not run over time.
I will be audio-recording our discussion today because, of course, I cannot memorize everything covered. Parts of our conversation may be used for research. The information published could include general themes gained from the interviews, and quotes that apply to those themes.
To ensure anonymity and privacy of everyone involved in this study, I ask that you refrain from using any names, dates, or locations. This interview will be de-identified, coded, and transcribed for research purposes. If you do mention any names, dates, or locations they will be removed from the audio-file and the final interview transcript.
What questions do you have for me before I begin recording?
If you are ready, I am going to begin recording now.
Remember: There are no right or wrong answers. I have provided you with a list of my questions that you can use as guide during our conversation.
Course Content (10 minutes)
We will begin by talking about the course content.

6. What are the three most memorable moments for you from the course?
7. Since we last spoke, has anything happened in your everyday life that reminded you of something that you learned in the course?
8. Do you find that you see any of the interactions with your child (or others) in a different light than you did prior to attending the course? Can you provide an example?
9. When you are experiencing a challenging situation while interacting with your child (or others), do you find that you view, or respond, to the situation in a different way than you did prior to attending the course? Can you provide an example?
10. A large portion of the course focused on different interpersonal communication modes, how would you describe your mode use before and after taking the course?

APPENDIX O (continued)

Course Structure (10 minutes)
Now, let's shift our conversation to course structure.

4. This course was delivered as a flipped classroom experience. Have you taken a similar course in the past? What was it like taking a flipped course?
5. During Week 1 and Week 5, I asked everyone to complete a series of questionnaires, what was the experience of filing out the survey questionnaires like for you? Did you notice a difference before, and after the course?
6. During Week 1 and Week 5 you saw a video of me interacting with a client, what do you remember about that video? What was the experience of watching that video like for you?

Suggestions for Improving the Course (5 minutes)
We are at the end of the interview. To wrap up, I want to know more about what suggestions you have for improving this course in the future.

2. The following question has two parts. If you were to improve the course, what would you change about the course:
    a. Content (for example, topics and information covered)
    b. Structure (for example, length and duration of the course)

Thank you!
Thank you so much for your time and your participation in this interview! Is there anything else that you would like to add or feel that we missed?

APPENDIX P

Institutional Review Board at University of Illinois at Chicago – Approved Documents

The research study titled *Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches* (Protocol # 2018-0380) was approved by Institutional Review Board at University of Illinois at Chicago:

- Initial Review Application (Expedited) – Request for Modifications – April 6, 2018
- Initial Review Application (Expedited) – Response to Modifications – Approved – May 25, 2018
- Amendment # 1 (Expedited) – Approved – August 13, 2018
- Amendment # 2 (Expedited) – Approved – October 4, 2018
- Amendment # 3 (Expedited) – Approved – February 19, 2019

The following documents have been approved for participant recruitment and enrollment for Study I:

- Phase II – Recruitment Flyer, Version 3 – Approved – August 13, 2018
- Phase II – Recruitment Script, Version 2 – Approved – May 25, 2018
- Phase II – Screening Questionnaire, Version 3 – Approved – August 13, 2018
- Phase II – Consent Form, Version 2 – Approved – May 25, 2018 – May 24, 2021

The following documents have been approved for participant recruitment and enrollment for Study II:

- Phase I – Recruitment Flyer, Version 4 – September 27, 2018
- Phase I – Recruitment Script, Version 2 – Approved – May 25, 2018
- Phase I – Invitation to Participate in Research, Version 2 – Approved – May 25, 2018
- Phase I – Screening Questionnaire, Version 3 – Approved – August 13, 2018
- Phase I – Consent Form, Version 4 – Approved – September 27, 2018 – May 24, 2021
- Phase I – Follow-up Recruitment Script, Version 1 – Approved – September 27, 2018
- Phase I – Follow-up Consent Form, Version 1 – Approved – September 27, 2018 – May 24, 2021

APPENDIX P (continued)

Request for Modifications and/or Information
Expedited Review
Initial Review

April 6, 2018

Evguenia Popova, BA
Occupational Therapy
1919 W. Taylor
M/C 811
Chicago, IL 60612
Phone: (312) 413-7469 / Fax: (312) 413-0256

RE: **Research Protocol # 2018-0380**
"Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches"

Dear Ms. Popova:

Your Initial Review application, received on March 27, 2018, was reviewed by members of the Institutional Review Board (IRB) # 2 under expedited review procedures [45 CFR 46.110(b)(2)] on April 4, 2018. It was determined that modifications and/or additional information about the research are required. The IRB requests the following:

The Board would like to express its appreciation for a well-written submission packet.

Please remember to submit a letter of support from each non-UIC site/organization that agrees to cooperate in the recruitment of their clients and staff into this research. Letters should be on letterhead, briefly outline the activities the site/organization agrees to host, and be signed by an authorized executive at the site/organization. If sites/organizations are added after the UIC IRB has granted initial approval of this research, the letters must be accompanied by an Amendment form when submitted to the UIC IRB.

Please remember that if data collection instruments are revised during the course of the research, those finalized instruments must be submitted to the UIC IRB for review before being administered to subjects.

1. Issues regarding research protocol and /or research protocol application:
Initial Review application:

1.1 Page 6.B: Please verify that subjects will be asked to evaluate pre-recorded video cases and that the subjects of this research will not themselves be video-recorded.

1.2 Page 6.B: Please clarify how non-UIC subjects will obtain access to UIC Blackboard.

1.3 Pages 8-9: Please clarify whether the subject contact information contained in the master code list will be obtained during the recruitment process (that is, prior to subjects' signing the consent document) or after subject consent/enrollment.

1.4 Pages 16.E and 19.b: Please note that potential subjects who are recruited and/or

APPENDIX P (continued)

communicate via social media run the risk of having their interest and/or involvement in the research displayed to others and/or tracked by the social media sites and other entities, particularly if the potential subject can link directly to the study or investigator via the social media site. If potential subjects will be able to link directly to the study and/or investigator via social media sites, kindly make potential subjects aware of this potential risk on all recruitment materials on social media sites.

1.5 Pages 17.XI.A and 22.2.b: Please clarify what professional organization is making continuing education credits available to subjects in this research, as well as how those credits will be reported to the professional organization and distributed to subjects. Also, kindly note that financial compensation is not a benefit of the research but is in appreciation of the subject's time and inconvenience.

1.6 Page 18.XII.B: Please clarify if subject phone numbers will also be collected.

1.7 Page 20.d: Please clarify when contact information for potential subjects who decline to participate or are ineligible are destroyed. Also, kindly provide a justification for retaining subject identifiers and/or the master code list after data analyses.

2. Issues regarding the informed consent process and/or document:

2.1 *Phase I Recruitment Flyer:*

2.1.1 Please revise the headline to make the research at least a co-equal feature of the project with the classes.

2.1.2 Please provide information regarding the type of data that will be collected as part of the research.

2.2 *Phase II Recruitment Flyer*: Please clarify whether the link that will be provided on the flyer will connect subjects to the screening questionnaire or directly to the surveys.

2.3 *Phase I Recruitment Script*: Please provide information regarding the type of data that will be collected as part of the research.

2.4 *Phase I Invitation to Participate in Research*, About the Study: Please clearly state that the course assignments will also be used/analyzed as research data.

2.5 *Phase I Screening Questionnaire*: Please clarify why potential subjects are directed to a digital consent document and not consented in person.

2.6 *Phase I and Phase II Screening Questionnaires*: Please clarify how potential subjects will find these screeners on REDCap: will they be linked via recruitment materials?

2.7 *Phase I Informed Consent:*

2.7.1 Pages 1-2, what procedures are involved?: Please move the collection of data from course assignments up to a separate bullet point instead of embedding it in the final paragraph of this section.

2.7.2 Page 2: Please delete the section titled Will I be told new information...?

2.7.3 Pages 2-3, What about privacy and confidentiality?, first paragraph: Please delete the phrase "...if you are injured and need emergency care or..."

2.8 *Phase II Informed Consent:*

2.8.1 Page 2: Please delete the section titled Will I be told new information...?

2.8.2 Page 2, Are there benefits to taking part in the research?: Please state that there are no direct benefits to subjects and remove the reference to compensation.

2.8.3 Page 2, What about privacy and confidentiality?, second paragraph: Please delete the phrase "...if you are injured and need emergency care or..."

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Chicago, Illinois 60612
Phone (312) 996-1711

APPENDIX P (continued)

When submitting your response upload the following via OPRSLive:

1. A cover or response letter, either:
   a. **Unlock the Request for Modifications letter from the IRB** and insert your response to each of the IRB's items directly beneath that item (request 1.1, response 1.1; request 1.2, response 1.2, etc), save this response letter with a new name and upload it with your response submission packet to the IRB;
   OR
   b. **Copy the Request for Modifications letter from the IRB to a new document**, insert your response to each of the IRB's items directly beneath that item, save this new document and upload it with your response submission packet to the IRB.

2. For modifications that involve the research protocol and/or research protocol application form:
   a. **Upload one copy** of the revised application **with track changes** plus **one copy without track changes but with all of the changes incorporated** into the document.
   b. Insert a footer on each page that includes the next sequential **version number and latest revision date**.

3. For issues that involve the informed consent document(s) and/or consent process:
   a. **Upload one copy** of each revised recruitment or consent document **with track changes** plus **one copy without track changes but with all of the changes incorporated** into the document so that it can be date-stamped and returned to you.
   b. Leave sufficient blank space for the IRB approval stamp (2-1/2 inches wide by 1-1/2 inches high) in the upper right corner of the first page.
   c. Include a **short descriptor** (to describe each document and differentiate among various documents in the same research protocol) in the footer of each page.
   d. Include the next sequential **version number and latest revision date** in the footer of each page.
   e. Be sure the pages are numbered: Page 1 of #, Page 2 of #.

The IRB has determined that your response to these required modifications may be reviewed under expedited review procedures without being scheduled for review at a convened IRB meeting. Based on your response, the IRB has the right to ask further questions, seek additional information, require further modifications, or refer your response to the convened IRB.

Please note that you ***may not*** initiate the research, including the recruitment of subjects, until you receive a ***written notice of IRB approval*** that will include the date-stamped informed consent documents to use when seeking consent from subjects.

If you do not respond to the IRB's requests within 90 days of this letter, your research protocol submission will be automatically withdrawn from the review process and the IRB will not take any further action.

If you have any questions or need further help, please contact the OPRS office at (312) 996-1711

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APPENDIX P (continued)

or me at (312) 996-2014.

Sincerely,
Sandra Costello
Assistant Director, IRB #2
Office for the Protection of Research Subjects

cc: Yolanda Suarez-Balcazar, Occupational Therapy, M/C 811
Renee R. Taylor (faculty advisor), Occupational Therapy, M/C 811

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APPENDIX P (continued)

Approval Notice
Initial Review (Response to Modifications)

May 25, 2018

Evguenia Popova, BA
Occupational Therapy
Phone: (312) 413-7469 / Fax: (312) 413-0256

RE: **Protocol # 2018-0380**
"Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches"

Dear Ms. Popova:

Your Initial Review application (Response to Modifications) was reviewed and approved by the Expedited review process on May 25, 2018. You may now begin your research.

Please note the following information about your approved research protocol:

Please note that stamped .pdfs of all approved recruitment and consent documents have been uploaded to OPRSLive, and you must access and use only those approved documents to recruit and enroll subjects into this research project. OPRS/IRB no longer issues paper letters or stamped/approved documents.

Protocol Approval Period: May 25, 2018 - May 24, 2021
Approved Subject Enrollment #: 500
Additional Determinations for Research Involving Minors: The Board determined that this research satisfies 45CFR46.404, research not involving greater than minimal risk.
Performance Site: UIC
Sponsor: None
Research Protocols:

a) Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches in Early Intervention; Version 2; 05/15/2018
b) Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches in Early Intervention;05/15/2018

Recruitment Materials:

a) Phase I Invitation to Participate in Research; Version 2; 05/15/2018
b) Phase I Recruitment Flyer; Version 2; 05/15/2018
c) Phase II Recruitment Flyer; Version 2; 05/15/2018
d) Phase II Screening Questionnaire; Version 2; 05/15/2018
e) Phase II Recruitment Script; Version 2; 05/15/2018
f) Phase I Screening Questionnaire; Version 2; 05/15/2018
g) Phase I Recruitment Script; Version 2; 05/15/2018

Informed Consents:

APPENDIX P (continued)

a) Phase II Informed Consent; Version 2; 05/15/2018
b) Phase I Informed Consent; Version 3; 05/24/2018
c) A waiver of documentation (electronic consent/no written signature obtained) and an alteration of consent has been granted only for online eligibility screening under 45 CFR 46.117(c)(2) and 45 CFR 46.116(d) (minimal risk; subjects will be provided with online information and identifiable information for any subsequent ineligibles or declines will be destroyed immediately; written subject consent will be obtained at enrollment for all Phase I subjects)
d) A waiver of documentation of consent (electronic consent/no written signature obtained) has been granted only for Phase 2 under 45 CFR 46.117(c)(2) (minimal risk; subjects will be provided with an online information sheet containing all of the elements of consent)
e) A waiver of documentation of consent (electronic consent/no written signature obtained) has been granted only for completion of the short course pre-test under 45 CFR 46.117(c)(2) (minimal risk; subjects will be provided with an online information sheet containing all of the elements of consent)

Assent:

a) A waiver of child assent has been granted only for infants as secondary subjects of this research under 45 CFR 46.116(d) (minimal risk; identifiable information may be disclosed by parents/caregivers)

Your research meets the criteria for expedited review as defined in 45 CFR 46.110(b)(1) under the following specific category:

(7) Research on individual or group characteristics or behavior (including but not limited to research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Please note the Review History of this submission:

Receipt Date	Submission Type	Review Process	Review Date	Review Action
03/27/2018	Initial Review	Expedited	04/04/2018	Modifications Required
05/17/2018	Response To Modifications	Expedited	05/25/2018	Approved

Please remember to:

→ Use your **research protocol number** (2018-0380) on any documents or correspondence with the IRB concerning your research protocol.

→ Review and comply with all requirements on the OPRS website under:
"UIC Investigator Responsibilities, Protection of Human Research Subjects"

Please note that the UIC IRB has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your

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APPENDIX P (continued)

research and the consent process.

Please be aware that if the scope of work in the grant/project changes, the protocol must be amended and approved by the UIC IRB before the initiation of the change.

We wish you the best as you conduct your research. If you have any questions or need further help, please contact OPRS at (312) 996-1711 or me at (312) 996-2014.

Sincerely,
Sandra Costello
Assistant Director, IRB # 2
Office for the Protection of Research Subjects

Please note that stamped .pdfs of all approved recruitment and consent documents listed below have been uploaded to OPRSLive, and you must access and use only those approved documents to recruit and enroll subjects into this research project. OPRS/IRB no longer issues paper letters or stamped/approved documents.

1. **Informed Consent Documents:**
   a) Phase II Informed Consent; Version 2; 05/15/2018
   b) Phase I Informed Consent; Version 3; 05/24/2018
2. **Recruiting Materials:**
   a) Phase I Invitation to Participate in Research; Version 2; 05/15/2018
   b) Phase I Recruitment Flyer; Version 2; 05/15/2018
   c) Phase II Recruitment Flyer; Version 2; 05/15/2018
   d) Phase II Screening Questionnaire; Version 2; 05/15/2018
   e) Phase II Recruitment Script; Version 2; 05/15/2018
   f) Phase I Screening Questionnaire; Version 2; 05/15/2018
   g) Phase I Recruitment Script; Version 2; 05/15/2018

cc: Yolanda Suarez-Balcazar, Occupational Therapy, M/C 811
Renee R. Taylor (faculty advisor), Occupational Therapy, M/C 811

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APPENDIX P (continued)

Approval Notice
Amendment to Research Protocol and Consent Documents – Expedited Review
UIC Amendment # 1

August 13, 2018

Evguenia Popova, BA
Occupational Therapy
Phone: (312) 413-7469 / Fax: (312) 413-0256

RE: **Protocol # 2018-0380**
"Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches"

Dear Ms. Popova:

Members of Institutional Review Board (IRB) #2 have reviewed this amendment to your research and consent forms under expedited procedures for minor changes to previously approved research allowed by Federal regulations [45 CFR 46.110(b)(2)]. The amendment to your research was determined to be acceptable and may now be implemented.

Please note the following information about your approved amendment:

Please note that Crystal Lepe and Kendall Busse could not be approved as research personnel at this time as they are not currently affiliated with UIC. If they are to be added as research personnel, kindly submit a new amendment accompanied by either IRB approval from their home institutions or a completed Individual Investigator Agreement (Appendix L2).

Please note that stamped .pdfs of all approved recruitment documents related to this amendment have been uploaded to OPRSLive, and you must access and use only those approved documents to recruit and enroll subjects into this research project. OPRS/IRB no longer issues paper letters or stamped/approved documents.

Amendment Approval Date: August 13, 2018
Amendment:

Summary: UIC Amendment #1, dated 1 August 2018, and submitted 2 August 2018 and accepted 3 August 2018, is an investigator-initiated amendment regarding the following:
(1) adding Kayla Horvath and Christina Hovatter as key research personnel (Appendix P);
(2) revising exclusion/inclusion criteria for parent/caregiver subjects from having a child 30 months old or younger to having a child 33 months old or younger (Initial Review application, 8/1/2018; Protocol, v3, 5/15/2018 on title page, 8/1/2018 in footer);
(3) submitting revised eligibility screening documents for clarity and consistency regarding the recruitment/screening/consent process via REDCap (Phase I Screening Questionnaire, v3,

APPENDIX P (continued)

8/1/2018; Phase II Screening Questionnaire, v3, 8/1/2018); and
(4) submitting revised recruitment flyers with minor formatting edits and the addition of the project website address (Phase I Recruitment Flyer, v3, 8/1/2018; Phase II Recruitment Flyer, v3, 8/1/2018).

Approved Subject Enrollment #: 500
Performance Site: UIC
Sponsor: None
Research Protocols:

a) Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches in Early Intervention (5/15/2018 on title page); Version 3; 08/01/2018
b) Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches in Early Intervention;08/01/2018

Recruiting Materials:

a) Phase I Recruitment Flyer; Version 3; 08/01/2018
b) Phase II Screening Questionnaire; Version 3; 08/01/2018
c) Phase I Screening Questionnaire; Version 3; 08/01/2018
d) Phase II Recruitment Flyer; Version 3; 08/01/2018

Please note the Review History of this submission:

Receipt Date	Submission Type	Review Process	Review Date	Review Action
08/03/2018	Amendment	Expedited	08/13/2018	Approved

Please be sure to:

→ **Use only the IRB-approved and stamped consent documents when enrolling subjects.**

→ Use your research protocol number (2018-0380) on any documents or correspondence with the IRB concerning your research protocol.

→ Review and comply with all requirements on the OPRS website under:
"UIC Investigator Responsibilities, Protection of Human Research Subjects"

Please note that the UIC IRB #2 has the right to ask further questions, seek additional information, or monitor the conduct of your research and the consent process.

Please be aware that if the scope of work in the grant/project changes, the protocol must be amended and approved by the UIC IRB before the initiation of the change.

We wish you the best as you conduct your research. If you have any questions or need further help, please contact the OPRS at (312) 996-1711 or me at (312) 996-2014.

Sincerely,
Sandra Costello

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APPENDIX P (continued)

Assistant Director, IRB # 2
Office for the Protection of Research Subjects

Please note that stamped .pdfs of all approved recruitment documents related to this amendment listed below have been uploaded to OPRSLive, and you must access and use only those approved documents to recruit and enroll subjects into this research project. OPRS/IRB no longer issues paper letters or stamped/approved documents.

1. **Recruiting Materials:**
   a) Phase I Recruitment Flyer; Version 3; 08/01/2018
   b) Phase II Screening Questionnaire; Version 3; 08/01/2018
   c) Phase I Screening Questionnaire; Version 3; 08/01/2018
   d) Phase II Recruitment Flyer; Version 3; 08/01/2018

cc: Renee R. Taylor (faculty advisor), Occupational Therapy, M/C 811
Yolanda Suarez-Balcazar, Occupational Therapy, M/C 811

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APPENDIX P (continued)

Approval Notice
Amendment to Research Protocol and/or Consent Document – Expedited Review
UIC Amendment # 2
REVISED*

October 04, 2018

Evguenia Popova, BA
Occupational Therapy
Phone: (312) 413-7469 / Fax: (312) 413-0256

RE: Protocol # 2018-0380
"Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches"

Dear Ms. Popova:

Members of Institutional Review Board (IRB) #2 have reviewed this amendment to your research and/or consent form under expedited procedures for minor changes to previously approved research allowed by Federal regulations [45 CFR 46.110(b)(2)]. The amendment to your research was determined to be acceptable and may now be implemented.

*** Please note that the Amendment # 2 approval letter has been revised on October 04, 2018 to reflect the approval of the Individual Investigator Agreement (IIA) by the authorized official at UIC (the Vice Chancellor for Research) between UIC and Crystal Lepe. Crystal Lepe has now been approved as key research personnel.**

Please note that the IRB has updated the footers for the following documents: Phase I Follow-up Recruitment Script, Version 1, 09/12/2018; Phase I Informed Consent, Version 4, 9/12/2018; and Phase I Follow-up Informed Consent, Version 1, 9/12/2018. Please be sure to keep a copy of these versions of the documents for your records, and remember to update footers when submitting revised and/or new documents.

Please note the following information about your approved amendment:

Amendment Approval Date: September 27, 2018
Amendment:

Summary: UIC Amendment # 2 dated September 12, 2018 and received via OPRSLive on September 13, 2018 is an investigator-initiated amendment to:
a)Add a Phase I Follow-up interview portion of the study for all enrolled Phase I participants. Participants will be invited to enroll in the follow-up portion of the study toward the end of the course (during Week 3 and Week 5 of the curriculum). Those participants that wish to participate in the follow-up portion of the study will be asked to sign a separate written consent form. The follow-up will include a 30-minute open-ended phone interview conducted by the principal investigator. Participants enrolled in the follow-up will be compensated with a

APPENDIX P (continued)

$5.00 Target gift card; revise data storage to maintain audio recordings of the interviews; increase the number of Phase I participants from 100 to 200 (600 total); and, update the correct time for Workshop Option 3 [1:00 PM to 3:00 PM] (IR, v4, 9/12/2018; RP, v4, 9/12/2018)
b) Add Aura Espinoza as key personnel (Appendix P):
c) Add Crystal Lepe as key personnel (Appendix L2); and
d) Submit recruitment and consent documents reflecting the changes above (Phase I Recruitment Flyer, Version 4, 9/12/2018; Phase I Follow-up Recruitment Script, Version 1, 09/12/2018; Phase I Informed Consent, Version 4, 9/12/2018; Phase I Follow-up Informed Consent, Version 1, 9/12/2018).

Approved Subject Enrollment #: 600
Performance Sites: UIC
Sponsor: None
Research Protocol(s):

a) Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches in Early Intervention (IR app):09/12/2018
b) Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches in Early Intervention; Version 4.0; 09/12/2018

Recruiting Material(s):

a) Phase I Follow-up Recruitment Script; Version 1; 09/12/2018
b) Phase I Recruitment Flyer; Version 4; 09/12/2018

Informed Consent(s):

a) Phase I Follow-up Consent Form; Version 1; 09/12/2018
b) Phase I Informed Consent; Version 4; 09/12/2018

Please note the Review History of this submission:

Receipt Date	Submission Type	Review Process	Review Date	Review Action
09/13/2018	Amendment	Expedited	09/27/2018	Approved

Please be sure to:

→ **Use only the IRB-approved and stamped consent document(s) and/or HIPAA Authorization form(s) enclosed with this letter when enrolling subjects.**

→ Use your research protocol number (**2018-0380**) on any documents or correspondence with the IRB concerning your research protocol.

→ Review and comply with all requirements on the guidance,
"UIC Investigator Responsibilities, Protection of Human Research Subjects"
(http://research.uic.edu/irb/investigators-research-staff/investigator-responsibilities).

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APPENDIX P (continued)

Please note that the UIC IRB #2 has the right to ask further questions, seek additional information, or monitor the conduct of your research and the consent process.

Please be aware that if the scope of work in the grant/project changes, the protocol must be amended and approved by the UIC IRB before the initiation of the change.

We wish you the best as you conduct your research. If you have any questions or need further help, please contact the OPRS at (312) 996-1711 or me at (312) 996-9299. Please send any correspondence about this protocol to OPRS at 203 AOB, M/C 672.

Sincerely,

Allison A. Brown, PhD
IRB Coordinator, IRB # 2
Office for the Protection of Research Subjects

Enclosure(s): Approved and stamped documents are available via OPRSLive.

1. **Informed Consent Document(s):**
   a) Phase I Follow-up Consent Form; Version 1; 09/12/2018
   b) Phase I Informed Consent; Version 4; 09/12/2018
2. **Recruiting Material(s):**
   a) Phase I Follow-up Recruitment Script; Version 1; 09/12/2018
   b) Phase I Recruitment Flyer; Version 4; 09/12/2018

cc: Renee R. Taylor Faculty Sponsor), Occupational Therapy, M/C 811
Yolanda Suarez-Balcazar, Occupational Therapy, M/C 811

UNIVERSITY OF ILLINOIS AT CHICAGO
Office for the Protection of Research Subjects
201 AOB (MC 672)
1737 West Polk Street
Chicago, Illinois 60612
Phone (312) 996-1711

APPENDIX P (continued)

Approval Notice
Amendment – Expedited Review
UIC Amendment # 3

February 19, 2019

Evguenia Popova, BA
Occupational Therapy
Phone: (312) 413-7469 / Fax: (312) 413-0256

RE: **Protocol # 2018-0380**
"Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches"

Dear Ms. Popova:

Your application was reviewed and approved on February 19, 2019. The amendment to your research may now be implemented.

Please note the following information about your approved amendment:

Please note that Christina Hovatter no longer appears to be affiliated with UIC and, unless alternative supporting paperwork is submitted and approved, should be removed from Appendix P.

Amendment Approval Date: February 19, 2019
Amendment:
Summary: UIC Amendment #3, dated, and submitted and accepted 13 February 2019, is an investigator-initiated amendment adding Patrycja Budzyk and Alejandro Carillo, and removing Kayla Horvath, Rikki Ostrowski, Arianna Rodriguez, and Christina Hovatter as key research personnel (Appendix P).
Approved Subject Enrollment #: 600
Performance Site: UIC
Sponsor: None

Please be sure to:

→ Use your research protocol number (2018-0380) on any documents or correspondence with the IRB concerning your research protocol.

UNIVERSITY OF ILLINOIS AT CHICAGO
Office for the Protection of Research Subjects
201 AOB (MC 672)
1737 West Polk Street
Chicago, Illinois 60612
Phone (312) 996-1711

APPENDIX P (continued)

→ Review and comply with the policies of the UIC Human Subjects Protection Program (HSPP) and the guidance ***Investigator Responsibilities***.

Please note that the IRB has the right to ask further questions, seek additional information, or monitor the conduct of your research and the consent process.

Please be aware that if the scope of work in the grant/project changes, the protocol must be amended and approved by the UIC IRB before the initiation of the change.

We wish you the best as you conduct your research. If you have any questions or need further help, please contact the OPRS at (312) 996-1711 or me at (312) 996-2014. Please send any correspondence about this protocol to OPRS via OPRS Live.

Sincerely,

Sandra Costello
Assistant Director, IRB # 2
Office for the Protection of Research Subjects

cc: Renee R. Taylor (faculty advisor), Occupational Therapy, M/C 811
Yolanda Suarez-Balcazar, Occupational Therapy, M/C 811

UNIVERSITY OF ILLINOIS AT CHICAGO
Office for the Protection of Research Subjects
201 AOB (MC 672)
1737 West Polk Street
Chicago, Illinois 60612
Phone (312) 996-1711

APPENDIX P (continued)

UIC Rehabilitation Sciences Program

Help advance family-centered Early Intervention by participating in research

WHAT?

- ☐ Share **YOUR** experience of receiving or providing family-centered care in Early Intervention by completing a series of confidential surveys (30-45 minutes to complete)
- ☐ Receive a **$5.00 Target gift card** as a thank you for your contribution to Early Intervention research

WHO?

- ☐ **PARENTS and CAREGIVERS** of children that receive Early Intervention services*
- ☐ **THERAPISTS** that provide direct services through the Early Intervention

WHERE?

Determine your eligibility to participate in this study by going to this link: **https://goo.gl/4cU4fe**

We are looking for research volunteers to complete a series of questionnaires and share their experience of receiving and providing Early Intervention services. The study aims to expand the existing knowledge of family-centered care by exploring the relationships between:

- Different approaches to implementing family-centered care in Early Intervention
- Different types of communication that therapist's use while working with families
- Family participation in Early Intervention

WHY?

Help expand the existing knowledge related to tangible strategies for supporting:

- Family-centered services
- Effective communication between families and therapists
- Collaborative partnerships between families and therapists
- Family's active participation in Early Intervention

Note:

** Only one parent/caregiver per household is eligible to participate in the course at this time.*

APPENDIX P (continued)

APPROVED
DATE: 5/25/2018
UNIVERSITY OF ILLINOIS AT CHICAGO INSTITUTIONAL REVIEW BOARD

Phase II
Recruitment Script

IN-PERSON RECRUITMENT:
Hello, my name is _____ [*name of research assistant*], and I am a research assistant at University of Illinois at Chicago. At this time we are conducting a research study that examines the association between family-centered care, family-therapist communication, and family participation in Early Intervention. We are looking for research volunteers to complete a series of questionnaires and share their experience of receiving and providing Early Intervention services. PARENTS and CAREGIVERS of children that receive services through the Early Intervention and THERAPISTS that provide direct services through the Early Intervention are eligible to participate in the study.
As a study participant you would be asked to share **YOUR** experience of receiving or providing family-centered care in Early Intervention by completing a series of confidential surveys online. The surveys will take 30-45 minutes to complete. Upon completion of the surveys, you will be eligible to receive a **$5.00 Target gift card** as a thank you for your contribution to Early Intervention research. Would you like to learn more about the study?
If "yes" offer the person the 1) Recruitment Flyer (paper, PDF, or website link) and 2) Invitation to Participate in Research
If "no", thank the person for their time and stop the recruitment process.

SOCIAL MEDIA RECRUITMENT (E.G., FACEBOOK, LINKEDIN, ETC.):
We are looking for research volunteers to complete a series of questionnaires and share their experience of receiving or providing Early Intervention services. The study aims to expand the existing knowledge of family-centered care by exploring the relationships between: family-centered practices, different approaches to communication between therapist and families, and family participation in Early Intervention.
WHAT?
- ☐ Share YOUR experience of receiving or providing family-centered care in Early Intervention by completing a series of confidential surveys (30-45 minutes to complete)
- ☐ Receive a $5.00 Target gift card as a thank you for your contribution to Early Intervention research

WHO?
- ✓ THERAPISTS that provide direct services through the Early Intervention
- ✓ PARENTS and CAREGIVERS of children that receive services through the Early Intervention

For more information visit: https://goo.gl/35LLBT

OTHER ONLINE RECRUITMENT (E.G., WEBSITES, BLOGS, EMAIL, ETC.):

Help advance family-centered Early Intervention by participating in research.

We are looking for research volunteers to complete a series of questionnaires and share their experience of receiving or providing Early Intervention services. The study aims to expand the existing knowledge of family-centered care by exploring the relationships between:
- Different approaches to implementing family-centered care in Early Intervention
- Different types of communication that therapist's use while working with families
- Family participation in Early Intervention

WHAT?
- ☐ Share **YOUR** experience of receiving or providing family-centered care in Early Intervention by completing a series of confidential surveys (30-45 minutes to complete)
- ☐ Receive a **$5.00 Target gift card** as a thank you for your contribution to Early Intervention research

WHO?
- ✓ **THERAPISTS** that provide direct services through the Early Intervention
- ✓ **PARENTS and CAREGIVERS** of children that receive services through the Early Intervention*

* *Only one parent/caregiver per household is eligible to participate in the course at this time.*

WHY?
Help expand the existing knowledge base related to tangible strategies for supporting:
- ✓ Family-centered services
- ✓ Effective communication between families and providers
- ✓ Collaborative partnerships between families and therapists

For more information visit: https://goo.gl/pChwpV

APPENDIX P (continued)

Phase II
Screening Questionnaire

Screening Questionnaire Response Logic: The screening questionnaire will be completed digitally via REDCap. *Potential participants will be able to access the screener via a link provided in the recruitment materials.* For the first question, the respond must select "No." For the second question, the respondent must select either "parent or caregiver" or "direct service provider" and select all checkboxes under the respective option in order to participate in study. The following message will be displayed once the screening questionnaire is completed:

> *"Thank you for completing the screening questionnaire and your interest in this research. If you are eligible to participate in the Phase II of the 'Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches in Early Intervention'. If you are eligible to participate in this study, the link to the research consent form will be displayed below. You will be directed to the study questionnaires after submitting the consent form."*
>
> *Please direct any questions related to this study to Evguenia S. Popova: epopov3@uic.edu"*

Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches in Early Intervention
Phase II: Screening Questionnaire

Thank you for your interest in participating in the Phase II of the **"Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches in Early Intervention"** research study conduced by the University of Illinois at Chicago, Department of Rehabilitation Sciences. Any questions related to the criteria listed below should be directed to Evguenia S. Popova: epopov3@uic.edu

Please complete the following screening questionnaire to determine your eligibility to participate in this research. You must meet all of the criteria listed below to quality.

1. Have you participated in a 5-week short-course titled "Supporting Child Development Through Relationship- and Capacity-Building Approaches"?

☐ Yes

> ***[If "yes" the following message is displayed]*** *"Based on your response, you have already completed the required questionnaires as part of your participation in Phase I and are not eligible to participate in Phase II. Thank you for your contribution to this research project."*

☐ No

2. What is your association with the Early Intervention program?

☐ I am **a *parent or a caregiver*** (for example a nanny or another family member) of a child who is receiving developmental, occupational, physical, and/or speech therapy through Early Intervention ***(select all that apply):***
- ☐ I am 18 years old or older
- ☐ I am a parent or the primary caregiver of a child who is 35 months or younger
- ☐ I am parent or a primary caregiver of a child who is receiving services from **at least one** of the following through Early Intervention: developmental therapy, occupational therapy, physical therapy, and/or speech therapy
- ☐ I am present during the regularly scheduled Early Intervention appointments

☐ I am **a *direct service provider*** through Early Intervention *(select all that apply)*:
- ☐ I am 18 years old or older;
- ☐ I am a licensed, or certified, developmental therapist, occupational therapist, physical therapist, or speech therapist
- ☐ I provide direct intervention services either full-time or part-time through Early Intervention
- ☐ I provide direct Early Intervention services to at least three families weekly

APPENDIX P (continued)

University of Illinois at Chicago
Research Information and Consent for Participation in Social Behavioral Research

Demystifying Family-Centered Care:
Relationship- and Capacity-Building Approaches in Early Intervention

You are being asked to participate in a research study. Researchers are required to provide a consent form such as this one to tell you about the research, to explain that taking part is voluntary, to describe the risks and benefits of participation, and to help you to make an informed decision. You should feel free to ask the researchers any questions you may have.

Principal Investigator Name and Title: Evguenia Popova, MS, OTR/L, PhD Student

Principal Investigator Email: epopov3@uic.edu

Faculty Sponsor Name and Title: Renee Taylor, PhD, Professor

Faculty Sponsor Email: rtaylor@uic.edu

Department and Institution: Rehabilitation Sciences, University of Illinois at Chicago (UIC)

Address and Contact Information: 1919 West Taylor, Room 322, Chicago, IL 60612

Why am I being asked?

You are being asked to participate in a research study that is looking at the associations between 1) delivery of family-centered care, 2) therapist's use of therapeutic and non-therapeutic communication, 3) parent/caregiver and the therapist confidence, and 4) family participation and engagement in Early Intervention (EI). You have been asked to participate in the research because you are a therapist, a parent, or a caregiver who is currently providing or receiving EI services.

Your participation in this research is voluntary. Your decision whether or not to participate will not affect your current or future dealings with the University of Illinois at Chicago. If you decide to participate, you are free to withdraw at any time without affecting that relationship.

Approximately 400 participants may be involved in this research at UIC.

What is the purpose of this research?

The purpose of this research is to answer the following questions:

1. How do therapist and parent/caregiver perspectives compare related to the delivery of family-centered care, use of therapeutic and non-therapeutic communication, and parent/caregiver participation in EI?
2. What is the association between the:
    a. Degree to which family-centered care is delivered in EI
    b. Therapist's use of therapeutic and non-therapeutic communication in EI
    c. Parent/caregiver and the therapist confidence in carrying out recommended EI practices
    d. Family participation and engagement in EI

What procedures are involved?

This research is conducted entirely online. As part of your participation in the study, you will be asked to complete a set of questionnaires, which will take 30-45 minutes to complete. You will only be asked to complete the questionnaires one time and you will not be contacted again after your participation. The questionnaires will be confidential, and you will not be required to disclose any personal information in order to participate in the study. A $5.00 Target gift card will be distributed to you via email upon completion of the survey questionnaires. Please note that you will have to disclose your first name, last name, and email address in order to receive the $5.00 gift card. Your name and email will only be collected for the purpose of gift card distribution.

What are the potential risks?

APPENDIX P (continued)

There is minimal anticipated risk to you as a study participant. The primary anticipated risks include potential loss of privacy and confidentiality of information gathered as part of the study, that is, the information you share with the researchers during your participation in the study. You will be reminded of any potential risk related to the loss of privacy and confidentially throughout your participation in the study.

Are there benefits to taking part in the research?

There are no direct benefits to you as a study participant.

Your participation in this study may also indirectly benefit families and therapists in EI from future knowledge translation of the research findings related to the impact of family-therapist communication on the delivery of family-centered care and family participation in Early Intervention.

What other options are there?

You have the option to not participate in this study.

What about privacy and confidentiality?

You are not required to disclose any personally identifying information (for example, first name, last name, or email) in order to participate in the study. You will be asked to provide your first name, last name, and email in order to receive the $5.00 gift card and this information will be tied to your survey questionnaire.

The people who will know that you are a participant in this study are the members of the research team. Otherwise information about you will only be disclosed to others with your written permission, or if necessary to protect your rights or welfare (for example, when the UIC Office for the Protection of Research Participants (OPRS) monitors the research or consent process) or if required by law. Study information that identifies you may be looked at and/or copied for checking up on the research by: Authorized Representatives of the UIC OPRS or the State of Illinois Auditors.

A possible risk of your participation in this research is that the information about you might become known to people outside the research team. To ensure your privacy and confidentiality, all data collected as part of this study will be password protected and stored in a secure server. When the results of the research are published or discussed in conferences, no information will be included that would reveal your identity.

Please be aware that, if you disclose actual or suspected abuse, neglect, or exploitation of a child, or disabled or elderly adult, the researcher or any member of the study staff must, and will, report this to Child Protective Services (i.e. Department of Family and Human Services), Adult Protective Services, and/or the nearest law enforcement agency.

What are the costs for participating in this research?

There are no costs to you for participating in this research.

Will I be reimbursed or paid for my participation in this research?

You will receive a $5.00 Target gift card upon completion of the survey questionnaires. You will receive the gift card via email within approximately 30 days following study completion. If you do not finish the questionnaires, or choose to not disclose our first name, last name, or email, you will not be compensated for your time.

Can I withdraw or be removed from the study?

If you decide to participate, you are free to withdraw your consent and discontinue participation at any time. You have the right to leave a study at any time without penalty. In addition, the researchers also have the right to stop your participation in this study without your consent if it is determined that you no longer meet the criteria specified for inclusion in the study. You can notify the primary investigator (Evguenia Popova, epopov3@uic.edu) of your decision to discontinue your participation.

Who should I contact if I have questions?

APPENDIX P (continued)

Contact the researchers (Evguenia Popova, epopov3@uic.edu OR Renee Taylor, rtaylor@uic.edu):

- If you have any questions about this study or your part in it
- If you have questions, concerns or complaints about the research

What are my rights as a research subject?

If you feel you have not been treated according to the descriptions in this form, or if you have any questions about your rights as a research subject, including questions, concerns, complaints, or to offer input, you may call the Office for the Protection of Research Participants (OPRS) at 312-996-1711 or 1-866-789-6215 (toll-free) or e-mail OPRS at uicirb@uic.edu.

What if I am a UIC employee?

Your participation in this research is in no way a part of your university duties, and your refusal to participate will not in any way affect your employment with the university, or the benefits, privileges, or opportunities associated with your employment at UIC. You will not be offered or receive any special consideration if you participate in this research.

Remember:

Your participation in this research is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University. If you decide to participate, you are free to withdraw at any time without affecting that relationship.

Digital Consent of Subject

I have read (or someone has read to me) the above information. I have been given an opportunity to ask questions and my questions have been answered to my satisfaction.

☐ I agree to participate in this research

Date

APPENDIX P (continued)

APPROVED
DATE: 09/27/2018
UIC UNIVERSITY OF ILLINOIS AT CHICAGO INSTITUTIONAL REVIEW BOARD

UIC Rehabilitation Sciences Program

Take a FREE course and participate in research on best practices for working with children and families in Early Intervention.

Determine your eligibility and register here: https://goo.gl/s5Vrmx

We are looking for research volunteers to participate in a NEW course for families and therapists in Early Intervention. The course is designed to provide evidence-based strategies for:

- ✓ Supporting the child's maximal capacity for learning and growth
- ✓ Establishing and maintaining strong therapeutic relationships while responding to challenging situations
- ✓ Supporting the family's maximal capacity to be actively engaged in Early Intervention

WHO?

- ✓ **PARENTS and CAREGIVERS** of children that receive services through Early Intervention*
- ✓ **THERAPISTS** that provide direct services through Early Intervention**

WHEN? Select one of three workshops:

Option 1: Thursday (10/4, 10/18, 11/1) from 6:00 PM to 8:00 PM

Option 2: Saturday (10/6, 10/20, 11/3) from 10:00 AM to 12:00 PM

Option 3: Saturday (10/6, 10/20, 11/3) from 1:00 PM to 3:00 PM

WHAT? Participate in a 5-week hybrid course delivered both in person and online (2 hours per week). The researchers will collect your responses to the 1) pretest questionnaires completed upon your enrollment in the course, 2) course assignments, and 3) posttest questionnaires completed upon your completion of the course. The course agenda is as follows:

Week 1 (in-person): Course overview and introduction to recommended relationship- and capacity-building practices in Early Intervention

Week 2 (online): Overview of strategies for implementing relationship-building practices while working with children and families in Early Intervention.

Week 3 (in-person): Solution-based approaches for resolving relationship-based challenges while working with children and families in Early Intervention.

Week 4 (online): Overview of strategies for implementing capacity-building practices while working with children and families in Early Intervention.

Week 5 (in-person): Solution-based approaches for resolving participation-based challenges while working with children and families in Early Intervention.

Course content: mini lectures, videos, readings, large/small group discussions, reflective assignments

WHERE? The in person meetings will take place at University of Illinois at Chicago: 1919 West Taylor, Chicago, IL 60612. Online meetings will be conducted via a Google Sites website.

Note:

* *Only one parent/caregiver per household is eligible to participate in the course at this time.*

** *Therapists will receive **up to 10 continuing education units** as a result of their participation in the study.*

APPENDIX P (continued)

Phase I
Recruitment Script

IN-PERSON RECRUITMENT:
Hello, my name is _____ [*name of research assistant*]. I am a research assistant at University of Illinois at Chicago. At this time we are conducting a research study that looks at family-centered care, family-therapist communication, and family participation in Early Intervention. We are looking for research volunteers to participate in a NEW course for families and therapists in Early Intervention. The course is offered FREE of charge and is designed to provide evidence-based strategies for:

- ✓ Supporting the child's maximal capacity for learning and growth
- ✓ Establishing and maintaining strong therapeutic relationships with people across the age span
- ✓ Supporting the family's maximal capacity to be actively engaged in Early Intervention
- ✓ Getting the most out of interprofessional teaming and collaboration in Early Intervention

The researchers will collect your responses to the 1) pre-test questionnaires completed upon your enrollment in the course, 2) course assignments, and 3) post-test questionnaires completed upon your completion of the course. The course is designed as a 5-week hybrid course delivered both in person and online. The weekly commitment is estimated to take approximately 2 hours per week. The in person meetings will take place at University of Illinois at Chicago (1919 West Taylor, Chicago, IL 60612). Online meetings will be conducted via a Google Sites website. Therapists may receive **up to 10 continuing education units** as a result of their participation in the study. PARENTS and CAREGIVERS of children that receive services through the Early Intervention and THERAPISTS that provide direct services through the Early Intervention are eligible to participate in the study. Would you like to learn more about the study?
If "yes" offer the person the 1) Recruitment Flyer (paper, PDF, or website link) and 2) Invitation to Participate in Research
If "no", thank the person for their time and stop the recruitment process.

SOCIAL MEDIA RECRUITMENT (E.G., FACEBOOK, LINKEDIN, ETC.):
Take a FREE course and participate in research on best practices for working with children and families in Early Intervention. Learn about evidence-informed strategies for 1) establishing and maintaining strong therapeutic relationship while responding to challenging situations and, 2) supporting the family's maximal capacity to be actively engaged in the Early Intervention. Parents and therapists are welcome to attend. **For more information visit: https://goo.gl/35LLBT**

OTHER ONLINE RECRUITMENT (E.G., WEBSITES, BLOGS, EMAIL, ETC.):

Take a FREE course and participate in research on best practices for working with children and families in Early Intervention.

We are looking for research volunteers to participate in a NEW course for families and therapists in Early Intervention.
The course is designed to provide evidence-based strategies for:

- Supporting the child's maximal capacity for learning and growth
- Establishing and maintaining strong therapeutic relationship while responding to challenging situations
- Supporting the family's maximal capacity to be actively engaged in the Early Intervention
- Getting the most out of interprofessional teaming and collaboration in Early Intervention

WHO?

- **PARENTS and CAREGIVERS** of children that receive services through Early Intervention*
- **THERAPISTS** that provide direct services through Early Intervention**

WHY?

- Learn tangible strategies that can be practically applied in your everyday life
- Advance science in delivery of family-centered services in Early Intervention
- Support development of evidence-based continuing education for therapists, parents, and caregivers in Early Intervention

WHAT? Participate in a 5-week hybrid course delivered both in person and online (2 hours a week)** The researchers will collect your responses to the 1) pre-test questionnaires completed upon your enrollment in the course, 2) course assignments, and 3) post-test questionnaires completed upon your completion of the course.

WHERE? The in person meetings will take place at University of Illinois at Chicago: 1919 West Taylor, Chicago, IL 60612. Online meetings will be conducted via a Google Sites website.

* *Only one parent/caregiver per household is eligible to participate in the course at this time.*
** *Therapists will receive **up to 10 continuing education units** as a result of their participation in the study.*

For more information visit: https://goo.gl/35LLBT

APPENDIX P (continued)

University of Illinois at Chicago
Invitation to Participate in Research

Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches in Early Intervention

You are being asked to be a participant in a research study about the feasibility and preliminary effectiveness of a curriculum-based short-course titled ""**Supporting Child Development Through Relationship- and Capacity-Building Approaches."** Researchers are trying to learn more about the ***feasibility*** and ***the effectiveness*** of a five-week short-course that is delivered to a combined audience of therapists and parents/caregivers in Early Intervention. The study aims to answer the following questions:

1. What is the demand for the proposed curriculum?
2. What is the participant satisfaction with the proposed curriculum?
3. What is the researcher's ability to adhere to the proposed curriculum?
4. What is the impact of participating in the proposed curriculum on the participant's:
    a. Confidence in using family-centered strategies in Early Intervention
    b. Ability to effectively communicate with families and therapists on the Early Intervention team
    c. Ability to participate in Early Intervention or support active family participation in Early Intervention

You have been asked to participate in this research because you are a therapist, a parent, or a caregiver who is currently providing or receiving Early Intervention services. **Your participation in this research is voluntary. Your decision whether or not to participate will not affect your current or future dealings with the University of Illinois at Chicago. If you decide to participate, you are free to withdraw at any time without affecting that relationship.**

About the Study:

This research will take place both in person and online. The short-course will span five weeks and you will be asked to complete in person and online components of the course. During Weeks 1, 3 and 5 of the short-course, you will be asked to attend the in person sessions at the University of Illinois at Chicago, Department of Occupational Therapy (located at 1919 West Taylor, Chicago, IL 60612). During Weeks 2 and 4, you will be asked to complete a series of activities, readings, and assignments online via a Google Sites website. Each weekly session will take 2 hours to complete, resulting in approximately 6 hours of in person training and 4 hours of online training over the course of five weeks (10 hours total).

The researchers will collect and analyze your responses to the survey questionnaires and the course assignments included in the short-course. As part of your participation in the study, you will be asked to do the following:

- Complete the course registration and a pretest questionnaire (30-45 minutes to complete)
- Participate in a five-week short-course and complete the associated course assignments. The course agenda is as follows:
    - **Week 1 (in-person):** Course overview and introduction to recommended relationship- and capacity-building practices in Early Intervention (2 hours to complete)
    - **Week 2 (online):** Overview of strategies for implementing relationship-building practices while working with children and families in Early Intervention (2 hours to complete)
    - **Week 3 (in-person):** Solution-based approaches for resolving relationship-based challenges while working with children and families in Early Intervention (2 hours to complete)
    - **Week 4 (online):** Overview of strategies for implementing capacity-building practices while working with children and families in Early Intervention (2 hours to complete)
    - **Week 5 (in-person):** Solution-based approaches for resolving participation-based challenges while working with children and families in Early Intervention (2 hours to complete)
- Complete the course evaluation and a posttest questionnaire (30-45 minutes to complete)

What are the costs for participating in this research?

There are no costs to you for participating in this study.

APPENDIX P (continued)

Will I be reimbursed or paid for my participation in this research?

You will not be offered payment for being in this study.

Are there benefits to taking part in the research?

The primary benefit to you as a study participant is the educational benefit of participating in a new curriculum designed for promoting family-centered care and family-therapist collaboration in Early Intervention. In addition, therapists participating in this research will be compensated for their time with up to 10 continuing education hours.

You participation in this study may also indirectly benefit other families and therapists in Early Intervention from future knowledge translation of the research findings related to development and implementation of evidence-informed educational resources for families and therapists.

What are the potential risks?

There is minimal anticipated risk to you as a study participant. The primary anticipated risks include potential loss of privacy and confidentiality of information gathered as part of the study, that is, the information you share with the researchers during your participation in the study. Specifically, while the surveys you complete as part of this study are confidential and will not be shared with anyone outside of the research team, the researchers will not be able to guarantee the confidentiality of the information you voluntarily share with other participants in the short-course during the in person sessions or in your personal communication with research participants outside of the research study. You will be reminded of any potential risk related to the loss of privacy and confidentially throughout your participation in the study.

If you wish to receive a certificate confirming the completion of continuing education hours as part of your participation in this research study, your first name, last name, and email address may have to be reported to the Early Intervention Training Program (EITP) and the Provider Connections offices for monitoring purposes. As a study participant, you will have an option to accept or decline a certificate of continuing education hours upon enrollment in the study or anytime thereafter. Your personal and contact information will never be disclosed to anyone outside of the research team without your consent.

Remember:

Your participation in this research is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University. If you decide to participate, you are free to withdraw at any time without affecting that relationship.

Who should I contact if I have questions?

Contact the researchers below if you have any questions about this study or your part in it or concerns or complaints about the research.

Principal Investigator Name and Title: Evguenia Popova, MS, OTR/L, PhD Student

Principal Investigator Email: epopov3@uic.edu

Faculty Sponsor Name and Title: Renee Taylor, PhD, Professor

Faculty Sponsor Email: rtaylor@uic.edu

Department and Institution: Rehabilitation Sciences, University of Illinois at Chicago (UIC)

Address and Contact Information: 1919 West Taylor, Room 322, Chicago, IL 60612

APPENDIX P (continued)

Phase I
Screening Questionnaire

Screening Questionnaire Response Logic: The screening questionnaire will be completed digitally via REDCap. *Potential participants will be able to access the screener via a link provided in the recruitment materials.* The respondent must select either "parent or caregiver" or "direct service provider" and select all checkboxes under the respective option in order to participate in study. The following message will be displayed once the screening questionnaire is completed:

> *"Thank you for completing the screening questionnaire and your interest in research. If you are eligible to participate in the Phase I of the 'Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches in Early Intervention'. If you are eligible to participate in this study, the link to the research consent form will be displayed below. You will be directed to register for the course after submitting the consent form."*
>
> *Please direct any questions related to this study to Evguenia S. Popova: epopov3@uic.edu"*

Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches in Early Intervention
Phase I: Screening Questionnaire

Thank you for your interest in participating in the Phase I of the **"Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches in Early Intervention"** research study conduced by the University of Illinois at Chicago, Department of Rehabilitation Sciences. Any questions related to the criteria listed below should be directed to Evguenia S. Popova: epopov3@uic.edu

Please complete the following screening questionnaire to determine your eligibility to participate in this research. You must meet all of the criteria listed below to qualify.

What is your association with the Early Intervention program?

- ☐ I am **a *parent or a caregiver*** (for example a nanny or another family member) of a child who is receiving developmental, occupational, physical, and/or speech therapy through Early Intervention ***(select all that apply):***
  - ☐ I am 18 years old or older
  - ☐ I am a parent or the primary caregiver of a child who is 33 months or younger
  - ☐ I am parent or a primary caregiver of a child who is receiving services from **at least one** of the following through Early Intervention: developmental therapy, occupational therapy, physical therapy, and/or speech therapy
  - ☐ I am present during the regularly scheduled Early Intervention appointments
- ☐ I am **a *direct service provider*** through Early Intervention *(select all that apply)*:
  - ☐ I am 18 years old or older;
  - ☐ I am a licensed, or certified, developmental therapist, occupational therapist, physical therapist, or speech therapist
  - ☐ I provide direct intervention services either full-time or part-time through Early Intervention
  - ☐ I provide direct Early Intervention services to at least three families weekly

APPENDIX P (continued)

University of Illinois at Chicago
Research Information and Consent for Participation in Social Behavioral Research

Demystifying Family-Centered Care:
Relationship- and Capacity-Building Approaches in Early Intervention

You are being asked to participate in a research study. Researchers are required to provide a consent form such as this one to tell you about the research, to explain that taking part is voluntary, to describe the risks and benefits of participation, and to help you to make an informed decision. You should feel free to ask the researchers any questions you may have.

Principal Investigator Name and Title: Evguenia Popova, MS, OTR/L, PhD Student

Principal Investigator Email: epopov3@uic.edu

Faculty Sponsor Name and Title: Renee Taylor, PhD, Professor

Faculty Sponsor Email: rtaylor@uic.edu

Department and Institution: Rehabilitation Sciences, University of Illinois at Chicago (UIC)

Address and Contact Information: 1919 West Taylor, Room 322, Chicago, IL 60612

Why am I being asked?

You are being asked to be a participant in a research study about the feasibility and preliminary effectiveness of a curriculum-based short-course titled "**"Supporting Child Development Through Relationship- and Capacity-Building Approaches."** You have been asked to participate in this research because you are a therapist, a parent, or a caregiver who is currently providing or receiving Early Intervention services.

Your participation in this research is voluntary. Your decision whether or not to participate will not affect your current or future dealings with the University of Illinois at Chicago. If you decide to participate, you are free to withdraw at any time without affecting that relationship.

Approximately 200 participants may be involved in this research study at UIC.

What is the purpose of this research?

Researchers are trying to learn more about the ***feasibility*** and ***the effectiveness*** of a five-week short-course that is delivered to a combined audience of therapists and parents/caregivers in Early Intervention. The study aims to answer the following questions:

1. What is the demand for the proposed curriculum?
2. What is the participant satisfaction with the proposed curriculum?
3. What is the researcher's ability to adhere to the proposed curriculum?
4. What is the impact of participating in the proposed curriculum on the participant's:
    a. Confidence in using family-centered strategies in Early Intervention
    b. Ability to effectively communicate with families and therapists on the Early Intervention team
    c. Ability to participate in Early Intervention or support active family participation in Early Intervention

What procedures are involved?

This research will take place both in person and online. The short-course will span five weeks and you will be asked to complete in person and online components of the course. During Weeks 1, 3 and 5 of the short-course, you will be asked to attend the in person sessions at the University of Illinois at Chicago, Department of Occupational Therapy (located at 1919 West Taylor, Chicago, IL 60612). During Weeks 2 and 4, you will be asked to complete a series of activities, readings, and assignments online via a Google Sites website. Each weekly session will take 2 hours to complete, resulting in approximately 6 hours of in person training and 4 hours of online training over the course of five weeks (10 hours total).

APPENDIX P (continued)

The researchers will collect and analyze your responses to the survey questionnaires and the course assignments included in the short-course. As part of your participation in the study, you will be asked to do the following:

- Complete the course registration and a pretest questionnaire (30-45 minutes to complete)
- Participate in a five-week short-course and complete the associated course assignments. The course agenda is as follows:
    - **Week 1 (in-person):** Course overview and introduction to recommended relationship- and capacity-building practices in Early Intervention (2 hours to complete)
    - **Week 2 (online):** Overview of strategies for implementing relationship-building practices while working with children and families in Early Intervention (2 hours to complete)
    - **Week 3 (in-person):** Solution-based approaches for resolving relationship-based challenges while working with children and families in Early Intervention (2 hours to complete)
    - **Week 4 (online):** Overview of strategies for implementing capacity-building practices while working with children and families in Early Intervention (2 hours to complete)
    - **Week 5 (in-person):** Solution-based approaches for resolving participation-based challenges while working with children and families in Early Intervention (2 hours to complete)
- Complete the course evaluation and a posttest questionnaire (30-45 minutes to complete)

The pretest surveys that you will be asked to complete upon course registration will be used as a part of a larger study conducted by the researchers that examines the associations between 1) delivery of family-centered care, 2) therapist's use of therapeutic and non-therapeutic communication, 3) parent/caregiver and the therapist confidence, and 4) family participation and engagement in Early Intervention.

What are the potential risks?

There is minimal anticipated risk to you as a study participant. The primary anticipated risks include potential loss of privacy and confidentiality of information gathered as part of the study, that is, the information you share with the researchers during your participation in the study. Specifically, while the surveys and the assignments you complete as part of this study are confidential and will not be shared with anyone outside of the research team, the researchers will not be able to guarantee the confidentiality of the information you voluntarily share with other participants in the short-course during the in person sessions. You will be reminded of any potential risk related to the loss of privacy and confidentially throughout your participation in the study.

Are there benefits to taking part in the research?

The primary benefit to you as a study participant is the educational benefit of participating in a new curriculum designed for promoting family-centered care and family-therapist collaboration in Early Intervention. In addition, therapists participating in this research will be compensated for their time with up to 10 continuing education hours.

You participation in this study may also indirectly benefit other families and therapists in Early Intervention from future knowledge translation of the research findings related to development and implementation of evidence-informed educational resources for families and therapists.

What other options are there?

You have the option to not participate in this study.

What about privacy and confidentiality?

The people who will know that you are a part of this research study the other participants in the short-course and the members of the research team. Your individual survey responses will not be shared within anyone outside of this research team. The information about you will only be disclosed to others with your written permission, or if necessary to protect your rights or welfare (for example, when the UIC Office for the Protection of Research Participants (OPRS) monitors the research or consent process) or if required by law. Study information that identifies you and the consent form signed by you will be looked at and/or copied for checking up on the research by: Authorized Representatives of the UIC OPRS or the State of Illinois Auditors.

If you wish to receive a certificate confirming the completion of continuing education hours as part of your participation in this research study, your first name, last name, and email address may have to be reported to the Early Intervention Training Program (EITP) and the Provider Connections offices for monitoring purposes. The researchers will maintain the

APPENDIX P (continued)

record of your participation in this continuing education course for up to seven years for monitoring purposes. As a study participant, you will have an option to accept or decline a certificate of continuing education hours upon enrollment in the study or anytime thereafter. Your personal and contact information will never be disclosed to anyone outside of the research team without your consent.

A possible risk of your participation in this research is that the information about you might become known to people outside the research team. To ensure your privacy and confidentiality, all data collected as part of this study will be password protected and stored in a secure server. When the results of the research are published or discussed in conferences, no information will be included that would reveal your identity. Although we ask everyone participating in this study to respect everyone's privacy and confidentiality, and not to identify anyone in the group or repeat what is said during the group discussion, please remember that other participants in the group may accidentally disclose what was said during in person sessions or as part of online discussion forums.

Please be aware that, if you disclose actual or suspected abuse, neglect, or exploitation of a child, or disabled or elderly adult, the researcher or any member of the study staff must, and will, report this to Child Protective Services (i.e. Department of Family and Human Services), Adult Protective Services, and/or the nearest law enforcement agency.

What are the costs for participating in this research?

There are no costs to you for participating in this study.

Will I be reimbursed or paid for my participation in this research?

You will not be offered payment for being in this study.

Can I withdraw or be removed from the study?

If you decide to participate, you are free to withdraw your consent and discontinue participation at any time. If possible, please notify the primary investigator (Evguenia Popova, epopov3@uic.edu) of your decision to discontinue your participation as soon as possible. You have the right to leave a study at any time without penalty. In addition, the researchers also have the right to stop your participation in this study without your consent if it is determined that you no longer meet the criteria specified for inclusion in the study.

Please note, that while you will not be penalized for withdrawing from the study, the continuing education units will only be provided for the number of education hours completed as part of your participation in the study (i.e., two hours of continuing education per week). In the event you withdraw or are asked to leave the study, you will still be compensated based on the number of education hours you were able to complete prior to withdrawal.

Who should I contact if I have questions?

Contact the researchers (Evguenia Popova, epopov3@uic.edu OR Renee Taylor, rtaylor@uic.edu):

- If you have any questions about this study or your part in it
- If you have questions, concerns or complaints about the research

What are my rights as a research subject?

If you feel you have not been treated according to the descriptions in this form, or if you have any questions about your rights as a research subject, including questions, concerns, complaints, or to offer input, you may call the Office for the Protection of Research Participants (OPRS) at 312-996-1711 or 1-866-789-6215 (toll-free) or e-mail OPRS at uicirb@uic.edu.

What if I am a UIC employee?

Your participation in this research is in no way a part of your university duties, and your refusal to participate will not in any way affect your employment with the university, or the benefits, privileges, or opportunities associated with your employment at UIC. You will not be offered or receive any special consideration if you participate in this research.

APPENDIX P (continued)

Remember:

Your participation in this research is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University. If you decide to participate, you are free to withdraw at any time without affecting that relationship.

Continuing Education Units

As a study participant, you have an opportunity to receive a certificate confirming the number of continuing education hours completed as part of your participation in this research study. If you choose to receive a continuing education certificate, your first name, last name, and email address may have to be reported to the Early Intervention Training Program (EITP) and the Provider Connections offices for monitoring purposes.

☐ **Accept** – I wish to receive a certificate confirming the number of continuing education hours I completed as part of my participation in this research study. I understand that the researchers may have to disclose my first name, last name, and email address to the Early Intervention Training Program (EITP) and the Provider Connections offices for monitoring purposes.

☐ **Decline** – I do not wish to receive a certificate confirming the number of continuing education hours completed as part of my participation in this research study.

Signature of Subject

I have read (or someone has read to me) the above information. I have been given an opportunity to ask questions and my questions have been answered to my satisfaction. I agree to participate in this research. I will be given a copy of this signed and dated form.

_____ _____
Signature Date

_____
First Name

_____
Last Name

_____
Email

_____ _____
Signature of Person Obtaining Consent Date (must be same as subject's)

_____
Printed Name of Person Obtaining Consent

APPENDIX P (continued)

Phase I – Follow-up
Recruitment Script

IN-PERSON RECRUITMENT:

Hello, everyone. First and foremost, I would like to thank you all for participating in this course and the associated research study. As you know, the primary purpose of this research is to evaluate the feasibility and preliminary effectiveness of this course. In addition to the anonymous course evaluations that you will have a chance to complete during our final meeting, I would like to invite you to participate in a follow-up interview. The interviews will take approximately 30 minutes to complete and would be conducted individually over the phone during a date and time that works best for your schedule. As a thank you for your time, you would be compensated with a $5.00 Target Gift Card after the interview is completed. The gift cards would be distributed digitally over email.

[Begin to hand out hard copy of the consent form]

Please take your time to review the consent form. I can answer any questions you may have now, during the break, or after the class. If you wish to participate in the phone follow-up portion of this study, please return the signed consent form to me prior to the end of the final class (Week 5).

Thank you for your time and consideration.

APPENDIX P (continued)

University of Illinois at Chicago
Research Information and Consent for Participation in Social Behavioral Research

Demystifying Family-Centered Care:
Relationship- and Capacity-Building Approaches in Early Intervention

You are being asked to participate in a research study. Researchers are required to provide a consent form such as this one to tell you about the research, to explain that taking part is voluntary, to describe the risks and benefits of participation, and to help you to make an informed decision. You should feel free to ask the researchers any questions you may have.

Principal Investigator Name and Title: Evguenia Popova, MS, OTR/L, PhD Student

Principal Investigator Email: epopov3@uic.edu

Faculty Sponsor Name and Title: Renee Taylor, PhD, Professor

Faculty Sponsor Email: rtaylor@uic.edu

Department and Institution: Rehabilitation Sciences, University of Illinois at Chicago (UIC)

Address and Contact Information: 1919 West Taylor, Room 322, Chicago, IL 60612

Why am I being asked?

You are being asked because you are currently a participant in a research study about the feasibility and preliminary effectiveness of a curriculum-based short-course titled **"Supporting Child Development Through Relationship- and Capacity-Building Approaches."**

Your participation in this research is voluntary. Your decision whether or not to participate will not affect your current or future dealings with the University of Illinois at Chicago. If you decide to participate, you are free to withdraw at any time without affecting that relationship.

Approximately 200 participants may be involved in this research study at UIC.

What is the purpose of this research?

Researchers are trying to learn more about the ***feasibility*** and ***the effectiveness*** of a five-week short-course that is delivered to a combined audience of therapists and parents/caregivers in Early Intervention. The study aims to answer the following questions:

1. What is the demand for the proposed curriculum?
2. What is the participant satisfaction with the proposed curriculum?
3. What is the researcher's ability to adhere to the proposed curriculum?
4. What is the impact of participating in the proposed curriculum on the participant's:
    a. Confidence in using family-centered strategies in Early Intervention
    b. Ability to effectively communicate with families and therapists on the Early Intervention team
    c. Ability to participate in Early Intervention or support active family participation in Early Intervention

What procedures are involved?

This research will take place over the phone. The researchers will collect and analyze your responses to open ended interview questions related to your experience of participating in the five-week course titled ""Demystifying Family-Centered Care: Relationship- and Capacity-Building Approaches in Early Intervention" and the associated research study. The interviews will take approximately 30 minutes to complete. The researchers will collect an audio recording of the interview for their records. The interviews will be transcribed verbatim and the written transcripts will be analyzed for research purposes. The researchers will be looking for common themes across all interviews collected. Direct quotes from the interviews may be used for publication purposes. To ensure privacy and confidentiality, all identifying information

APPENDIX P (continued)

(including names, dates, and locations) will be removed from the audio files and verbatim transcripts prior to analysis and publication.

What are the potential risks?

There is minimal anticipated risk to you as a study participant. The primary anticipated risks include potential loss of privacy and confidentiality of information gathered as part of the study, that is, the information you share with the researchers during your participation in the study. You will be reminded of any potential risk related to the loss of privacy and confidentially throughout your participation in the study.

Are there benefits to taking part in the research?

There is no direct benefit to you as a participant in this study. You participation in this study may also indirectly benefit other families and therapists in Early Intervention from future knowledge translation of the research findings related to development and implementation of evidence-informed educational resources for families and therapists.

What other options are there?

You have the option to not participate in this study.

What about privacy and confidentiality?

The people who will know that you are a part of this research study are the members of the research team. The information about you will only be disclosed to others with your written permission, or if necessary to protect your rights or welfare (for example, when the UIC Office for the Protection of Research Participants (OPRS) monitors the research or consent process) or if required by law. Study information that identifies you and the consent form signed by you will be looked at and/or copied for checking up on the research by: Authorized Representatives of the UIC OPRS or the State of Illinois Auditors.

A possible risk of your participation in this research is that the information about you might become known to people outside the research team. To ensure your privacy and confidentiality, all data collected as part of this study will be coded, password protected, and stored in a secure server. When the results of the research are published or discussed in conferences, no information will be included that would reveal your identity.

Please be aware that, if you disclose actual or suspected abuse, neglect, or exploitation of a child, or disabled or elderly adult, the researcher or any member of the study staff must, and will, report this to Child Protective Services (i.e. Department of Family and Human Services), Adult Protective Services, and/or the nearest law enforcement agency.

What are the costs for participating in this research?

There are no costs to you for participating in this study.

Will I be reimbursed or paid for my participation in this research?

You will receive a $5.00 Target gift card upon completion of the follow-up phone interview. You will receive the gift card via email within approximately 7 days following the interview. If you are not able to complete the phone interview, or withdraw from the study prior to the interview, you will not be compensated for your time.

Can I withdraw or be removed from the study?

If you decide to participate, you are free to withdraw your consent and discontinue participation at any time. If possible, please notify the primary investigator (Evguenia Popova, epopov3@uic.edu) of your decision to discontinue your participation as soon as possible. You have the right to leave a study at any time without penalty. In addition, the researchers also have the right to stop your participation in this study without your consent if it is determined that you no longer meet the criteria specified for inclusion in the study.

Who should I contact if I have questions?

Contact the researchers (Evguenia Popova, epopov3@uic.edu OR Renee Taylor, rtaylor@uic.edu):

APPENDIX P (continued)

- If you have any questions about this study or your part in it
- If you have questions, concerns or complaints about the research

What are my rights as a research subject?

If you feel you have not been treated according to the descriptions in this form, or if you have any questions about your rights as a research subject, including questions, concerns, complaints, or to offer input, you may call the Office for the Protection of Research Participants (OPRS) at 312-996-1711 or 1-866-789-6215 (toll-free) or e-mail OPRS at uicirb@uic.edu.

What if I am a UIC employee?

Your participation in this research is in no way a part of your university duties, and your refusal to participate will not in any way affect your employment with the university, or the benefits, privileges, or opportunities associated with your employment at UIC. You will not be offered or receive any special consideration if you participate in this research.

Remember:

Your participation in this research is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University. If you decide to participate, you are free to withdraw at any time without affecting that relationship.

Signature of Subject

I have read (or someone has read to me) the above information. I have been given an opportunity to ask questions and my questions have been answered to my satisfaction. I agree to participate in this research. I will be given a copy of this signed and dated form.

_____ _____
Signature Date

_____
First Name

_____
Last Name

_____
Email

_____
Phone Number

_____ _____
Signature of Person Obtaining Consent Date (must be same as subject's)

_____
Printed Name of Person Obtaining Consent

VITA

LICENSURE

- Licensed Occupational Therapist, State of Illinois, September 2015 – Current
    - Early Intervention Credential – May 2016 – Current

EDUCATION

- PhD Candidate, Rehabilitation Sciences, University of Illinois at Chicago, *expected* December 2019
- Master of Science, Occupational Therapy, University of Illinois at Chicago, July 2015
- Bachelor of Arts, Psychology, with a Minor in Education, University of California, Berkeley, May 2010

PUBLICATIONS

Taylor, R. R. & Popova, E. S. (in-press). Evaluating Client-Provider Communication in Acute Care and Acute Inpatient Rehabilitation: Clinical Assessment of Modes-Therapist. *American Journal of Occupational Therapy.*

Popova, E. S., & Taylor, R. R. (in-press). Evaluating Students' Therapeutic Use of Self: Structural Validity of the Clinical Assessment of Modes. *American Journal of Occupational Therapy.*

Popova, E. S., & Taylor, R. R. (2019). Reliability and validity of the Clinical Assessment of Sub-optimal Interaction in outpatient pediatric rehabilitation. Occupational Therapy in Mental Health. https://doi.org/10.1080/0164212X.2019.1666771

Popova, E. S., Ostrowski, R. K., Wong S. R., & Taylor, R. R. (2019). Reliability and validity of the Clinical Assessment of Modes in outpatient pediatric rehabilitation. *British Journal of Occupational Therapy, 0*(0), 1–9. https://doi.org/10.1177/0308022619868091

Popova, E. S., Ostrowski, R. K., Wescott, J., & Taylor, R. R. (2019). Development and validation of occupational self assessment – short form (OSA-SF). *American Journal of Occupational Therapy. 73(3).* 7303205020p1-7303205020p10. https://doi.org/10.5014/ajot.2019.030288

Popova, E. S., & Wescott, J. (2019). Art as occupation: Promoting the occupational therapy role in evaluating community-based programs. *SIS Quarterly: Practice Connections, 4*(1), 5-7. Retrieved from https://www.aota.org/

Fan, C. W., Keponen, R., Piikki, S., Popova, E.S., & Taylor R. R. (2019). Volitional questionnaire: Psychometric evaluation of the Finnish translation. *Scandinavian Journal of Occupational Therapy.* https://doi.org/10.1080/11038128.2019.1572786

Fan, C. W., Keponen, R., Piikki, S., Tsang, H., Popova, E.S., & Taylor R. R. (2018). Psychometric evaluation of the Finnish translation of the assessment of communication and interaction skills (ACIS-FI). *Scandinavian Journal of Occupational Therapy.* https://doi.org/10.1080/11038128.2018.1483425

Bonder, B.R., Taylor, R.R., & Popova, E.S. (2018). *Theories of aging: A multidisciplinary review for occupational and physical therapists.* In B.R. Bonder & V. Dal Bello-Haas (Eds.), Functional Performance in Older Adults (4th edition). Philadelphia, PA: F.A. Davis.

RESEARCH EXPERIENCE

PhD Candidate – University of Illinois at Chicago, Chicago, IL
PhD Program in Rehabilitation Sciences, August 2015 – Current

- Under the mentorship and supervision of doctoral advisor Dr. Renee Taylor, and committee chairs (Dr. Joy Hammel, Dr. Jane O'Brien, Dr. Mary Khetani, and Dr. Michelle Bulanda) developed and conducted a two-phase study.
- In phase one, examined therapists' communication and interpersonal approaches to family-centered care, and its impact on family participation from the perspectives of therapists and families in Early Intervention.
- In phase two, developed, delivered, and evaluated a five-week continuing education course for an interdisciplinary team of therapists and families in Early Intervention. Taylor's Intentional Relationship Model (IRM) and transformative learning theory guided the curriculum development. The course consisted of in-person and online components, including a seven-part video curriculum developed specifically for the course.

Graduate Research Assistant – University of Illinois at Chicago, Chicago, IL
Model of Human Occupation Clearinghouse, January 2014 – Current

- Lab manager under the supervision of primary investigator Dr. Renee Taylor:
    - Contribute to all stages of research design and implementation including literature review, protocol development, maintenance of institutional review board approval, data collection, data coding, data analysis, and manuscript writing.
    - Provide supervision and mentorship to a team of undergraduate and graduate research assistants.
- Provide customer support for Model of Human Occupation (MOHO) Clearinghouse customers; collaborated with international team of MOHO researchers and practitioners on updating MOHO assessment and intervention tools.
- Serve as a MOHO representative at the American Occupational Therapy Association (AOTA) national conference.
- Serve on the institute planning community during the 4th, 5th, and 6th International Institute on Kielhofner's MOHO.

Research Assistant Level III - University of California Berkeley, Berkeley, CA
Joseph J. Campos Infancy Lab, February 2009 – May 2010

- As a research assistant under the supervision of primary investigator Dr. Irena Keller:
    - Assisted with the Infant Sleep and Parental Attitudes project that culminated in a senior honors thesis examining a relationship between father involvement during

early infancy and parental attitudes, parental self-efficacy, infant locomotion, and infant emotional reactivity.
- Conducted, transcribed, and coded interviews exploring child development and parenting experiences.
- Prepared data, assisted with data reconciliation, and performed data analysis using SPSS.
- Provided mentorship and training for incoming undergraduate research assistants.

TEACHING EXPERIENCE – GRADUATE LEVEL

Co-Instructor – University of Illinois at Chicago, Chicago, IL
Master of Science in Occupational Therapy Program - Fall 2016 – Current
- Contribute to curriculum development and student evaluation for a semester-long course titled *Development of a Therapeutic Self.* Content topics include: Taylor's Intentional Relationship Model, motivational interviewing, and group planning and leadership.
- Deliver three, two-hour lectures on the role of client-therapist relationship in delivery of client-centered care. Evaluate evidence-based strategies and interpersonal reasoning process for: developing and maintaining the therapeutic relationship, responding to challenging interpersonal events, managing challenging interpersonal behaviors, and responding to interpersonal conflict.
- Facilitate weekly two-hour lab groups designed to promote students' knowledge related to therapeutic use of self through small and large group discussion, role-play, and guided self-reflection.

Facilitator – University of Illinois at Chicago, Chicago, IL
Interprofessional Education (IPE) Immersion Program, *College of Applied Health Sciences Program – Spring 2018 – 2019*
- Facilitated a discussion between an interdisciplinary group of graduate students in the College of Applied Health Sciences regarding the promise and challenges of interprofessional collaboration and communication.

Guest Lecturer – University of Illinois at Chicago, Chicago, IL
Post-professional Occupational Therapy Doctorate Program
- Popova, E. S. (2018, October 31). *Development and evaluation of community-based programs for young adults with developmental disabilities.* One-hour lecture in the course titled *Program Evaluation.*

Master of Science in Occupational Therapy Program
- Popova, E. S. (2019, February 1). *Behavioral Management and Intervention Strategies.* Two-hour lecture in the course titled *Psychosocial Aspects of Occupational Performance.*

- Popova, E. S. (2018, November 2). *Sensory Integration: Interventions and Strategies for Sensory Behaviors.* Two-hour lecture in the course titled *Cognition and Perception in Action.*

- Popova, E. S. (2018, February 1). *Behavioral Management and Intervention Strategies.* Two-hour lecture in the course titled *Psychosocial Aspects of Occupational Performance.*

- Popova, E. S. (2017, November 6). *Sensory Integration: Interventions and Strategies for Sensory Behaviors.* Two-hour lecture in the course titled *Cognition and Perception in Action.*

- Popova, E. S. (2017, February 7). *Behavioral Management and Intervention Strategies.* Two-hour lecture in the course titled *Psychosocial Aspects of Occupational Performance.*

- Popova, E. S. (2016, December 2). *Supporting Families in Management of Challenging Behaviors.* Guest lab facilitator in the course titled *Cognition and Perception in Action.*

Guest Panelist – Rush University, Chicago, IL
Occupational Therapy Doctorate Program
- Popova, E. S. (2019, March 28). *The Culture of Pediatric Occupational Therapy.* Guest presenter on a clinical panel in the course titled *Sociocultural Aspects of Care*.

- Popova, E. S. (2018, March 13). *The Culture of Pediatric Occupational Therapy.* Guest presenter on a clinical panel in the course titled *Sociocultural Aspects of Care*.

Guest Lecturer – Midwestern University, Chicago, IL
Occupational Therapy Doctorate Program
- Popova, E. S. (2018, October 3). *Establishing and Maintaining the Therapeutic Relationship.* Three-hour lecture in a course titled *Therapeutic Communication*.

- Popova, E. S. (2017, October 6). *Establishing and Maintaining the Therapeutic Relationship.* Three-hour lecture in a course titled *Therapeutic Communication*.

TEACHING EXPERIENCE – UNDERGRADUTE LEVEL

Guest Lecturer – University of Illinois at Chicago, Chicago, IL
Bachelor of Rehabilitation Sciences Program
- Popova, E. S. (2019, March 22). *Occupational Therapy Role in Research and Community Practice.* One-hour lecture in a course titled *Introduction to Occupational Therapy: Occupation and Participation Across the Life Span.*

- Popova, E. S. (2018, November 16). *Introduction to Sensory and Behavioral Interventions.* Three-hour lecture in a course titled *Pediatric Rehabilitation*.

- Popova, E. S. (2018, November 9). *Introduction to Therapeutic Use of Self: The Intentional Relationship Model.* Two-hour lecture in a course titled *Pediatric Rehabilitation*.

- Popova, E. S. (2018, September 21). *Occupational Therapy Role in Research and Community Practice.* One-hour lecture in a course titled *Introduction to Occupational Therapy: Occupation and Participation Across the Life Span.*

- Popova, E. S. (2018, April 6). *Occupational Therapy Role in Research and Community Practice.* One-hour lecture in a course titled *Introduction to Occupational Therapy: Occupation and Participation Across the Life Span.*

- Popova, E. S. (2017, November 17). *Introduction to Sensory and Behavioral Interventions.* Two-hour lecture in a course titled *Pediatric Rehabilitation*.

- Popova, E. S. (2017, October 20). *Introduction to Therapeutic Use of Self: The Intentional Relationship Model.* One-hour lecture in a course titled *Pediatric Rehabilitation*.

- Popova, E. S. (2016, June 6). *Occupational Therapy Role in Research and Community Practice.* One-hour lecture in a course titled *Introduction to Occupational Therapy: Occupation and Participation Across the Life Span.*

PRESENTATIONS

- Januszewski, C., Popova, E. S., & Taylor, R. R. (2019, September 14). *Preventing Burnout: Successfully Responding to Challenging Behaviors and Interpersonal Events in Practice.* Short course presentation at the American Occupational Therapy Association Mental Health and Opioids Specialty Conference, Chicago, IL.

- Popova, E. S., & Taylor, R. R. (2019, July 28). *Maximizing Child Participation Through Parent-Child Interaction: Empowering Parents' Use of Self.* Short course at American Occupational Therapy Association Specialty Conference: Children and Youth, Orlando, FL.

- Popova, E. S., & Taylor, R. R. (2019, April 4). *Supporting child engagement in outpatient pediatrics: The intentional relationship model.* Poster presentation at American Occupational Therapy Association Annual National Conference, New Orleans, LA.

- Popova, E. S. (2018, November 23). *Advanced application of the Intentional Relationship Model in outpatient pediatrics.* As an invited trainer, facilitated a two-hour professional development training at Eyas Landing, Inc., Chicago IL.

- Popova, E. S., Ostrowski, R. K., Wescott, J., & Taylor, R. R. (2018, November 30). *Development and validation of the occupational self assessment-short form.* Poster presentation at the American Occupational Therapy Association Adult Specialty Conference, Los Angeles, CA.

- Popova, E. S., Januszewski, C., & Taylor, R. R. (2018, November 30). *Promoting positive client outcomes through interpersonal reasoning using the intentional relationship model (IRM).* Short course presentation at the American Occupational Therapy Association Adult Specialty Conference, Los Angeles, CA.

- Wescott, J., & Popova, E. S. (2018, September 29). *Development and evaluation of community-based programs for young adults with developmental disabilities.* Short course presentation at the American Occupational Therapy Association Pediatric Specialty Conference, Milwaukee, WI.

- Boyer, S., & Popova, E. S. (2018, September 22). *MOHO and martial arts: Informing OT practice through karate practice.* Short course presentation at the Illinois Occupational Therapy Association Annual State Conference, Lisle/Naperville, IL.

- Duffy, L., Rosen, A., Popova, E. S., & Wescott, J. (2018, September 22). *Promoting self-determination and community integration in young adults with intellectual and developmental disabilities.* Short course presentation at the Illinois Occupational Therapy Association Annual State Conference, Lisle/Naperville, IL.

- Januszewski, C., Popova, E. S., Lee, J., & Taylor, R. R. (2018, September 22). *Promoting positive client outcomes through interpersonal reasoning using the intentional relationship model (IRM).* Short course presentation at the Illinois Occupational Therapy Association Annual State Conference, Lisle/Naperville, IL.

- Popova, E. S., Ostrowski, R. K., & Taylor, R. R. (2018, September 21). *Supporting child and family engagement in outpatient pediatrics using the intentional relationship model (IRM).* Short course presentation at the Illinois Occupational Therapy Association Annual State Conference, Lisle/Naperville, IL.

- Januszewski, C., Popova, E. S., & Taylor, R. R. (2018, June 16). *Promoting active patient participation in rehabilitation.* Poster presentation at the Psychiatric Rehabilitation Association 41st Annual Wellness and Recovery Summit, Denver, CO.

- Januszewski, C., & Popova, E. S. (2018, May 22). *Supporting client-centered practice through critical self-reflection: the intentional relationship model.* World Federation of Occupational Therapy, Cape Town, South Africa.

- Januszewski, C., Popova, E. S., Lee, J., & Taylor, R.R. (2018, April 21). *Supporting client engagement in rehabilitation through critical self-reflection: The intentional relationship model.* Short course presentation at American Occupational Therapy Association Annual National Conference, Salt Lake City, UT.

- Popova, E. S., Wescott, J., Ostrowski, R. K. (2018, April 20). *Development and evaluation of community-based programs for young adults with developmental disabilities.* Short course presentation at American Occupational Therapy Association Annual National Conference, Salt Lake City, UT.

- Popova, E. S., Melling, A., Win, M., & Colangelo, J. (2018, April 19). *Interdisciplinary, community-based group for families with young children with Down syndrome.* Poster presentation at American Occupational Therapy Association Annual National Conference, Salt Lake City, UT.

- Popova, E. S., Ostrowski, R. K., Wescott, J., & Taylor, R. R. (2018, April 19) *Development and validation of the occupational self assessment-short form.* Poster presentation at American Occupational Therapy Association Annual National Conference, Salt Lake City, UT. *[The poster was selected for Young Scientist Theater presentation.]*

- Popova, E. S., Ostrowski, R. K., Wescott, J., & Taylor, R. R. (2017, November 11). *Development and validation of the occupational self assessment – short form.* Poster presentation at Illinois Occupational Therapy Association Annual State Conference, Bloomington/Normal, IL.

- Popova, E. S., Melling, A., Win, M., & Colangelo, J. (2017, November 11). *Interdisciplinary, community-based group for families with young children with Down syndrome.* Short course at the Illinois Occupational Therapy Association Annual State Conference, Bloomington/Normal, IL.

- Wescott., J., Ostrowski, R. K. McNamara, N., Brumm, S., & Popova, E. S. (2017, November 9). *Program evaluation and development of community based groups for adolescents and young adults with Down syndrome.* Short course at the Illinois Occupational Therapy Association Annual State Conference, Bloomington/Normal, IL.

- Popova, E. S., Januszewski, C., & Lee, J. (2017, October 27). *Evaluation of students' therapeutic use of self using the clinical assessment of modes (CAM).* Research panel presentation at the American Occupational Therapy Association Education Summit, Fort Worth, TX.

- Popova, E. S., & Januszewski, C. (2017, October 21). *The intentional relationship model: From classroom to practice.* Invited speaker at the Consortium of Psychiatric Rehabilitation Educators (CPRE) Symposium, Rush University & University of Illinois, Chicago, IL.

- Popova, E. S., Ostrowski, R. K., Wescott, J., & Taylor, R. R. (2017, October 13). *Guiding client-centered goal setting using the occupational self assessment.* Presentation at the 5th International Institute on Kielhofner's Model of Human Occupation, MD Anderson Cancer Center, Houston, TX.

- Popova, E. S., Ostrowski, R. K., Wescott, J., & Taylor, R. R. (2017, October 13). *Development and validation of the occupational self assessment – short form.* Poster presentation at the 5th International Institute on Kielhofner's Model of Human Occupation, MD Anderson Cancer Center, Houston, TX.

- Popova, E. S., & Taylor, R. R. (2016, October 28). *The role of patient-provider interpersonal communication in facilitating patient participation in inpatient rehabilitation.* Short course presentation at the Illinois Occupational Therapy Association Annual State Conference, Lisle/Naperville, IL.

- Popova, E. S. (2015, February 16). *Maximizing client engagement and treatment adherence in acute care.* In-service presentation to multidisciplinary team of professionals on evidenced based approach to supporting active client engagement in acute care, University of Chicago Medical Center, Chicago, IL.

- Chan, S. Oldenberg, J., & Popova, E. S. (2014, November 5). *Constraint-induced movement therapy and intensive bimanual training therapy approaches to treatment of unilateral hemiplegia in children with cerebral palsy*. Poster presentation at College of Applied Health Sciences Research Day, Chicago, IL.

- Chan, S. Oldenberg, J., & Popova, E. S. (2014, October 25). *Constraint-induced movement therapy and intensive bimanual training therapy approaches to treatment of unilateral hemiplegia in children with cerebral palsy.* Poster presentation at Illinois Occupational Therapy Association Annual State Conference, St. Charles, IL.

- Chan, S. Oldenberg, J., & Popova, E. S. (2014, September 18). *Constraint-induced movement therapy and intensive bimanual training therapy approaches to treatment of unilateral hemiplegia in children with cerebral palsy.* Poster presentation at Aspire Kids, Hillside, IL.

CLINICAL EXPERIENCE

Occupational Therapist - Early Intervention
Child and Family Development Clinic, Chicago, IL, February 2017 – Current
Purposeful Play, Inc., Chicago, IL, May 2016 – Current

- Collaborate with families of children with developmental disabilities (0-3 years) and the interdisciplinary team of early childhood providers on development and implementation of the occupational therapy treatment plan.
- Assess and evaluate progress using standardized assessments (Peabody Developmental Motor Scales, Sensory Profile, Short Child Occupational Profile, Pediatric Volitional Questionnaire, etc.), observation, and parent interview to ensure evidence-informed treatment planning and tracking of therapeutic outcomes.
- Supervise and mentor graduate and undergraduate students and volunteers.

Fieldwork 2B Student - Inpatient Pediatric Rehabilitation
Rehabilitation Institute of Chicago, Chicago, IL, April–June 2015

- Evaluated and treated a diverse population of pediatric patients (0-18 years); commonly treated diagnoses included cerebral palsy, traumatic brain injury, spinal cord injury, and failure to thrive; collaborated with families and multidisciplinary rehabilitation teams during discharge planning; implemented intervention strategies to support patient participation during self-care and play activities through aquatic therapy.
- Contributed to The Battery of Rehabilitation Assessments and Interventions (BRAIN) by conducting a literature review of validity, reliability and clinical utility of Motor-Free Visual Perception Test – 3 (MVPT-3) within inpatient pediatric settings.

Fieldwork 2A Student - Acute Care
University of Chicago Medical Center, Chicago, IL, January–March 2015

- Evaluated and treated patients (21-98 years) admitted to hematology/oncology and neurology/neurosurgery acute care units; provided patient education to support participation and independence during self-care activities; fabricated protective splints; provided patient and caregiver training in home-exercise programs to support rehabilitation and safety upon discharge; contributed to discharge planning within a multidisciplinary team of healthcare providers.
- Conducted a literature review, developed a case study, and delivered an in-service presentation for a multidisciplinary rehabilitation team on maximizing patient engagement and treatment adherence in acute care.

Fieldwork 1B/C Student - Community Mental Health
Thresholds, Chicago, IL, July 2014

- In collaboration with an interdisciplinary Assertive Community Treatment (ACT) team, provided community-based, mental health services to individuals with mental health diagnoses transitioning out of a nursing home and towards independent living in the community; provided individual treatment targeted at increasing individuals self-efficacy and

independence during Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL).
- Designed and implemented community-based IADL groups for individuals at Thresholds New Freedom Center; groups focused on development of self-management, self-advocacy and action planning.

Fieldwork 1A Student - Intermediate Care Facility Mental Health
Margaret Manor North, Chicago, IL, March – April 2014
- Designed and implemented IADL groups for individuals with mental health diagnoses transitioning from the Intermediate Care Facility (ICF) to independent community living; groups targeted increasing self awareness of individual strengths and barriers during the transition process and improved action planning skills to support independence and participation in IADL.

OTHER WORK EXPERIENCE

Content Marketing – BlackBerry World
BlackBerry Limited, Sunnyvale, CA, February 2012 – December 2013
- Led and managed a team of content merchandizers to ensure consistent marketing and merchandizing of content on North American and global storefronts.
- Collaborated with North American and global business development teams to ensure consistent featuring of strategic partner content; developed and implemented weekly and seasonal promotions of partner content on North American mobile storefronts; performed analysis of marketing strategy and performance.

In-home Support for Children on the Autism Spectrum
Self-employed, San Jose, CA, October 2011 – July 2013
- Provided in-home support to children (5-9 years) diagnosed with autism spectrum disorder; supported participation in age-appropriate play and school preparatory activities.

Executive Assistant
Cellmania Inc., acquired by Research In Motion, Sunnyvale, CA, August 2005 – February 2012
- Organized and prepared legal documents; proposed and implemented processes to increase efficiency during contract filing and retrieval; prepared quarterly reports and documentations for auditors, investors and partners.

Therapist - Applied Behavioral Analysis (ABA)
I Can Too! Learning Center, San Jose, CA, May 2010 – September 2011
- Provided ABA services to children (2-9 years) diagnosed with the autism spectrum disorder.
- Intervention methods included play-based approaches and naturalistic teaching strategies, relationship development intervention (RDI) based games, discrete trial teaching (DTT), picture exchange communication systems (PECS), pivotal response training (PRT), and other social skills training techniques.

COMMUNITY SERVICE

Board of Managers – GiGi's Playhouse - Chicago
Vice President - Chicago, IL, January 2019 – Current
- Supervise and mentor the Director of the GiGi's Playhouse – Chicago; conduct organization and program level needs assessment and program evaluation to identify and address gaps in programing and organizational structure.

Chair of Programs - Chicago, Chicago, IL, November 2015 – Current
- Establish an interdisciplinary therapeutic programs committee.
- Establish partnerships with community-based (North Centre Chamber of Commerce) and academic organizations (University of Illinois at Chicago, Rush University, Northwestern University, Chicago State University).
- Establish and monitor long-term and short-term goals for educational and therapeutic programs; conduct program level evaluation to ensure sustainability and quality of programming.

Volunteer – Therapeutic Programs
GiGi's Playhouse - Chicago, Chicago, IL, January 2014 – Current
- Collaborated with an interdisciplinary team of volunteers (occupational, physical, and speech therapists and students) to establish 11 therapeutic programs for young children, adolescents, and adults with Down syndrome.
- Supervised and mentored undergraduate and graduate student volunteers to ensure evidenced-based and purposeful therapeutic programing across the age-span, including:
    - Leadership Education in Neurodevelopmental and Related Disabilities (LEND) Program at University of Illinois at Chicago
    - Health and Diversity and Academy Fellows at University of Illinois at Chicago
    - Doctoral students in occupational therapy during an advanced clinical practicum
    - Masters students in occupational therapy during Fieldwork Level 1A
- Supervised and mentored graduate students in program evaluation and knowledge dissemination through presentation of existing efforts at state and national conferences.

Volunteer – Program Evaluation Consultant
New Focus – Anixter Center, Chicago, IL, September – December 2015
- In collaboration with a multidisciplinary leadership team, developed a program evaluation plan for the New Focus – Traumatic Brain Injury day-rehabilitation program.

Volunteer – Pediatric Transitional Care
Almost Home Kids, Chicago, IL, October 2013 – December 2015
- Developed and implement play-based activities for young children and adolescents with complex medical needs.

Volunteer – Outpatient Occupation Therapy
Trumpet Behavioral Health, San Jose, CA, October 2011 – March 2013
- Assisted the primary occupational therapist with activity setup during fine and gross motor tasks.

Volunteer – Pediatric Rehabilitation Center
Oakland Children's Hospital, Oakland, CA, September 2009 – May 2010
- Assisted occupational and physical therapists during inpatient and outpatient therapy sessions with a wide age-range of clients (premature infants to adolescents); prepared and set up equipment, filed medical records.

Volunteer – Classroom Assistant/Tutor
Saint Martin de Porres Elementary, Oakland, CA, September 2009 – May 2010
- Worked with 3rd grade students during class time activities in language arts, mathematics, and social studies; assisted students (K-5) with homework completion and participation in extracurricular activities.

Volunteer – Kids Club Facilitator
Next Door Solutions to Domestic Violence, San Jose, CA, August 2008 – February 2010
- Developed and implemented recreational activities for preschool and school-aged children (2-15 years); provided childcare services at a safe-home site for young children and adolescents (2-18 years).

EXTERNAL SERVICE
- Invited Reviewer – *British Journal of Occupational Therapy*, April 2019 - Current

AWARDS, HONORS and ACHIEVEMENTS
- "Raise the Baar "Service Award, GiGi's Playhouse – Chicago, December 2019
- Applied Health Sciences Community Partner Award on behalf of GiGi's Playhouse Chicago, University of Illinois at Chicago, May 2018
- Urban Allied Health Academy Fellow, University of Illinois at Chicago, July 2015
- Dean's Honor List, University of California, Berkeley, Fall 2008 through May 2010
- Highest Distinction Honors in Psychology, University of California, Berkeley, May 2010
- Highest Distinction Honors in General Scholarship, University of California, Berkeley, May 2010

CERTIFICATION and TRAINING
- Autism Diagnostics Schedule, 2nd Education (ADOS-2) training, April 2019
- Certified Leader of Stanford's Chronic Disease Self Management Program (CDSMP), January 2014
- Professional Assault Crisis Training (Pro-ACT), August 2011
- Level I Certificate: Introduction to Pivotal Response Treatment (PRT), August 2011

PROFESSIONAL AFFILIATIONS
- Illinois Occupational Therapy Association (ILOTA), August 2013 – Current
- American Occupational Therapy Association (AOTA), August 2013 – Current