

Challenges and contributors to self-efficacy for caregivers of toddlers with autism

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Hannah H Schertz^{id}, Jessica Nina Lester, Emine Erden, Selin Safran and Penny Githens

Abstract

In this qualitative study, 11 mothers of toddlers with autism participated in interviews to investigate how they perceived their roles and their competency to support toddlers' social learning in the context of both professional-implemented and parent-mediated early intervention models. The authors conducted a thematic analysis with multiple layers of independent coding. Four resulting themes highlighted challenges and contributors to parent self-efficacy. First, related to child characteristics, challenges were most prominent in the early period as participants adjusted to the diagnosis and reached to connect when social difficulties emerged. Second, having a peripheral role in early intervention challenged participants' confidence in their abilities, while receiving guidance to assume an active leadership role supported their sense of efficacy for facilitating toddlers' social learning. In a third theme, participants described specific and general examples of their expertise. Fourth, participants considered the transactional context of parent-child interaction and largely viewed their toddlers' independent wills, natures, and preferences as strengths upon which to build social engagement. The results support the need for early interventionists to promote and leverage family capacity for facilitating toddler learning as social challenges begin to appear for toddlers with autism.

Lay Abstract

Parent-participatory early intervention practices are linked to parents' positive views of their own and their children's capabilities, beliefs that are associated with a range of parent and child outcomes. A qualitative study was conducted with 11 mothers of toddlers with autism who had experience with both professionally directed and parent-mediated early intervention. Participants were interviewed to explore their perspectives on their roles in relation to professionals and on how they viewed their ability to support their toddlers' social learning. An in-depth analysis of the transcribed interviews resulted in four themes. First, in the early stages, participants experienced challenges to their self-efficacy as they adjusted to the diagnosis and reached to connect with their child when social challenges emerged. Second, participants' views of their capability were stronger when they were provided with background knowledge enabling them to take the lead in guiding their children's learning than when professionals modeled predetermined intervention strategies for them to copy. Third, participants provided specific examples of their expertise to support their toddlers' social learning and viewed their close parent-child relationship and intimate knowledge of their children as valuable to the intervention. Fourth, participants voiced respect for their toddlers' natures and preferences, positioning them to build on their toddlers' strengths in everyday interactions. The results support the need for early intervention providers to promote and leverage family capacity for facilitating toddler learning as social challenges begin to appear for toddlers with autism.

Keywords

autism spectrum disorders, family functioning and support, pre-school children, qualitative research, social cognition and social behavior

The early social challenge of autism in toddlers, which can test parents' confidence as they seek to elicit interaction (Meirsschaut et al., 2010), in turn provides a challenge for early intervention. A central purpose of early intervention is to build family capacity (IDEA, 2004), defined as

Indiana University, USA

Corresponding author:

Hannah H Schertz, Department of Curriculum & Instruction, Indiana University, 201 N Rose Avenue, Bloomington, IN 47405, USA.
Email: hschertz@indiana.edu

participatory experiences to promote parenting abilities that, in parallel, enhance parenting self-efficacy (Division for Early Childhood, 2014). By this definition, parenting self-confidence is linked to opportunities that recognize, enhance, and engage their expertise, commensurate with Bandura's (1997) theory of self-efficacy as generative—that one comes to understand and value one's own capabilities through active participation in domain-specific learning. Given the early core social communication concern in autism (American Psychological Association, 2013), the relevant learning domain for parents of toddlers with autism is promoting interactive engagement. The research reported here explores caregivers' perspectives on how intervention and related factors impact their self-efficacy to facilitate their toddlers' social learning.

Although relational and family-participatory approaches are associated with parents' positive views of child capabilities and their own self-efficacy (Brown & Woods, 2016; Carr et al., 2015; Dunst et al., 2006), reported early intervention practices were often professionally directed and non-participatory, limiting parents' opportunities to develop a sense of personal agency (Kemp & Turnbull, 2014). In intervention studies of toddlers with autism, family outcomes were largely unreported or inconclusive (Beaudoin et al., 2014) and practitioner attention to family-centered approaches, family quality of life, and parent self-efficacy also remain limited (Wainer et al., 2017).

A review of the broader literature (T. L. Jones & Prinz, 2005) found direct and indirect associations between parent self-efficacy beliefs and child functioning in infant interactive behavior, child anxiety, and a variety of adolescent indicators. In toddler research, Coleman and Karraker (2003) found that parent self-efficacy was positively associated with toddler outcomes in affection, compliance, and enthusiasm and was negatively associated with avoidance and negativity. For parents of older children with Asperger syndrome, intervention targeting self-efficacy was found to result in reduced child problem behaviors compared with controls (Sofronoff & Farbotko, 2002).

Relationships between self-efficacy and parent outcomes were also explored. Parent-focused intervention for children with autism was associated with improved parent efficacy (Conti, 2015). Coleman and Karraker (2003) also found that parents' understanding of their own competence, in combination with child variables, predicted parenting satisfaction. A number of other studies explored relationships between parent self-efficacy and stress indicators for parents of children with autism. Hastings and Brown (2002) reported that self-efficacy beliefs mediated effects of child behavior problems on mothers', but not fathers', anxiety and depression, and other research found associations between parents' self-efficacy and their well-being, agency, and feelings of guilt (Kuhn & Carter, 2006; Meirsschaut et al., 2010). These reported associations of parent self-efficacy with child and parent outcomes suggest that it may play a pivotal role in maximizing early intervention's effects.

An alternative to professionally directed models is professionally supported parent-mediated intervention that harnesses the parent-child relationship and parents' intimate knowledge of toddler strengths and interests (Schertz & Horn, 2017). Certain features of parent-mediated intervention have been found to impact outcomes for families and their young children with autism. Specifically, professionals' asset-based attitudes, defined as orientation to family strengths, were linked to positive family experiences (Coogle & Hanline, 2016) and non-directive collaborative approaches to parent education resulted in positive child outcomes (e.g. Baranek et al., 2015; Kasari et al., 2015; Klein, 2003; Schertz et al., 2018; Watson et al., 2017; Wetherby et al., 2014). Parent-mediated approaches have been recommended and successfully implemented across wide-ranging socioeconomic circumstances (e.g. Guler et al., 2017; Klein, 1996).

The Institute of Medicine and National Research Council (2012) recommended a shift from evidence testing of intervention models as a whole toward understanding particular features of successful approaches, a need also identified in a review of parent-mediated intervention for young children with autism (Trembath et al., 2019). For families of toddlers with autism, exploring parents' perspectives directly could expand the field's knowledge of factors that contribute to or detract from parent self-efficacy during the formative period when autism first becomes recognizable. Notably, qualitative research has been described as important in its potential to "refine understandings of particular issues" and generate "valuable evidence" (O'Reilly et al., 2016, p. 355). More particularly, qualitative analysis of focused interviews may reveal nuances of parents' perspectives not discernable through other inquiry methods, such as surveys. Presenting parents' perspectives could provide an authentic view of underlying influences impacting their beliefs, guide future research on family capacity-building practices, and inform professionals how they might best support parent learning.

Accordingly, the purpose of this study was to explore qualitatively how caregivers of toddlers with autism viewed their competencies related to their toddlers' learning. We had a particular interest in participants' perspectives on their promotion of toddlers' social engagement with the world and how they viewed their efforts in relation to professionals. Our overarching research question was, "How do participants' experiences undermine or support their perceived ownership of the parent-child social learning process and confidence in their efficacy to support child learning?"

Methods

This qualitative study consisted of in-depth interviews with participants who were currently enrolled in a larger investigation that explored the effects of the Joint Attention Mediated Learning intervention. This randomized controlled

Table 1. Participant characteristics.

ID	Parent age	Partner status	Employment status	Parent education	Family income	Child age, months	No. of siblings	Child gender	EI tenure, months	PMI tenure, months
1	27	Lives with partner	FT	Some college	40,000–45,000	29	0	M	5	3
2	37	Married	FT	BA	38,891–40,000	27	2	M	3–6	3
3	28	Married	Not employed	Some college	Over 100,000	23	0	M	3–6	3
4	45	Married	FT	Bachelor's degree	75,000–99,999	25	1	F	5–6	3
5	31	Married	Not employed	Some college	50,000–59,999	35	1	M	3–4	2
6	28	Married	<20 h/week	Bachelor's degree	Over 100,000	23	1	M	4	2
7	25	Married	FT	Some college	11,171–15,130	28	0	M	>6	3
8	30	Married	FT	Bachelor's degree	60,000–74,999	25	0	F	>6	3
9	33	Married	FT	Graduate degree	Over 100,000	24	0	F	3	3
10	30	Married	Not employed	Graduate degree	Over 100,000	27	0	F	>6	4
11	33	Never married	<20 h/week	Graduate degree	11,171–15,130	33	0	M	>6	3

EI: early intervention; PMI: parent-mediated intervention; FT = full-time.

trial implemented parent-mediated intervention to promote social communication at the preverbal level for toddlers with autism using a mediated learning approach to facilitate active engagement by both parents and toddlers (Schertz et al., 2018). For the current study, we drew upon thematic analysis as both a methodological and analytical framework (Braun & Clarke, 2006; O'Reilly & Kiyimba, 2015). Human subject protections were assured through the Internal Review Board informed consent process.

Researcher roles

Throughout this study, we acknowledged our multiple, intersecting identities (Fine, 1994) and diverse backgrounds and perspectives. The first author's previous research emphasized the parent's role in promoting toddlers' social communication and the capabilities they bring to the task. This research included the larger study from which participants for the current study were recruited, a factor that may have influenced analytic interpretations but which was balanced by the second author's credibility monitoring role. The second author brought expertise in qualitative methods applied to disability studies and the third and fourth authors conducted previous qualitative research related to families of individuals with autism. The fifth author, a mother of a young adult on the autism spectrum, brought additional knowledge from her interviews with participants. The first, second, and fifth authors' backgrounds as middle-class Caucasian parents framed their interpretations while the third and fourth authors' multicultural backgrounds contributed cultural breadth and depth. We conducted the data analysis by maintaining a reflexive stance as described by Pillow (2003), regularly chronicling ideas generated from our personal perspectives in the form of memos, conducting meetings and interchanges to share analytic ideas, and posing questions aimed at unearthing presuppositions and deepening the analytic process.

Participants

Families of toddlers aged 16 to 30 months with social communication challenges were recruited from community-based early intervention systems for the larger intervention study. That study, which was conducted in rural, suburban, and urban settings in one southeastern and two midwestern states, included 144 participants over the duration of a 4-year period. The current study was conducted as the larger study was nearing completion, at which time 15 potential participants remained, all of whom were invited to participate in the current study. Eleven, all mothers, consented to participate, forming a convenience sample. One (P10) was subsequently found to be ineligible for the larger study due to a confounding condition but agreed to participate in the current study. All remaining participants were enrolled in the Joint Attention Mediated Learning intervention during the current study. Participants' toddlers had been assessed as showing moderate to severe levels of autism as part of eligibility determination for the larger study. Participant 11 was African American and the others were Caucasian, largely reflecting the demographics of the settings from which participants were drawn. Additional participant descriptors are summarized in Table 1.

At the time of the interviews, all participants had experienced community-based early intervention, which was later followed by parent-mediated intervention. On monthly reports of other services received, all 11 reported that their community-based intervention was professionally rather than parent-implemented, consistent with findings in the field (Campbell & Sawyer, 2007). In their community-based intervention, families were served primarily by generalists (three of whom also received speech-language therapy and two of whom also received occupational therapy). Four families received speech-language services only.

In their parent-mediated intervention experience, rather than observing professionals, participants received conceptual support that equipped them to take the lead in promoting social communication in naturally occurring parent–child interactions. This guidance was provided for both intervention content and process. Content-focused support related to the current targeted preverbal social communication outcome (e.g. joint attention) and included descriptive information, purpose/rationale, and strategy examples. Examples were provided verbally, in print (“Ideas Other Parents Have Used”), and by viewing video clips of another toddler with autism successfully engaged in the targeted outcome. Similar process-oriented guidance was provided to promote the use of mediated learning principles in parent–child interaction. For this, in addition to verbal and print guidance, parents viewed video examples of other parents of toddlers with autism using mediated learning principles to promote their current targeted outcome. Parents then applied these principles to facilitate their toddlers’ social learning. The purpose of using examples of parents addressing challenges similar to their own (i.e. promoting social learning for toddlers with autism) was to showcase parents’ expertise and creativity in translating targeted content into playful social learning opportunities, thereby signifying their own potential for the same. To provide further conceptual support, after engaging in 10-min video-recorded parent–toddler interaction sessions, parents watched these videos and participated in guided reflection on the child’s engagement in the targeted outcome and on their use of mediated principles to promote it.

Data sources

Participant interviews were the primary data sources; however, supplementary data compiled for the larger study provided contextual background. These sources included eligibility and demographic records, initial family questionnaires, family activity logs, reports of participants’ reflections on video-recorded parent–child interaction, interventionist observational notes, and post-intervention social validity assessments.

Interview development and implementation

Cognitive interviews were conducted for a separate project to develop a parent questionnaire for assessing parent self-efficacy in future research. The cognitive interviews, conducted by telephone, served a twofold purpose. The first was to obtain feedback on item wording (e.g. clarity, interpretability, and acceptability). The second purpose was to elicit perceptions on how participants would answer the questions for themselves, the data for which were the sole focus of the current study. Consistent with cognitive interviewing procedures, we revised questions as interviews were conducted. Question topics, however, were consistent across iterations and focused on parents’ interaction with professionals, responsiveness to toddler communications,

Table 2. Interview content.

Interview Topics
Interaction with professionals:
Role as a member of the intervention team
Willingness to suggest social communication strategies to professionals from my knowledge of my child’s preferences and abilities
Understanding of my own expertise
Ability to respond to my child’s cues and preferences by:
Recognizing when my child is becoming upset to prevent meltdowns
Preventing repetitive behaviors (if applicable) from interfering with everyday interactions
Using a variety of strategies to help him or her improve day-to-day behavior
Devising new/innovative strategies to see what works best
Reading child’s nonverbal cues
Ability to help my child take an active role in social engagement by:
Improving attention to other’s interests
Interacting with me
Feeling comfortable acknowledging others and engaging with them
Reconnecting with me if he or she retreats into own world
Shifting from solitary to interactive play without becoming upset
Learning to keep his or her behavior from getting out of control
Calming down if upset

and promotion of active social engagement. These topics are itemized in Table 2. The fifth author conducted the interviews by creating a conversational atmosphere and encouraging elaboration with follow-up probes formulated in advance or devised in situ. Interviews ranged from one to two hours each and were audio recorded.

Data exploration and analysis

We conducted a thematic analysis of the data (Braun & Clarke, 2006), an analytic method for “identifying, analyzing and interpreting patterned meanings or ‘themes’” (Braun et al., 2014, p. 95). Throughout, we used MAXQDA, a qualitative data analysis software package, to organize and systematize our analysis. Data exploration began with literal transcriptions of interviews by the fifth author. The interview data were then cleaned by removing portions unrelated to the study’s purpose (i.e. related to item wording), leaving 107 single-spaced pages of primary data. After a full reading, Authors 1 and 2 independently coded the data by identifying segments that carried meaning related to the study’s purpose. Throughout the open coding process, both in vivo and descriptive codes (Saldaña, 2016) were applied to the data. The initial codes accommodated a range of possible meanings, representing lower and higher levels of inference

(i.e. some were literal representations requiring little interpretation while others were more expansive and subjective). Most segments received multiple codes representing a range of meanings. Authors 3 and 4 each coded two interview transcripts to assess the consistency with which codes were applied and whether adjustments were needed for the larger data set. Differences were discussed in group meetings with all authors except the fifth. The second author moderated the discussions and coding adjustments were made until consensus was achieved. Following the input of multiple coders and multiple coding cycles (Saldaña, 2016), 411 coding categories, including 76 primary codes, were contained in the final set, representing an in-depth and confirmable system through which the data were interpreted. (The codebook is available from the first author.)

In an early stage of thematic development, codes were organized into categorical sets. Preliminary themes were then identified and revised throughout the process as prevalent codes rose to the surface and appeared to be interconnected. Ultimately, four themes and their associated subthemes were produced, representing the range of participant perspectives.

Validation strategies

Throughout the study, we took measures to verify the findings' authenticity and trustworthiness consistent with quality indicators recommended for special education research (Brantlinger et al., 2005) as well as for education research more generally. First, we recorded our analytic process, leaving an audit trail to allow outsiders' review of our decision-making process (Creswell & Miller, 2000) and to make visible how our interpretations were consistent with the data (Guba, 1981). Second, we supported our discussion of themes with detailed evidence explicated from the dataset, showing how participants described their experiences in relation to the themes. Third, multiple forms of triangulation supported the convergence of thematic evidence across investigators, data sources, and participants. The inclusion of multiple investigators and resolution of coding differences provided a form of interobserver reliability for the data analysis and thematic conclusions. Secondary data sources were coded when their content was relevant to parent self-efficacy, thus contributing to thematic development. Finally, most participants' voices were represented in each theme and subtheme. The second author was unaffiliated with the larger study. As such, she was well suited to oversee the coding process and drew from her expertise in qualitative research to examine and confirm the logic of the conceptual pathway from the coded data to our conclusive findings.

Results

Four themes surfaced from the data analysis related to the study's purpose of exploring participants' perceptions of

their roles and competency in promoting toddler social communication. These interfacing themes portrayed affirmative and adverse influences that included child challenges, caregiver and professional roles, personal contributors, and child autonomy. Table 3 summarizes the subthemes, number of primary codes, and participants who contributed to each theme.

Theme 1: autism-related early challenges to parent self-efficacy

Theme 1 featured child-specific concerns that participants viewed as taxing their sense of efficacy for supporting their toddlers' social learning. Concerns converged around the initial process of coming to terms with the diagnosis and the ongoing challenge of making connections as social communication and behavioral concerns became prominent.

Adjusting. As they began adapting to their new circumstances, some participants reported feeling overwhelmed, worried about the future, or being judged by others. Participants described how challenges they faced placed their self-efficacy into question to different degrees over time, progressing through a range of emotions from diagnosis to the present: "The wound is still open . . . We don't have tough skin yet." (P3) and "Now that I'm understanding him better . . . I feel [less] overwhelmed with parenting him" (P5). Others, while acknowledging persistent challenges, set a realistic path that incorporated a degree of self-acceptance: "Honey, if you need a breakdown, go cry it out. . . . We're not super-heroes, we're humans, regular moms who need to be a little bit stronger for their children" (P5). Participants' initial reactions seemed to reflect a sense that child outcomes were defined by their diagnosis, which they experienced as an assault or "wound" to their belief in their potential influence.

Reaching to connect as social challenges emerged. Other challenges to self-efficacy were linked to autism symptoms. Broadly, these related to social isolation and difficult behaviors. The tendency toward self-isolation, a recurring focus, heavily tested the mothers' trust in their parenting abilities.

One of the hardest parts . . . is when your child acts as though other people don't exist. (P5)

She doesn't interact, and there's not much I can do to help change that. She's a twin, so she has a sibling that's by her side 24/7, so certainly the opportunity arises . . . but she chooses not to interact with him . . . because she's in her own world. (P4)

If you get down on the floor to try to play with him, he'll literally pick up his toy and hide somewhere . . . like under our dining room table. (P3)

Table 3. Thematic development.

Themes, No. of primary codes ^a	Conceptual threads: Participants represented
1. Autism-related early challenges to PSE: 14	a. Adjusting. Participants 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 b. Reaching to connect as social challenges emerged. Participants 1, 2, 3, 4, 5, 7, 8, 6, 9, 10, and 11
2. Parent/professional roles and PSE ^b : 16	a. Muted voices: Parent as follower and professional as expert. Participants 1, 2, 3, 5, 8, 9, and 10 b. Supplemental voices: Parent involved but in an ancillary role. Participants 1, 2, 3, 4, 5, 6, 7, 8, 10, and 11 c. Primary voices: Parent in the driver's seat. Participants 4, 5, 6, 9, and 11
3. Manifestations and personal contributors to PSE: 24	a. Specific views of expertise: Acting creatively, tuning into child's cues, and persisting in promoting child's social engagement. Participants 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, and 11 b. General perceptions of PSE: Benefits of the close parent-child relationship, time spent with child, and knowledge of child preferences. Participants 1, 2, 3, 4, 5, 6, 7, and 11
4. Child autonomy as an extension of PSE: 9	a. Locus of control. Participants 1, 2, 3, 4, 5, 6, 7, 8, and 11 b. Acceptance of child's choices. Participants 1, 3, 4, 5, 6, 7, 8, 10, and 11 c. Following child preferences to support learning. Participants 1, 2, 3, 4, 5, 6, 7, 9, 10, and 11

PSE: parent self-efficacy.

^aSome redundancy of codes occurred among themes. ^bParent comments referenced both parent-mediated intervention and traditional intervention models.

While viewing supporting social engagement as their “job” or even “mission in life,” participants also described the emotional toll they experienced from their toddlers’ self-isolation: “A huge part of parenting is wanting to have this little person interact with you and have fun . . . [A parent] just really longs for that” (P8). Notably, all participants voiced a desire to support social engagement in spite of perceived constraints.

Although a decrease in challenging behaviors was noted for some as they became more adept at mediating their children’s social learning, others described continued difficulties, perceived causes, and potential solutions. Participant 3 observed that her son sensed her stress and responded in kind, creating “a vicious circle.” Another recognized layers of complexity: “You have got autism with all its oddities . . . then just the normal toddler stage on top of it. . . . We’re dealing with dynamite” (P10). Others saw challenging behavior as transformable by social scaffolding.

There are occasionally times when I can’t bring him out of [repetitive behavior]. But, there are also times when I can, and once I engage him we can slowly move on and start to . . . make it a more social behavior. (P5)

Participants’ understanding of their ability to effect change progressed from a feeling of woundedness in the adjustment phase toward a belief that the social challenge was not immutable but, with purposeful effort, amenable to change.

Theme 2: parent/professional roles and parent self-efficacy

Three role configurations emerged in Theme 2, representing a continuum of ownership for child learning. The distinctions

largely reflected participants’ variant experiences in traditional and parent-mediated intervention approaches. The role parameters represented a progression in their potential to impact challenges described in Theme 1.

Muted voices: Parent as follower and professional as expert. In this strand, participants viewed professionals as firmly “in the driver’s seat,” directly controlling the child learning process. At times, their perceptions reflected elevated views of professionals: “I tend to bow to their ability. You know, they’ve been in school for this, they’ve gone to trainings, they are the experts” (P8). In other cases, systemic influences were apparent. One likened herself to a mere cog in a poorly integrated system in which the family is served by seven professionals: “I am not a big part” (P1). While these examples depicted acquiescence to professionals’ dominance, one mother questioned her subservient role.

I have never been more intimidated [than] by this team. . . . You have professionals coming in . . . telling you what you should do . . . I wish I could be a part of the discussion . . . I have not felt an equal member of the team. They come over as, “We’re the experts.” (P10)

Whether participants accepted or questioned it, their limited role had the effect of constraining their opportunities to view child learning as resulting from their efforts.

Supplemental voices: Parent involved but in an ancillary role. In a second configuration, professionals remained in the lead while caregivers participated alongside them but largely in a “back-seat” role. Two strands revealed progressive levels of participant involvement and recognition of their own contributions. At one end, participants

were deferential: “I really want to know what they . . . see with a trained eye and then . . . do what they suggest” (P8). Participant 3 spoke of the expectation that she observe from “outside the window . . . so I can mimic it at home.” Participant 6 showed a similar direction-following stance in accepting as a compliment a professional’s comment that she “mirrored treatments well.” Participant 11 reported acquiescing to professionals’ ideas even while predicting they would not be effective: “Parents know their children enough to offer suggestions . . . [but therapists] may see something I’m not seeing, so, I try to take more of a back seat . . . even though I question certain things.”

While professionals’ ideas continued to take precedence, some were more active in adapting or challenging professionals’ ideas. A majority, exemplified by Participant 8, portrayed the relationship as a partnership in which they supplemented professionals’ plans with their own knowledge: “I do have extensive knowledge of my daughter and her quirks, so if I see them doing something I know is just not going to get us anywhere . . . I’m able to speak up.” Finally, at the end of the continuum, Participant 5 asserted, “Every victory is not just because of the professional. If you’re helping your child, I think you should take a little pat on the back.” These depictions of roles ranging from acquiescent to more participatory represented increasingly strong opportunities for supporting parent agency.

Primary voices: Parent in the driver’s seat. Finally, referencing their parent-mediated intervention experience, several participants endorsed a role as primary facilitator of their children’s learning while receiving behind-the-scenes conceptual support from a professional. All had recently supplemented traditional EI with parent-mediated intervention in which they received targeted support. Participants welcomed the opportunity (P6 depicted it as “an answer to prayer”) and embraced a sense of buy-in for the participatory role: “They [traditional early interventionists] write up a plan, they decide . . . When [the parent-mediated intervention professional] is here . . . we come up with a plan together . . . Because I come up with it, I’m more willing to do it” (P1).

The influence of parent-mediated intervention on both caregiver and child learning was evident in participants’ reflections: “I do a lot more of trying to follow [son’s] cues, whereas before I was trying to get him to do what I wanted him to do” (P3). Participant 1 drew a direct connection between her own learning and her toddlers’ growth: “Now that I’m being taught how to . . . work with him, that’s what’s helped him the most versus relying on other people . . . He’s reaching goals more quickly now.”

Parents assuming a central role in the intervention addressed an expressed need, opened the door for learning and understanding their ability to impact child learning, and was linked to positive views of child potential. In

contrast to earlier perceptions of child limitations and fear for the future (see Theme 1: Adjusting), taking charge gave participants a positive sense of future possibilities (“He’s reaching goals more quickly now”) and a sense of control that appeared to sublimate earlier fears.

Theme 3: manifestations and personal contributors to parent self-efficacy

The third theme further depicts participants’ understanding of their own expertise in supporting social engagement. Two streams emerged: specific portrayals of their competence and perceived contributors related to their parental advantage or personal history.

Specific views of expertise. Parents attributed successes to a number of strategies, including creative variation, following child cues, initiative, and persistence. Participant 9 exemplified her creativity in trying another way like “throwing her on the pillows” if her child loses attention. Others described reading child cues to discern the child’s feelings, detect opportunities for interaction, or interpret communicative intentions of aggressive behavior:

I can do things within his interest to get his attention. . . . The other day he did not want to sit and read the book, but I started making animal sounds . . . and [soon] he was looking. (P6)

When I . . . play Twinkle, Twinkle Little Star with her, [I know] she enjoys it because of the smile that comes across her face. (P4)

Participant 11 reported taking initiative to get things in motion following the diagnosis: “I’m the person who . . . got it started.” An example of persistence featured a single-minded drive to create internal motivation for social engagement.

It’s not all about what he wants to do. He kind of needs to participate with other people, too . . . I was just thinking about how much I’ve learned and how differently I do things with [him] now and how I see him . . . I see him learning how to act socially. I’m constantly working with him. (P3)

General perceptions of parent self-efficacy. In addition to the impact of their intervention experiences on their sense of personal agency, participants referenced background factors that may have played a part. These factors related to their parenting role and general life experience. Central to this perspective was the caregiver–child relationship and knowledge of the child:

This is my kid. . . . I know what some of her triggers are, and I know how to deter her or distract her to make her happy, which the professional probably doesn’t. (P4)

He's going to respond to me more . . . because I'm his mom. (P1)

I spend more time with him so . . . maybe what I do sticks with him better just because I'm able to repeat it a lot more throughout the week. (P3)

For some, general life experiences supported an embedded sense of self-reliance and lack of deference to authorities. Participant 11 reported feeling ahead of the game as she “started the ball rolling” and Participant 6 expressed confidence stemming from other experiences: “My husband is a doctor and my mother is a nurse and I don't have pedestals anymore,” as if to imply that professionals' opinions are no worthier than her own. Perspectives represented in this theme demonstrate that factors external to intervention design—specifically, internal parent attributes—contribute to their self-efficacy.

Theme 4: child autonomy as an extension of parent self-efficacy

In Theme 4, participants portrayed their toddlers as having independent natures and wills that could be harnessed in the learning process. This view incorporated three interconnected strands: who controls the child's behavior and learning (locus of control), acceptance of child preferences, and respect for child self-determination. Findings interface with those from Theme 2, pointing to heightened views of the child's potential when participants experienced ownership of the intervention process.

Locus of control. A majority of participants viewed efficacy for promoting social interaction as shared with the child and not fully within the caregiver's control, even a view that the child's behavior “depends more on [the child] than on me” (P7).

She prefers to play more by herself. She doesn't interact, and there's not much I can do to help change that. (P4)

Yesterday we were playing a game and . . . I couldn't get him to stop looking out the window. I can [sometimes] . . . but whether or not he wants to look at me is another question. (P1)

Other factors internal to the child were cited. Participant 5 indicated that her influence was partially limited by autism severity as she compared reactions of her two sons with autism: “He [older son] is very social, very interactive. All I have to do is say, ‘Can you say hi?’ and boom, he's there. . . . [The younger] runs in the other direction.” Participant 4 questioned how much credit she could claim for her child's gains: “She's growing and developing, so I don't know how much . . . I get to play a part.” These views of children as autonomous individuals with

independent wills and natures placed participants' own efficacy in a transactional context and created a path for respecting their children's preferences and abilities.

Acceptance of child's choices. Participants showed acceptance of two core difficulties in autism: “being in their own world” and repetitive and restrictive behavior (RRB) by voicing respect for their toddlers' need for solitary play:

He's definitely in his own world. . . . At first it bothered me . . . because I'd try to get his attention to show him things and he'd just slap and look everywhere else . . . [Now] I don't really see my child playing alone as a bad thing; I see it as an independent thing. (P7)

I do see [it as good] . . . to play by yourself and be alone but not lonely . . . Depending on how long it's been going, I attempt to join her. (P8)

Repetitive behavior was similarly viewed by some as acceptable, calming, or enjoyable. Participant 5 viewed her child's flapping behavior as stereotypical but not problematic. Some gave toddlers space to calm themselves with repetitive behaviors when overwhelmed: “If I allow him to do that for a little bit, he'll come out of it on his own. . . . I see it as him self-soothing” (P6) or as a legitimate source of shared enjoyment: “I don't really discourage him from [hand flapping] so much as I do it with him so that he's not doing it by himself” (P7). On the other hand, others recognized the need to break the cycle if repetitive behaviors go “on and on” (P8) or deter social engagement: “[Holding blocks and flapping them] . . . doesn't allow her to move on” (P4).

Following child preferences to support learning. Participants were highly sensitized to child learning preferences by following child interests to promote enjoyment and by redirecting rather than controlling out-of-control or solitary behavior. Understanding child enjoyment as essential to social engagement was common:

If they're not enjoying it, they're not going to interact. (P4)

Interacting with you [can be] just as fun as [repetitive behavior]. (P5)

She likes to bang on walls [and I] . . . do it with her to bring her out of the world. (P10)

Child preferences were considered when presenting social opportunities:

I don't think I can change his reactions . . . but I think that it's very important [to give] opportunities to interact. (P4)

There [are] certain activities that I know not to interrupt, or I know to be more gingerly [sic] in my interruption. (P6)

Participants described multiple ways to redirect toddlers from solitary to social pursuits, such as creating variety, luring the child into interaction without “totally eliminating what he’s doing” (P11), or positioning her face to create opportunity for the child to look at her (P3).

As exemplified in Theme 3, parents may be better positioned than professionals to understand and respect their toddlers’ preferences by virtue of their close relationship and knowledge of child interests. Their tendency toward a strengths-based orientation appeared evident in this strand, in which they regarded in a positive light behavior that others (e.g. professionals) might view as problematic. While participants viewed “being in their own world” and RRB as challenges, their approach allowed toddler preferences to co-exist within an expanded orientation to the social world. This attitude of acceptance contrasted with Theme 1, in which participants in the early stage appeared to worry more about symptoms of autism.

Across the four themes, self-efficacy appeared to be associated with conditions both more and less related to intervention design. In Theme 1, self-efficacy appeared most at risk in the early stages immediately following autism diagnosis, pointing to time as a variable of interest. Theme 2 showed a close correspondence of self-efficacy with the extent to which participants experienced a sense of ownership for the intervention process. Factors external to intervention, including the parent–child relationship and the general parenting role as well as caregiver attributes and past experiences, appeared to influence their self-efficacy in Theme 3. Finally, Theme 4 portrayed self-efficacy as related to transactional influences and parents’ acceptance of and appreciation for child preferences and interests.

Discussion

This study explored aspects of participants’ experiences that they perceived as supporting or detracting from their ownership and confidence in guiding social learning for their toddlers with autism. Interviews with 11 mothers of toddlers with autism converged around four broad themes related to self-efficacy: autism-related early challenges, caregiver/professional roles, manifestations and personal contributors, and child autonomy. This research addressed a knowledge gap identified by Wainer and colleagues (2017) in an area related to early intervention’s central purpose, facilitating family empowerment to promote child learning (IDEA, Part C, 2004). In response to calls for isolating specific intervention features that demonstrate effective practices (Institute of Medicine and National Research Council, 2012; Trembath et al., 2019), the study identified particular aspects that participants perceived as contributing to or detracting from their sense of personal efficacy in supporting toddler learning.

Challenges to participants’ views of themselves as competent to support child learning related to factors external and internal to the intervention. As prior research linked child autism symptoms to negative indicators of parent well-being (e.g. L. Jones et al., 2014; Meirsschaut et al., 2010), our findings in Theme 1 showed the initial impact of the child’s diagnosis and early autism symptoms to exert a level of challenge to participants’ sense of efficacy, although some revealed having already achieved a degree of acceptance after their brief period in early intervention. Less explored is how intervention design may create barriers to parents’ sense of personal agency by restricting their intervention role. This phenomenon was clearly illustrated with participants who, when encountering expectations that they assume a bystander role, found their expertise to be underutilized. These results supported earlier reports that limitations in family-professional collaboration (Carr et al., 2015; Kemp & Turnbull, 2014) and parent participation (Brown & Woods, 2016; Dunst et al., 2007) may compromise parents’ sense of personal efficacy.

Describing their parent-mediated intervention experience, participants reflected on how their learning supported their evolving competence, revealing an alignment with recommended practices that promote “family confidence and competence . . . in ways that recognize and build on family strengths and capacities” (Division for Early Childhood, 2014, p. 10). Our results added perspective to others’ findings of stronger effects on parent self-efficacy from intervention that supported parents’ active engagement and leadership in the intervention than from professionally driven approaches (Dunst et al., 2007; Trivette et al., 2010). Participant reports of empowerment associated with an “informed expert” role echoed the generative nature of active parent engagement, such as described by M. A. Feldman and Werner (2002) in which parents’ confidence from observing effects of their efforts on child learning bolstered their motivation, contributing in turn to future learning. In alignment with Keen and colleagues’ (2010) proviso that close involvement from professionals is needed in parent-mediated intervention, participants relied on conceptually grounded non-prescriptive guidance to support and strengthen their facilitation of everyday learning opportunities.

Participants’ views of their competence also connected to influences less directly linked to the intervention design, including personal experiences that bolstered their personal agency, their positive regard for their toddlers (whose autonomy they largely respected), and their perceptions of success from incorporating toddlers’ preferences into everyday interactions. The latter two contributors carry implications for intervention design. First, parents’ positive views of their children may sustain their sense of hope for the future, giving meaning to their efforts. Participants’ accepting attitude toward their children’s nature and choices, such as viewing instances of repetitive behavior

with tolerance, paralleled others' findings. King et al. (2009) reported that families' sense of optimism and acceptance led to a sense of control in which they viewed their children positively. Others reported families' willing accommodation of repetitive and restrictive behaviors in their children with autism (I. Feldman et al., 2019) and positive views of the child even when blamed for challenging child behavior (Neely-Barnes et al., 2011). These indicators of parents' natural orientation toward viewing their children as competent provides a model for strengths-based early intervention, as proposed by Mottron (2017) and as a counter to the deficit-based perspectives that some participants reported.

Implications for practice

The findings linking self-efficacy with the support parents received as primary drivers of child learning provide insights for configuration of early intervention delivery. In Theme 2, participants illustrated how professionally implemented intervention could have unintended negative consequences for their self-efficacy (e.g. "I tend to bow to their ability." or "I am not a big part."). In contrast, referencing their parent-mediated intervention experience in Theme 3, participants relayed perceptions that their parenting expertise contributed to child learning in ways not achievable through professional-child interaction (e.g. "I know how to . . . make her happy, which the professional probably doesn't" or "He's going to respond to me more . . . because I'm his mom") and that, as a result, child progress was accelerated (e.g. "He's reaching goals more quickly now"). Participants' impressions of accelerated progress were born out in findings from the larger study (Schertz et al., 2018) in which post-intervention effects were found for social communication outcomes favoring the group who received parent-mediated intervention.

Professionally prescribed strategies may be of particular concern when social communication is the primary challenge—as it is for toddlers with autism—if the parent-child relationship, which provides a rich and varied venue for social engagement, is overlooked as the primary intervention milieu. Following a parent-mediated intervention model, interventionists can replace prescribed strategy instruction with broader conceptual support related to targeted outcomes and processes for mediating child social learning, support that incorporates parents' expertise. Once armed with an understanding of socially oriented intervention content and process, parents are supported to take the lead in translating this knowledge to everyday interactions, incorporating child interests "in the moment" in ways congruent with their own familial and cultural priorities. This parent-as-learner approach defines the key difference between a particular parent-mediated intervention experience and the professionally implemented model they had also experienced, a difference reflected in participants'

portrayal of the models' relative impacts on beliefs in their own efficacy.

For early interventionists in the field, understanding the influence of professionally implemented versus professionally supported approaches may be a key to improving child and parent outcomes. The well-documented associations of parent self-efficacy with a range of child and parent outcomes (e.g. Conti, 2015; Trivette et al., 2010) highlight the importance of configuring intervention to provide a direct and supported role for parents. For participants in the current study, parent-mediated intervention appeared to play a direct role in strengthening their competencies and, relatedly, their confidence.

Limitations

Our sample was limited in two important ways that constrain how our results might be interpreted for under-represented populations. First, although participants' ethnic distribution represented the systems in which they were enrolled (and from which we recruited participants for the larger study), access to early intervention for toddlers with autism is affected by race/ethnicity and socioeconomic factors, with those from minority groups and lower incomes tending to be diagnosed at later ages (Boyd et al., 2010). Importantly, although family income ranged widely for our participants, the racial/ethnic make-up was less diverse. Similarly, fathers were not represented in this study, as is common in the field (Flippin & Crais, 2011). Fathers of older children on the spectrum were found to experience certain challenges in implementing intervention strategies (Elder et al., 2005) and, perhaps relatedly, experienced less stress reduction after involvement in intervention than did mothers (Baker-Ericzen et al., 2005). Both findings point to potentially differential effects on self-efficacy for mothers and fathers from their participation in intervention, although involvement in parent-mediated intervention may produce different results. Assessment of father involvement and its relation to self-efficacy outcomes is therefore a limitation in this study and an area for future research. Perspectives of fathers, those with less advanced educational levels, and those from Latinx or African American backgrounds might diverge in important ways from those of our largely Caucasian, middle class, and female sample.

A second limitation is the narrow timeframe in which we were able to conduct interviews. Had resources allowed, inclusion of follow-up interviews might have revealed changes or constancy in perspectives over time, showing how early influences translated into longer-term trajectories. Finally, while the participants appeared to show strong regard for the support received through parent-mediated intervention, others may prefer a professionally implemented model. These parents may have been less likely to participate in the larger study and thus to have

been included in the current one. These limitations inform directions for future research to extend the field's understanding of parent perspectives on their efficacy during the period in which autism first emerges in toddlers.

Conclusion

In conclusion, our findings position early intervention for families of toddlers with autism in relation to Bandura's (1997) theory of self-efficacy as a potentially generative process. Participants revealed that professional-directed intervention approaches and role inequality appeared to negatively impact their views of their own parenting competence, while a non-directive approach that fosters conceptual learning facilitated their active engagement. Participants reported that the mediated learning approach supported their capacity to promote toddler learning and had a positive impact on how they viewed their own and their children's capabilities. Commensurate with a relationship-based orientation to mediating their toddlers' learning, participants frequently acknowledged the need for interaction to be enjoyable for their children to learn from it, revealing an understanding of transactional influences in parent-toddler interaction. These results point to the need for further exploration into family capacity-building practices as a means of promoting empowering, productive, and self-perpetuating learning experiences for both parents and their young children with autism with consideration of how such practices are acceptable and effective for families across varied cultural, income, and educational circumstances.

Author contributions

H.H.S. conceived the study, oversaw its implementation, conducted primary coding and thematic development, and drafted the manuscript. J.N.L. guided the qualitative analysis, participated in all stages of coding and thematic development, and drafted portions the data analysis and validation portions of the methods section. E.E. and S.S. coded a portion of the data, contributed to thematic development for coded portions, and helped to identify a portion of content for the results section. P.G. conducted participant interviews and transcribed the data. All authors read and approved the final manuscript.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical approval

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

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Informed consent

Informed consent was obtained from all individual participants included in the study.

ORCID iD

Hannah H Schertz  <https://orcid.org/0000-0002-3926-2396>

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