



Parent Perspectives on Co-located Parent Coaching Services within Pediatric Primary Care

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Abstract

The pediatric primary care setting offers a promising platform for delivering positive parenting interventions as a strategy to prevent childhood adversity and behavioral health issues. This pilot project assessed parents' acceptability and perspectives of Parent ConnexTM, a positive parenting and prevention program that includes screening for parenting and family psychosocial concerns by pediatricians and individualized parent coaching for parents by co-located Parenting Specialists. Eleven pediatric practices implemented Parent ConnexTM over a three year period, and 1,301 families participated in parent coaching. Parents were invited to complete surveys on parenting and psychosocial factors at sessions 1, 3, and 3 months follow-up and were emailed a satisfaction survey after their last session and invited to participate in a phone interview. A subsample of 280 biological mothers who completed surveys at multiple time points showed improved parenting satisfaction, parenting efficacy, and parent-child interaction and reduced psychosocial concerns over time. The majority (≥97%) of the 387 parents who completed the satisfaction survey reported satisfaction with the accessibility, convenience, and quality of the parent coaching service. Nearly all 27 parents interviewed (96%) reported being highly likely to recommend the service to a friend or parent, and most (84%) felt their needs had been met. Parents described the key program attributes to include normalization of their experiences, non-judgmental support, easy-to-implement tailored strategies, and empowerment in parenting. Overall, parents found Parent ConnexTM to be a worthwhile addition to their pediatric primary care. Alternative payment models are needed to support the sustainability of integrated programs like Parent ConnexTM.

Keywords Parenting · Preferences · Prevention · ACEs · Pediatrics

Highlights

- Parenting Specialists provided parent coaching to parents at 11 pediatric practices.
- Parenting efficacy, parenting satisfaction, and parent-child interaction improved in participating mothers.
- 97% of parents were satisfied with the quality and accessibility of parent coaching.
- Parents most appreciated the normalizing, non-judgmental support and empowerment.
- Parents found the concrete, tailored parenting strategies received to be beneficial.

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Social determinants of health are conditions in the environments where people live, learn, work, play, and age that can impact a wide range of risks and outcomes related to health and well-being (Centers for Disease Control and Prevention, 2021). Healthcare access and quality, education access and quality, economic stability, the neighborhood and built environment, and social and community contexts can all contribute to a child's health (Healthy People 2030, n.d.). Adverse childhood experiences (ACEs) that happen within a child's social environment, such as abuse, neglect, witnessing domestic violence, being separated from parents, and living with mental illness or substance misuse in the home, are one type of social determinant of health. Exposure to ACEs has been associated with increased odds of developmental delay in childhood (Bright et al., 2016; Bethell et al., 2014) and physical and mental health conditions in adulthood (Felitti et al., 1998). Frequent or prolonged exposure to ACEs has the potential to change the development of a child's brain and physiology, especially if that child lacks protective and supportive adults in their life to buffer the stress (Shonkoff et al., 2012). In an effort to prevent the effects of ACEs, the American Academy of Pediatrics recommends that pediatricians provide guidance related to child social-emotional development and positive parenting techniques, actively screen for family psychosocial risk factors, and participate in innovative service-delivery adaptations to support at-risk children (Garner et al., 2012).

Several studies involving parent interviews have found that parents would like their child's doctor to talk with them more about parenting, child development, and behavior (Riley et al., 2019; Davis et al., 2015; Schultz & Vaughn, 1999). About half of parents (42–51%) reported that they had already talked with their child's doctor about parenting and found it to be helpful (Young et al., 1998; Schultz & Vaughn, 1999). Many parents preferred parenting guidance from their child's doctor (Schultz & Vaughn, 1999; Davis et al., 2015). In a qualitative interview study, the majority of parents indicated that they support screening for ACEs in the pediatric office in order for pediatricians to gain a better understanding of family needs, to facilitate family access to external resources, and to strengthen the parent-provider relationship (Conn et al., 2018). Davis et al. (2015) found that parents were also interested in receiving parenting guidance through face-to-face or one-on-one meetings with a professional.

Recent systematic reviews have found that approaches to addressing social determinants of health within medical care are becoming increasingly more common (Gottlieb et al., 2017; Sokol et al., 2019). Nearly a dozen screening tools have been developed for pediatrics, although few have been validated (Sokol et al., 2019). Evidence for the impact of these approaches on health outcomes is still in its nascent

phase (Gottlieb et al., 2017; Sokol et al., 2019). The Safe Environment for Every Kid model, which incorporates screening for psychosocial risk factors for child maltreatment, motivational interviewing, and referral into pediatric health care, has been shown to reduce child protective service reports and minor physical and psychological aggression by mothers and to improve adherence to medical care (Dubowitz et al., 2009; Dubowitz et al., 2012).

In addition to addressing social determinants of health, primary care settings may also be an opportune environment to provide positive parenting guidance and interventions (Bultas et al., 2017). Recent research has found that positive parenting practices have protective effects on early childhood social-emotional skills and general development, even in the face of adversity (Yamaoka & Bard, 2019). By integrating them into primary care, parents can access parenting supports in a timely manner at a familiar and potentially less stigmatizing location (Boyle et al., 2010). Addressing parenting concerns as a routine part of child health care may also help to reduce the stigma associated with accessing parenting and behavioral health supports (Leslie et al., 2016). Furthermore, receiving parenting support early may prevent childhood adversities and/or the need for more intensive and expensive behavioral health services for children later in life.

A few group-based positive parenting programs, including Incredible Years (Perrin et al., 2014), Child Adult Relationship Enhancement in Primary Care (PriCARE) (Schilling et al., 2017), and Primary Care Triple P (Spijkers et al., 2013), have been provided on-site at pediatric primary care practices and resulted in improved positive parenting attitudes and practices and child behavior. Other programs, such as Healthy Steps for Young Children and Parent-focused Redesign for Encounters, Newborns to Toddlers (PARENT), have integrated professionals into the pediatric primary care visit specifically to conduct developmental screening and provide parenting guidance to parents with infants and have shown positive effects on child health (Johnston et al., 2004; Coker et al., 2016). Little information is available about parent's perceptions of positive parenting interventions within primary care practices (McMenamy et al., 2011; Johnston et al., 2004; Coker et al., 2016).

Parent ConnexTM is a positive parenting and prevention program that includes both screening and monitoring for parenting and family psychosocial concerns by pediatricians and individualized parent coaching for parents by co-located Parenting Specialists within pediatric primary care practices (Eismann et al., 2021; Lott, 2020). Screening is performed at targeted well-child visits from birth to age 6, and pediatricians monitor for these concerns at all other patient visits. Pediatricians are trained on motivational interviewing skills for engaging families in conversations

related to these concerns. Parenting Specialists from a community-based organization with graduate level education meet with parents on-site at the pediatric practice and use a collaborative parent coaching model to guide and equip caregivers with solution-focused strategies for achieving their parenting-related goals. This parent coaching model focuses on promoting child social-emotional and behavioral health by strengthening positive parenting and family functioning. Parent ConnexTM differs from other positive parenting interventions by providing individual rather than group sessions to parents with any aged child and using a coaching model with the intensity of services based on parent preference and needs. This co-located parent coaching model has previously been found to be feasible within pediatric primary care (Eismann et al., 2021). After implementing Parent ConnexTM, healthcare professionals reported feeling significantly more supported, confident, and knowledgeable about addressing parenting and family psychosocial concerns and that the program improved their relationships with families and quality of care (Eismann et al., 2021).

The purpose of this pilot project was to perform an initial assessment of the acceptability and perspectives of parents about Parent ConnexTM as well as their changes in parenting and psychosocial factors over the course of participating in parent coaching. We hypothesized that parents would view the program favorably and that parenting satisfaction, parenting efficacy, self-care, and parent-child interaction would improve and parenting stress and psychosocial concerns would decrease over time.

Methods

Participants

Eleven pediatric primary care practices within a large metropolitan area in the Midwestern United States implemented Parent ConnexTM as part of this pilot project. Four practices began in November 2016; another three practices began in January 2018, and another four practices began in January 2019. Two of the practices that began in November 2016 were independently owned solo pediatric primary care practices, and the rest of the practices were part of one large multi-specialty group medical practice. Parents who participated in one or more parent coaching sessions through Parent ConnexTM at any of the eleven practices between July 1, 2017 and December 31, 2019 were sent an online satisfaction survey immediately following their last coaching session. Those parents who completed the survey between May 1, 2018 and December 31, 2019 were invited to participate in a phone interview at the end of the survey, and the parents who indicated that they would be interested

in participating were contacted by phone or email to schedule an interview time. The current paper includes the findings of the convenience samples of parents who responded to the surveys and those who agreed to participate in an interview.

Parent ConnexTM Program

Screening and monitoring

This program and screening tool have been described in detail previously (Eismann et al., 2021). Prior to implementation, primary care providers completed a two-hour in-person training on motivational interviewing techniques, adapted for brief encounters. At up to four targeted well-child visits under age six, families were asked by practice staff to complete the Parent ConnexTM Parent Questionnaire (PCPQ), which screens for parenting stress and family psychosocial concerns (harsh punishment, depression, substance use, financial insecurity, and domestic violence). Providers also monitored for these concerns during all patient visits for any aged child. Providers used motivational interviewing techniques to engage parents in supportive conversations and used their clinical judgment to decide whether to refer the parent to the Parenting Specialist.

Parent coaching

Parenting Specialists, employed by a community-based organization, were co-located within each of the 11 practices part-time to meet one-on-one with parents and provide complementary parent coaching services. The Parenting Specialists all had graduate level education in child development, counseling, social work, or a related field and over five years of experience working with parents and children. Parenting Specialists were trained in parent coaching through the Natural Strength ParentingTM model developed by the community-based organization. This parent coaching model is centered in approaches from positive psychology, including intentionality, strengths, and mindfulness, and applies concepts from social cognitive theory, including goal-setting and monitoring, to support self-efficacy. Parenting Specialists were also trained in motivational interviewing (Miller, 1983). The parent coaching process began with an assessment of the parent and child's strengths as a foundation for growth as well as development of goals related to the parent's specific concerns. Parenting Specialists facilitated change through a process of: (a) eliciting and understanding of concerns; (b) envisioning desired goals; (c) providing education on child development, parenting guidance and resources, self-care guidance and mindfulness practices, resource navigation and referral, and crisis

support as appropriate; (d) collaboratively identifying intentional daily actions to support progress; (e) affirming and building on strengths as the foundation for change; and (f) ongoing monitoring. Parent coaching sessions typically included parents without their children and lasted approximately 60 min, with the number of sessions and time between sessions varying based on the parent's preference and progress.

Data Collection

Parenting and psychosocial factors

Parents who participated in parent coaching were asked to complete the Healthy Families Parenting Inventory (HFPI) and the PCPQ at their first coaching session, by online survey after their second session (if they only attended two sessions), at their third coaching session (if they attended three or more sessions), and by online survey three months after their last session. The HFPI is a 63-item parent-reported questionnaire that assesses change in the following nine parenting-related domains based on a 5-point Likert scale: social support, problem-solving, depression, personal care, mobilizing resources, role satisfaction, parent/child interaction, home environment, and parenting efficacy (Krysiak & LeCroy, 2012). The HFPI has good to excellent content validity, internal consistency (Cronbach's α ranging from 0.76–0.92), and sensitivity to change (Krysiak & LeCroy, 2012). This program inquired about four of the nine domains: personal care (5 items, total score ≤ 16 indicates concern), role satisfaction (6 items, total score ≤ 21 indicates concern), parent-child interaction (10 items, total score ≤ 40 indicates concern), and parenting efficacy (6 items, total score ≤ 33 indicates concern). These subscales were selected because self-care skills, responsive parent-child interactions, and the positive appraisal of and executive function involved in parenting efficacy have been identified as modifiable factors of resilience (Traub & Boynton-Jarrett, 2017). Scores for each subscale were calculated, and subscale scores were summed to create a total score. The PCPQ is a 17-item survey that assesses parenting stress and family psychosocial concerns (Eismann et al., 2021). Parenting stress was assessed through 6 questions on a 4-point Likert scale (not very, somewhat, quite, very) and considered positive if “not very” was selected for questions related to parenting confidence, parenting support, and parenting effectiveness, and if “quite” or “very” was selected for questions related to child behavior challenges, home/family life stress, and parenting differences. Family psychosocial concerns were assessed on a 4-point Likert scale (never, rarely, sometimes, often) and considered positive if “sometimes” or “often” was selected for questions related to harsh punishment, depression, substance

use, financial insecurity, and domestic violence. Each of these concerns was evaluated separately as well as whether or not the parent reported any concerns. The PCPQ has not been validated as a whole; however, certain sets of items have some prior evidence of validity and responsiveness to change (Eismann et al., 2021).

Parent satisfaction survey

All parents who participated in parent coaching were emailed an online satisfaction survey after their last session. The satisfaction survey asked, “How likely are you to recommend this service to a friend or other parent”? on a scale from 0 “not at all likely” to 10 “extremely likely”. A net promoter score was calculated by taking the percentage of parents who gave a score from 0 to 6 (detractors) and subtracting it from the percentage of parents who gave a score of 9 or 10 (promoters). The average score was also calculated. The survey also asked whether or not they were satisfied with (a) the process of getting the service, (b) the time it took to access the service, (c) the time the service was offered, (d) the location of the service, (e) the service met your need(s), (f) the quality of the service, and (g) the competence and professionalism of our staff. Parents could provide additional open comments and feedback. At the end of the survey, parents were asked if they would be willing to provide more feedback on their experience with this service through a 30-minute phone call. All survey data were collected and managed using REDCap (Research Electronic Data Capture), which is a secure, web-based software platform designed to support data capture and management (Harris et al., 2009).

Semi-structured parent interviews

Parents who responded “yes” to being willing to provide more feedback were contacted by phone and/or email and invited to schedule a 30-min phone interview. The purpose of the project and format of the interview were described to them. An interview guide was used to structure the interview and included questions on getting to know the parents, details on how they were introduced to the program, information on how easy or difficult scheduling was, content of the parent coaching sessions, and general satisfaction with the program. During the interview, the following questions were asked on a Likert scale: 1) “How likely are you to recommend this service to a friend or fellow parent”? on a scale from 0 “not at all likely” to 10 “extremely likely”, 2) “To what extent, has the program met your needs”? on a scale from 1 “none of my needs have been met” to 4 “almost all of my needs have been met”, 3) “In an overall, general sense, how satisfied are you with the service you have received”? on a scale from 1 “quite dissatisfied” to 4

“very satisfied”, and 4) “If you were to seek help again, would you come back to this program”? on a scale from 1 “no, definitely not” to 4 “yes, definitely”. Interviews were audio-recorded if the participant agreed, transcribed verbatim by a professional transcription company, and de-identified by project staff. The interviewers also took detailed notes during the interview and completed an insight sheet directly following the interview that summarized key information from the interview. These notes were used in three cases where the audio recordings were too poor of quality to transcribe. Participants were compensated with a \$20 gift card for participating in the interview.

Data Analysis

Descriptive statistics were used to characterize the demographics of the parents who participated in parent coaching and completed the satisfaction survey. Generalized Estimating Equations (GEE) were used to describe changes in parenting and psychosocial factors over time among biological mothers, as they were the most common participants in parent coaching (88%, $n = 1140$). These models included the subsample of 280 biological mothers with a child under 18 years of age who completed the HFPI or PCPQ at two time points, including their first session and either their third session or 3 months after their last session (if not completed at their third session). Biological mothers who never completed the surveys ($n = 55$) or completed them only at their first session ($n = 770$) or either their third session or 3 months after their last session ($n = 35$) were excluded. Models adjusted for child age at first session. GEE models were fit using an exchangeable correlation matrix structure and an identity link function (normal distribution) for each HFPI subscale and the total score and a logit link function (binomial distribution) for each PCPQ concern. All regression analyses were conducted using SAS 9.4. Statistical significance was set at $p < 0.05$.

A combination of thematic analysis and content analysis was employed to evaluate the parent interview content. The thematic analysis approach is intended to systematically identify meaningful and repeating themes or patterns that emerge across interviews (Braun & Clarke, 2006; Daly et al., 1997; Gale et al., 2013; Polit & Beck, 2010). During this approach, the team of four interviewers independently conducted open-coding and then held consensus meetings to create a codebook of major codes and sub-codes. Next, the interviewers independently coded the interview transcripts and held consensus meetings to review and discuss any discrepancies among the codes and sub-codes and their application until consensus was reached. After that, the team reviewed all coded data and synthesized responses into potential themes. The constant comparison method was used to examine and refine these themes by comparing and

contrasting information within each interview and across all interviews (Boeije, 2002; Strauss & Corbin, 1967). The content analysis approach was used to characterize the demographics of the participants (e.g. race, ethnicity, marital status, number and age of children) and to quantify the types of issues that prompted referrals, the number of parent coaching sessions attended, and whether or not marketing materials were noticed.

Results

Change in Parenting and Psychosocial Factors

From July 2017 to December 2019, 2,711 families were referred to the Parenting Specialists, and 1,301 (48%) families (including 1,874 parents) participated in parent coaching at the eleven pediatric primary care practices implementing Parent ConnexTM. The demographic characteristics of these parents can be found in Table 1. The results of pediatrician screening and motivational interviewing have been described previously (Eismann et al., 2021). Of the 1,140 biological mothers who participated in parent coaching, 280 (25%) completed the HFPI and/or PCPQ at two time points. This subsample was similar in demographics to the full sample of parents who participated in parent coaching, except there was a greater proportion with a bachelor's degree (42%, 113/271) or higher (35%, 94/271) ($X^2 = 11.37$, $p = 0.010$) and more part-time employees (21%, 55/265) and stay-at-home parents (22%, 59/265) ($X^2 = 28.84$, $p < 0.001$). The biological mothers showed significant improvement over time in their role satisfaction, parenting efficacy, and parent-child interaction, but not personal care (Table 2). Significant reductions over time were also identified in the percentage of mothers reporting any psychosocial concerns, parenting stress, harsh punishment, depression, and financial insecurity, but not substance use or domestic violence (Table 2).

Parent Satisfaction

Of the 1,301 families who participated in parent coaching, 387 (30%) completed the satisfaction survey. The demographic characteristics of these parents can be found in Table 1. These parents gave an average rating of 9.3 (standard deviation of 1.6) on a scale from 0 to 10 for how likely they would be to recommend parent coaching to a friend or other parent. The net promoter score was 78%, with 83% (320/387) being promoters (gave ratings from 9–10) and 5% (21/387) being detractors (gave ratings from 0–6). Nearly all were satisfied with the process for getting the service (99%, 382/387), time it took to access the service (98%, 381/387), service time (97%, 373/386), location

Table 1 Demographic characteristics of parents who participated in parent coaching services at their pediatric primary care practice as part of the Parent ConnexTM program ($N = 1874$) and those who completed a satisfaction survey ($n = 387$)

Characteristics	All participants n (%)	Survey participants n (%)	Characteristics	All participants n (%)	Survey participants n (%)
Gender	1755 (94%)	387 (100%)	Educational attainment	1,645 (88%)	378 (98%)
Male	583 (33%)	26 (7%)	Graduate or professional degree	491 (30%)	132 (35%)
Female	1172 (67%)	361 (93%)	Bachelor degree	630 (38%)	171 (45%)
Race	1664 (89%)	377 (97%)	Some college/Associate degree	327 (20%)	55 (15%)
White/Caucasian	1546 (93%)	362 (96%)	High school graduate/GED	187 (11%)	20 (5%)
African American/Black	50 (3%)	2 (1%)	Some high school	10 (1%)	0 (0%)
Asian	38 (2%)	8 (2%)	Employment status	1602 (85%)	365 (94%)
More than one race	16 (1%)	2 (1%)	Full-time	1113 (69%)	211 (58%)
Other	14 (1%)	3 (1%)	Part-time	200 (12%)	64 (18%)
Ethnicity	1619 (86%)	375 (97%)	Stay-at-home parent	231 (14%)	85 (23%)
Not Hispanic or Latino	1568 (97%)	363 (97%)	Unemployed	42 (3%)	4 (1%)
Hispanic or Latino	51 (3%)	12 (3%)	Retired	16 (1%)	1 (<1%)
Parenting role	1751 (93%)	386 (99.7%)	Annual household income	1586 (85%)	367 (95%)
Biological parent	1705 (97%)	379 (98%)	≤\$15,000	27 (2%)	6 (2%)
Grandparent	20 (1%)	5 (1%)	\$15,001–\$30,000	52 (3%)	10 (3%)
Step-parent	16 (1%)	0 (0%)	\$30,001–\$50,000	129 (8%)	28 (8%)
Legal guardian/dedicated adult	6 (<1%)	1 (<1%)	\$50,001–\$75,000	253 (16%)	54 (15%)
Foster parent	4 (<1%)	1 (<1%)	>\$75,000	1125 (71%)	269 (73%)
Marital status	1703 (91%)	384 (99%)			
Married	1429 (84%)	338 (88%)			
Single	135 (8%)	13 (3%)			
Divorced	84 (5%)	22 (6%)			
Separated	50 (3%)	9 (2%)			
Widowed	5 (<1%)	2 (1%)			

(99%, 383/386), quality (97%, 375/387), and staff competence and professionalism (98%, 379/385), and 96% (368/385) felt the service met their needs.

Parent Perspectives

Sample characteristics

Semi-structured interviews were conducted with 27 parents who had participated in one or more parent coaching sessions through Parent ConnexTM. The majority of parents had 2 children (59%), with toddler age children being the most common (96%). Parenting was their most commonly reported source of stress (63%), and family was their most commonly reported source of support (78%). Child behavior issues, such as temper tantrums, were the most common reason parents were referred to the program (37%), followed by child mental health issues, such as anxiety and attention problems (26%). Nearly all of the parents (93%, $n = 25$) were referred to the program by their pediatrician,

with one being referred by a nurse and one by a friend. Quite a few parents (44%) recalled seeing marketing material, such as pamphlets and signs, at their pediatric practice. The majority of parents (61%) had four or more parent coaching sessions. A more detailed description of the parents and service characteristics can be found in Table 3.

Overall positive view of the program

The majority of interviewed parents indicated being overall, very satisfied (84%, 21/25) or mostly satisfied (12%, 3/25) with the service they received through Parent ConnexTM (mean of 3.8, median of 4, interquartile range of 0). Only one parent (4%) reported feeling indifferent or mildly dissatisfied. The majority of parents (84%, 21/25) felt that most or all of their needs had been met through the program (mean of 3.5, median of 4, interquartile range of 1). Of the remaining 16% (4/25) who felt that only a few of their needs had been met, they gave reasons such as misunderstanding the scope of the services, feeling like their

Table 2 Change in parenting and psychosocial factors over time, accounting for child age, among biological mothers who participated in parent coaching at their pediatric primary care practice as part of the Parent ConnexTM program ($N = 280$)

Variable	Time 1 Median (IQR)	Time 2 ^a Median (IQR)	<i>B</i> (SE)	95% CI	<i>Z</i> (<i>p</i> value)
Healthy families parenting inventory (HFPI)					
Personal care	18 (4)	19 (5)	−0.003 (0.02)	−0.03–0.03	−0.15 (0.88)
Role satisfaction	23 (7)	24 (6)	0.06 (0.02)	0.03–0.09	3.79 (<0.001)*
Parenting efficacy	21 (5)	23 (4)	0.08 (0.02)	0.04–0.11	4.62 (<0.001)*
Parent-child interaction	39 (6)	41 (6)	0.12 (0.02)	0.08–0.16	6.32 (<0.001)*
Total score	101 (18)	107 (16)	0.28 (0.05)	0.18–0.39	5.30 (<0.001)*
Variable	% (<i>n/N</i>)	% (<i>n/N</i>)	<i>B</i> (SE)	95% CI	<i>Z</i> (<i>p</i> value)
Parent Connex TM Parent Questionnaire (PCPQ)					
Parenting stress	74% (181/246)	44% (107/246)	−0.09 (0.01)	−0.12–0.06	−6.06 (<0.001)*
Harsh punishment	14% (34/241)	7% (17/246)	−0.10 (0.03)	−0.15–0.05	−3.68 (<0.001)*
Depression	46% (113/245)	28% (68/246)	−0.04 (0.01)	−0.06–0.01	−2.87 (0.004)*
Substance use	2% (6/246)	2% (5/246)	−0.05 (0.04)	−0.12–0.03	−1.17 (0.24)
Financial insecurity	18% (44/246)	12% (29/246)	−0.03 (0.02)	−0.06–0.001	−2.04 (0.042)*
Domestic violence	2% (5/242)	2% (4/245)	−0.04 (0.05)	−0.15–0.06	−0.83 (0.41)
Any psychosocial concern	83% (204/246)	57% (139/246)	−0.07 (0.01)	−0.10–0.05	−5.90 (<0.001)*

$n = 277$ for analysis of HFPI, $n = 246$ for analysis of PCPQ, $n = 280$ across both analyses; estimates (β) are from generalized estimating equations modeling differential change over time for each domain with adjustments made for child age at session 1; * $p < 0.05$ indicates statistical significance

SE standard error, *CI* confidence interval

^aTime 2 was collected a median of 7 weeks after the first time point (IQR = 11, range = 2–50 for HFPI; IQR = 8, range = 2–48 for PCPQ) and after a median of three sessions (IQR = 1, range = 1–6)

“needs were just not in alignment” with the program’s services, and their “lack of follow through” with the services. For example, one parent stated, “Maybe the pediatrician just misunderstood what I was looking for”, and another stated, “Something else needed to be addressed, so he [my child] probably needed a different type of service”. Overall, parents gave an average rating of 9.5 (median of 10, interquartile range of 0.9) on a 10-point scale for how likely they would be to recommend the service to a friend or fellow parent. Eighteen parents gave a 10 rating (69%), five parents gave a 9 or 9.5 rating (19%), two parents gave an 8 rating (8%), and one parent gave a 5 rating (4%). Several parents revealed that they had already recommended the service to friends or family members. A few parents who were hesitant to recommend the services mentioned that they were a little embarrassed to admit to others that they needed help. All but one parent (21/22) indicated that they would come back to the program if they were seeking help again in the future (mean of 3.8, median of 4, interquartile range of 0). Most parents (81%, 22/27) stated that they would have been willing to pay for the services. Two parents recommended that the first session be offered at no cost. Several parents mentioned, however, that it would be beneficial for the services to continue to be offered at no or low cost to assist parents who may not otherwise be able to afford to pay for the services.

Motivation for program use

While a range of specific issues led parents to use the program (Table 3), it was typically an underlying sense of deep frustration with parenting that seemed to be the main driver for parents to schedule a session. A main theme across the interviews was that parents had tried to problem solve on their own but reported being “out of options” or “at wit’s end”. This level of frustration or desperation seemed to be related to parents feeling isolated in their struggles with their children and losing confidence in their parenting abilities.

Key program attributes

The top four themes related to the most beneficial attributes of the program were that the parents received: 1) normalization and validation of their experiences as parents, 2) non-judgmental support and reassurance, 3) concrete and easy-to-implement tools tailored to their specific needs, and 4) empowerment around parenting. Many parents discussed feeling great relief about being told that their issues were common and that they were not alone in their parenting struggles. One reported feeling like they had found a “non-judgmental sounding board” for their parenting issues. Another said that, “I felt like someone was on my team

Table 3 Characteristics of parents interviewed following participation in parent coaching services at their pediatric primary care practice as part of the Parent ConnexTM program ($N = 27$)

Characteristics	<i>n</i> (%)	Characteristics	<i>n</i> (%)
Number of children		Marital status	
1	4 (15%)	Married	13 (81%)
2	16 (59%)	Separated/divorced	2 (13%)
3	6 (22%)	Single	1 (6%)
4	1 (4%)	Household income	
Age of children		Two income	11 (69%)
Infant (<2 years of age)	6 (22%)	Single income	5 (31%)
Toddler (2–4 years of age)	26 (96%)	Reasons for referral ^a	
Youth (5–10 years of age)	19 (70%)	Child behavioral issues (e.g. tantrums)	10 (37%)
Pre-teen (11–13 years of age)	3 (11%)	Parenting tips (e.g. toilet training)	6 (22%)
Teenager (14–18 years of age)	3 (11%)	Child mental health issues (e.g. attention, anxiety)	7 (26%)
Sources of stress ^a		Family dynamics (e.g. divorce, new child)	5 (19%)
Children/parenting	17 (63%)	Child emotional issues (e.g. anger)	4 (15%)
Personal relationships	8 (30%)	Number of sessions	
Health (e.g. stress, cancer)	6 (22%)	1	4 (17%)
Work	5 (19%)	2–3	5 (22%)
Work/life balance	5 (19%)	4–5	8 (35%)
Sources of support ^a		5+	6 (26%)
Family (e.g. parents, sister)	21 (78%)		
Friends	11 (41%)		
Partner	6 (22%)		
Religion (e.g. church, prayer)	6 (22%)		
Other parents	4 (15%)		

^aParticipants could provide more than one response

trying to help me”. Many parents also talked about how much they appreciated the concrete strategies and resources that were offered by the Parenting Specialist. One parent said, “She made good connections with us and came up with good strategies in just a few [sessions], we only saw her I think 3 or 4 times”. One parent mentioned how they felt like the program was “tailored for busy moms”. Several parents talked about how well the strategies worked, like one parent who stated, “Having the tools to head off temper tantrums, I saw improvement in two months”. After meeting with the Parenting Specialist, parents also discussed how they felt empowered and emboldened to try something with their child rather than feeling defeated and out of options. Many reported a validating boost in confidence in their skills as parents. Representative quotes for each of these themes can be found in Table 4.

Key parenting specialist attributes

Repeatedly, parents mentioned the specific Parenting Specialist that they had met with by name and how ideally suited they were for the role. Nearly every parent mentioned how warm and friendly, supportive and empathetic, and knowledgeable their Parenting Specialist was and how

much it helped to have their own problems normalized by someone who understood. These characteristics appeared to play an important role in helping parents to feel comfortable in opening up and being more receptive to the strategies offered. The Parenting Specialists were frequently likened to a therapist, marriage counselor, or trusted friend. One parent stated that, “She made you feel really comfortable. I don’t know, it was like a partnership, but you also kind of felt like you were going to like a therapist. You know, she wasn’t just helping you solve the one issue that you kind of originally went in for. I felt like she kind of helped with a lot of other issues that you didn’t really realize you needed some help with”. Other representative quotes for these key attributes can be found in Table 5.

Ideas for program improvement

A small handful of the parents interviewed expressed specific ideas for improvements, which were mostly logistical or structural in nature, such as offering more flexible hours (e.g., evening availability) and having a dedicated office to meet with families instead of an exam room. All but two parents noted that it was easy and hassle-free to schedule with the Parenting Specialist. Two parents recommended

Table 4 Themes and representative quotes from parents about the key attributes of Parent ConnexTM

Key program attributes

1. Normalization and validation of parent experiences

“She was very relatable, you know. She shared things related to her own kids, and she very much normalized what we were experiencing”.

“It’s not like she’s just looking at a research paper and telling us how we should handle things. She has been through something similar, and you know, explained that she had other patients that have gone through this”.

“I really like the person that I saw. You know, she was very like, she made it very personal. She would share like her own experiences, which sometimes always makes you feel better because you feel like you’re not alone”.

2. Non-judgmental support and reassurance

“There was zero judgment. You know, I didn’t feel like there was any judgment talking about what was going on, and it’s a very easy thing to judge”.

“It was really comfortable. She kind of, she let me talk when I had something to add, ask questions, and was really like supportive of, you know, the things that I said. She, you know, would say that’s really great and that she would offer me, you know, other things that I could do or maybe things that I could do differently, but she never made me feel like I was doing anything wrong ever”.

3. Concrete and easy-to-implement tools tailored to specific needs

“And they worked! They totally worked for the things that were going on with him at that time, the tantrums over what had happened. You know, it was all things that were...like she knew a single mom with a 3-year-old who is working is going to be able to actually do and not just give me stuff that I’m going to take home and throw away”.

“It’s specifically for you, which is really cool. You don’t really get that nowadays. Now it’s like, here’s a general parenting book, or here’s some other general things”.

4. Empowerment around parenting

“I felt encouraged and empowered to try some things instead of you know feeling conquered”.

“I felt a little more confident in how to approach problems and, you know, a lot of the suggestions she made were actually really helpful for us, and I also felt a little more confident in my ability to parent because I had no idea if I was doing the right things”.

“I thought it was really helpful. She, you know, like I said, first and foremost, she just made me feel like, ok, this is normal, and you know something terrible isn’t wrong. And I felt like she helped me build back some like confidence in my parenting, so when I went in there, I felt like I was like doing everything wrong and, you know, she helped me like deal with the big stuff but also I think like was good at kind of pointing out some things that I was doing right along the way that you don’t always see when you’re kind of down about how it’s all going”.

that the advice offered be more “practical or realistic”. One stated, “I really liked [the Parenting Specialist], but there were examples that she gave, or examples that I gave that she gave me some strategies on, that I, in theory, in the office, sounded amazing but were very difficult to realistically execute during the chaos of two kids and work and,

Table 5 Themes and representative quotes from parents about the key attributes of the parenting specialists who provided parent coaching services as part of the Parent ConnexTM program

Key parenting specialist attributes

1. Warm and friendly

“I thought she was fabulous. [...] I felt like she was very friendly. Like, I mean, I would’ve wanted just to go hang out with her. It’s like she was a personal psychologist. Like, she was making me feel like I wasn’t a complete total, parent loser”.

“I thought she felt warm and genuine. I liked her, and I felt comfortable around her”.

“She was extremely welcoming, and she was just like, she had this really soft tone like this really nice tone of voice that makes you feel really comfortable”.

“She was amazing. She was very warm, friendly, extremely professional, and she made me feel like I was still doing a really good job being a parent, even though she doesn’t really know me, but the things that I expressed, she said that I was like on track. It gave me confidence as a parent”.

2. Supportive and empathetic

“From the very start of walking in there, she was fantastic. Yeah, she’s super empathetic. She was super supportive, and you know, she was really good at like helping me release that guilt”.

“She treats you like you’re a capable parent, which is nice. I kind of felt like it was like sometimes talking to like my mom. I know that sounds weird, but like she just gives you professional advice, but she does it in kind of like a motherly way, so you don’t feel like it’s somebody lecturing you. It’s more like somebody who’s on your team trying to help you”.

3. Knowledgeable

“I thought she was extremely knowledgeable. She was very upfront with me in the beginning. [...] Very nice, very open, very friendly, very knowledgeable”.

“She was very receptive. She listened very carefully to what our concerns were and what our family dynamic was, so I feel she definitely paid attention, and so I had a lot of confidence in her. [...] She was like somebody who really cared about her own children and family and about families in general. She seemed like the type of person who was made to be in this type of role because she just wants to help families create a positive dynamic, so I really felt like we were speaking to someone who was well-qualified to guide us through these struggles”.

you know, everything”. One parent suggested that the program be less “prescribed” and more tailored to their child and family’s unique context.

Discussion

The Parent ConnexTM program combines screening and monitoring for parenting and family psychosocial concerns with co-location of a Parenting Specialist who provides positive parenting support within pediatric primary care practices. This pilot project assessed the perspectives of parents who participated in Parent ConnexTM and found that nearly all were highly satisfied with the accessibility,

convenience, and quality of the parent coaching service and considered it to be a beneficial addition to pediatric health care. A subset of parents who completed assessments at multiple time points during parent coaching demonstrated improved role satisfaction, parenting efficacy, and parent-child interaction over time and a decreased percentage reported psychosocial concerns, particularly parenting stress, harsh punishment, depression, and financial insecurity, over time.

The vast majority of parents interviewed (96%) had a positive view of the program. Nearly all (96%) stated that they would be highly likely to recommend the service to a friend or fellow parent, and most felt like the majority of their needs had been met. Four out of five parents stated that they would have been willing to pay for the services, up to \$100 per session. Parents reported reaching out to use the program due to a deep sense of frustration with parenting and feeling like they were out of options. The key elements of the program that parents discussed as being most beneficial were how the Parenting Specialists normalized their experiences, provided non-judgmental support and reassurance, offered concrete tools tailored to their specific needs, and empowered them to feel more competent in their parenting. The parents spoke about how the attributes of the Parenting Specialists, specifically how they came across as warm and friendly, empathetic, and knowledgeable, helped them to feel more comfortable opening up and more willing to try strategies and resources.

Prior studies have also found that parents are more open to parenting interventions when the practitioner takes a non-directive approach and does not immediately teach or confront (Patterson & Chamberlain, 1994). During parent coaching, the Parenting Specialists used motivational interviewing skills to take a collaborative, non-judgmental approach to eliciting, understanding, and normalizing the parent's concerns prior to envisioning goals, setting intentions, or providing information. By listening in a non-judgmental way and generating goals, intentions, and plans, the Parenting Specialists were also modeling and promoting self-regulation skills, which Sanders and Mazzucchelli (2013) describe as fundamental to maintaining positive, nurturing, non-abusive parenting practices. Furthermore, mindful parenting practices were incorporated into the parent coaching sessions to promote the non-judgmental acceptance, emotional awareness, and compassion of the parent toward themselves and their child. These mindful parenting practices have previously been found to enhance parent-child relationships (Duncan et al., 2009; Coatsworth et al., 2010). Taken together, these approaches of normalizing the parent's concerns and promoting their self-efficacy, self-regulation, and self-acceptance may have contributed to the parents increased sense of competence in their parenting. This combined approach seemed to be well-received by parents.

Few other studies have reported on the perspectives of parents who have participated in positive parenting interventions in primary care. One study on the Incredible Years parenting education program in primary care similarly found that all mothers who completed the full series of 10 group sessions felt positive about the program and stated that they would recommend it to a friend, and three out of four were satisfied with their child's progress (McMenamy et al., 2011). Analogous to our findings, this study also found that parents expressed increased confidence in managing future behavioral problems, improvements in their parenting skills, and that the program helped them with other family or psychosocial concerns (McMenamy et al., 2011). Furthermore, other prior studies have found that parents who receive screening and parenting interventions in pediatric primary care report being more satisfied with their child's doctor and finding them to be more competent, caring, helpful, and family-centered than parents who receive usual care (Feigelman et al., 2011; Johnston et al., 2004; Coker et al., 2016). These studies evaluated the Safe Environment for Every Kid (SEEK) model that integrates psychosocial risk screening and brief provider intervention and referral into well-child visits from birth to age 5 (Feigelman et al., 2011), the Healthy Steps for Young Children program that integrates Healthy Steps Specialists within primary care to provide developmental screening and parenting guidance to parents with infants through team-based well-child visits (Johnston et al., 2004), and the PARENT program that integrates health educators within primary care to provide psychosocial and developmental screening, guidance, and referral during well-child visits from birth to age 2 (Coker et al., 2016). These three programs also show evidence of improving child health (Dubowitz et al., 2009; Johnston et al., 2006; Coker et al., 2016). Collectively, these findings support that parents find integration of screening and positive parenting interventions within pediatric health care to be feasible, acceptable, and beneficial for them as parents.

Furthermore, parenting programs like Parent ConnexTM may also serve as a preventive measure against childhood adversity (Prinz et al., 2009) and behavioral health issues (Maughan et al., 2005; Nowak & Heinrichs, 2008; Reyno & McGrath, 2006). Parenting programs aim to strengthen parent-child relationships and enhance problem-solving through building confidence and family management skills (Biglan et al., 2017). Families equipped with self-regulation and conflict management skills may be better able to navigate stressful situations, which may reduce the likelihood that adverse situations occur (Bultas et al., 2017; Sanders & Mazzucchelli, 2013).

The sustainability of integrating collaborative models like Parent ConnexTM within health care is a challenge due to the lack of payment mechanisms (Stancin & Perrin,

2014). Traditionally, medical and mental health services have been delivered and funded separately, which has created fiscal challenges related to the coding and billing for integrated services (Blount et al., 2007; Campo et al., 2018). Evidence suggests that integration of these services results in better behavioral health outcomes and reduced medical costs (Blount et al., 2007; Asarnow et al., 2015). Preventive services that bridge the two systems like Parent ConnexTM face additional challenges, such as insurance restrictions precluding reimbursement for services not provided by a licensed professional or not associated with a medical diagnosis. Policy changes that would make it possible to use existing billing mechanisms to charge insurance for these preventive services would help to make programs like Parent ConnexTM sustainable. The majority of parents in this pilot valued the preventive service so much that they would have been willing to pay for it. That option, however, would not be feasible for many patient populations. Therefore, alternative payment models (e.g., bundled payments, shared savings) are needed to support the integration of preventive and collaborative care services within health care, as these approaches have the potential to reduce long-term medical costs to a degree that more than offsets the cost (Blount et al., 2007).

Limitations

This study was not without limitations. The lack of a control group precludes a causal interpretation of the findings related to change in parenting and psychosocial factors over time. Parents may show natural changes in these factors over time. These analyses are further limited by the use of parent-reported measures, the variable number of sessions provided and time between sessions, and the limited sample of mothers who completed the measures at multiple time points. A response bias may have also existed in the 30% completion rate for the satisfaction survey. This rate, however, is similar to the 32% completion rate of satisfaction surveys for general medical hospitals (Siddiqui et al., 2014) and primary care providers (Mazor et al., 2002). Furthermore, the perspectives of the small sample of parents interviewed may not be representative of all parents who participated in the program. Also, the majority of parents who participated in parent coaching (71%) and responded to the satisfaction survey (73%) had an annual household income greater than \$75,000, limiting generalizability to low income families who may experience additional barriers to utilizing these services. There was also a greater proportion of white or Caucasian participants who engaged in parent coaching (93%) and responded to the satisfaction survey (96%) when compared to the general population of this metropolitan area (79%), suggesting disparity in the utilization of either these practices or the parent coaching

service (U.S. Census Bureau, 2018). It is unknown whether there was a self-selection bias in which parents chose to participate in parent coaching and chose to complete the surveys. Demographic information was not collected on parents who were referred but chose not to participate in parent coaching. Future studies should explore the distinguishing characteristics of parents who do and do not choose to participate in parent coaching as well as evaluate the feasibility and acceptability of this program within more representative populations.

Conclusions

Parent ConnexTM is a strengths-based positive parenting and prevention program co-located within pediatric primary care practices that equips and empowers parents in managing challenging child behaviors and family psychosocial concerns. Participating mothers who completed assessments at multiple time points demonstrated strengthened parenting and reduced psychosocial concerns over the course of parent coaching. Nearly all parents surveyed and interviewed as part of this pilot project were highly satisfied with the Parent ConnexTM program. The pediatric primary care setting offers a promising platform for delivering positive parenting interventions like Parent ConnexTM. Parents attend well-child visits frequently during children's early years and commonly seek pediatrician advice on a range of parenting and child behavior concerns, often as their first point of contact (Shah et al., 2016; Leslie et al., 2016). Parents have previously reported being more inclined to use services that are co-located within pediatric primary care because of the trust they have with their physician, the service being offered at a familiar location, and the ease of getting an appointment (Ward-Zimmerman & Cannata, 2012). Given the wide acceptance and utilization of pediatric primary care, integration of positive parenting interventions within this particular setting could provide a population-level approach to enhancing parenting capacity and skills in an effort to protect and promote child health. However, payment models are needed to support this integration so that they can become more widely available. A more rigorous study design with a control group, however, is needed to better understand the relative effectiveness of this program on improving family functioning and child health.

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Compliance with Ethical Standards

Conflict of Interest The authors declare no competing interests.

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Consent to Participate Verbal informed consent was obtained prior to the interviews.

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