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Using a Brief Multimedia Educational Intervention to Strengthen Young Children’s Feelings while Visiting Jailed Parents

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Abstract

The significant number of annual US jail admissions is intricately tied to the increasing population of children with incarcerated parents. Some proportion of these children will visit their parents in jail, and the limited research linking visits to young children’s well-being is mixed. Sesame Street developed multimedia educational materials to support young children with incarcerated parents, including specific messages around visiting. The educational materials have been found to positively shape how caregivers talk to children about parental incarceration, though a gap remains regarding young children’s self-reported experiences. In a preliminary randomized efficacy trial of these educational materials, the current study examined 67 young children’s (aged 3–8) self-reported feelings while at the jail following viewing of the video materials, including their feelings about their caregivers, incarcerated parents, families, and visiting in general. Data were collected when children arrived at the jail (before half were randomized to watch the intervention materials) and then again following the intervention. In the treatment group, the proportion of children reporting positive feelings increased from pre- to post-test, most saliently for feelings about families, while feelings decreased overall for those in the control group. The intervention was associated with positive feelings about family, especially for those children who were told developmentally appropriate information about the parent’s incarceration prior to arrival at the jail. The exploratory findings shed light on young children’s emotions when visiting parents in jail and the buffering role that intervention materials can have in offering support to help manage feelings during jail visits.

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Conflict of Interest The authors declare no competing interests.

Ethical Approval All research protocols were approved by the University of Wisconsin-Madison and the University of Minnesota Institutional Review Boards (Protocol: Sesame Street Materials: Using Developmentally Appropriate Educational Materials to Improve Child Behavioral Health and Family Relationships when Parents Are in Jail).

Informed Consent Participation in the study was completely voluntary; all jailed parents and caregivers provided written consent for their own and their children’s participation in the research and all children offered verbal assent.

Keywords

Children; Feelings; Incarcerated parents; Intervention; Jail

Parental incarceration is a significant public health concern that has impacted a growing number of children over recent decades of mass incarceration (National Research Council, 2014). On any given day in 2019, the United States' carceral system detained more than 2.3 million individuals (Sawyer & Wagner, 2020), though point-in-time estimates miss the portion of individuals who enter and exit the system each year. For instance, jails – locally operated confinement facilities that house individuals awaiting sentencing or for those with sentences for misdemeanor offenses of one-year or less – admitted more than 8 million people in 2020 alone (rates that were down from 10.3 million in 2019 due to the COVID-19 pandemic; Minton & Zeng, 2021). Estimates suggest that about two-thirds of those in prison and upwards of 80% in jail are parents of minor children (Sawyer & Bertram, 2018, Shlafer et al., 2019). This equates to more than 5 million children who have experienced the incarceration of a parent with whom they had lived, with most initial episodes of parental incarceration occurring before the time a child turns 9 years old (Murphey & Cooper, 2015).

When a co-resident parent becomes incarcerated, it can abruptly alter family structure and dynamics. In an attempt to maintain close relationships, most prisons and jails offer visiting opportunities for incarcerated individuals to stay connected with family members. More than three-quarters of parents in prison report some contact with their children while incarcerated, though less than half receive personal visits (Glaze & Maruschak, 2010). While similar representative estimates for parent-child jail visits do not exist, one study found that 25% of fathers had weekly and 18% had monthly visits, with just under half having never been visited (Shlafer et al., 2020). Overall, it may be that rates of visits in jails are similar to or even higher than what is reported in prisons given that jails are often located in areas closer to the communities individuals previously resided in and may therefore be closer to where families live. While research on the consequences of visits with incarcerated parents for young children is mixed (Cramer et al., 2017), there is a need for evidence-based strategies that support children during these visiting experiences so as to promote the most optimal outcomes.

Visiting parents in jail can be challenging for young children as they may be particularly sensitive to security protocols and potentially re-traumatized by aspects associated with the loss of their parents (Arditti et al., 2003). As such, child-focused and trauma-informed resources may help children learn about incarceration in a simple and developmentally appropriate context thereby mitigating challenges before, during, and after visits. The current study examines how educational materials developed by Sesame Workshop for children with incarcerated parents can positively influence children's feelings while visiting parents at jail. The study builds off of prior work that finds these resources to be useful for children and families (Poehlmann-Tynan et al., 2021), now leveraging data collected from children directly to understand how these resources may change their feelings while visiting with parents, as well as how these associations may be moderated by the information they are given about the incarceration.

Background

Children with Parents in Jail

Parental incarceration can be a confusing, complex, and stressful experience for children, particularly for infants and young children. Boss (2006, 2007, 2009) originally coined the term “ambiguous loss” to provide a theoretical framework for describing a type of loss in a family that lacks clarity or resolution, making it difficult for someone to adjust to the absence of a loved one. The theory has since been extended to the context of parental incarceration, applying it as a key mechanism behind children’s adjustments (e.g., Arditti, 2005, 2012, 2016). When a parent is incarcerated, they are physically separated from their child’s day-to-day life despite often having an ongoing psychological presence in a child’s mind and heart. This duality of the parent’s presence and absence can create ambiguity for a child, contributing to conflicting feelings such as love and anger, longing and confusion. Parental incarceration can also lead to ambiguity in terms of parenting roles, as it disrupts family dynamics and may leave a child uncertain about their own position within the family unit. This “ambiguous loss” can result in a range of emotional challenges for children with incarcerated parents, including grief, guilt, and disconnection. Yet, much of this ambiguity may come to a head when children visit parents in jail. Although physically present with the parent again during the visit, a child and parent may still feel a sense of loss due to the constrained and unfamiliar environment and separation from each other’s everyday lives, on top of the uncertainty and lack of resolution that comes with leaving at the end of the visit. Although some research has explored ambiguous loss in the context of parental incarceration in adults and older children (e.g., Bocknek et al., 2009; Johnson & Easterling, 2015), more research guided by this theoretical framework is needed to understand young children’s feelings while visiting parents in jail, as well as the extent to which evidence-based practices can prioritize and support the well-being of young children.

As previously alluded to, one in every fourteen U.S. children experience the incarceration of a co-resident parent (Murphey & Cooper, 2015). Compared to peers who have never experienced parental incarceration, those with incarcerated parents are more likely to display behavior problems and experience challenges in school, including lower levels of non-cognitive school readiness and higher rates of repeating grades (Haskins, 2014, 2015; Haskins et al., 2018; Johnson, 2009; Turney & Haskins, 2014). Additionally, they are five times more likely than their peers to experience other adverse childhood experiences, such as experiences of poverty or exposure to violence (Turney, 2018). Previous research that examines parental jail incarceration finds that children and families are at increased risk for experiencing financial stress, residential insecurity, and parents’ own unmet mental health needs (Arditti et al., 2003; Milavetz et al., 2021; Muentner et al., 2019). This represents an accumulation of chronic stress experienced by the family prior to and during parents’ carceral experiences in jail. In fact, Muentner and colleagues (2021) found that children who witness the arrest of their jailed parent on top of pre-existing behavioral stress had the most maladaptive physiological stress processes which paralleled that of those with post-traumatic stress disorder.

Owing to young children's limited developmental capabilities, much of the existing literature on young children with incarcerated parents relies on parent-report methodologies, with only a few studies employing strategies that garner information from children directly. Some studies have interviewed children during middle childhood or adolescence. For instance, Bocknek et al. (2009) asked youth between first and tenth grade about struggles they experienced while parents were away, such as feelings of stress, loneliness, and wishing they knew more about their incarcerated parents' whereabouts. Similarly, Saunders (2018) interviewed children between 8- and 18-years-old about the ways in which stigma around parental incarceration shaped the way they navigated relationships with others. However, with such wide age ranges, researchers should expect variability in the length of answers to open-ended questions, be mindful of the sensitive nature of parental incarceration, and prepare follow-up probes for younger children (Siegel & Luther, 2019). Indeed, different and more developmentally appropriate strategies may be necessary to capture young children's feelings. For example, Dallaire and colleagues (2012) coded drawings of children between 6- and 10-years to assess depictions of family and explore their feelings about family members and visits. Muentner et al. (2021) employed a physiological measure of young (aged 2–6) children's stress (i.e., assessing cortisol and cortisone in hair samples), moving the needle beyond solely parents' reports of distress. Finally, Dunlea et al. (2020) used a Likert-type scale to ask children between 6- and 12-years-old about feelings towards their incarcerated parents, finding that these children reported generally positive attitudes which were even stronger when children had access to ample social support (e.g., parents, friends).

What Children are Told about Parents' Incarceration

Children may especially struggle to process their parent's incarceration depending on what they were told about their parent's whereabouts. Some children are provided with a developmentally appropriate explanation while others may be told a vague explanation, or nothing at all (Runion, 2017; Shlafer & Poehlmann, 2010). Still others may engage in compassionate deception and tell the child that the parent is at school, on vacation, or elsewhere to shield the child from the emotional burden of this sensitive information (Hart-Johnson, personal communication, March 21, 2022). This may leave children feeling confused as to why no one will tell them what is happening and they may feel isolated and believe that they are the only one experiencing this emotional loss. While it is true that these conversations between caregivers and children can be emotionally taxing and challenging to navigate, parents' communication strategies have been positively related to children's emotional coping and proves to help buffer stress that children experience (Gentzler et al., 2005; Farrell et al., 2018). Put simply, children may likely benefit from talking through experiences and emotions regarding parental incarceration with a trusting and supportive caregiver or parent.

These trends are seen in the few studies that have examined this link for young children with incarcerated parents. Pointedly, providing children with developmentally appropriate information as to their incarcerated parents' whereabouts has been found to have more secure attachments and positive emotions when visiting their parents in jail (Poehlmann, 2005; Poehlmann-Tynan et al., 2021). Recent work has found continued positive associations of this even after parents are released, particularly in reduced behavior

problems for young boys (Muentner & Eddy, 2023). In interviews with children with incarcerated family members, Bocknek and colleagues (2009) relayed a child's request to "know about themselves and know about what their families do," suggesting that young children yearn for more details about their parents' incarceration (Bocknek et al., 2009, p. 329). In short, children's feelings of confusion and isolation associated with parents' incarceration may be shaped and even mitigated by developmentally appropriate and honest conversations with trusted adults.

Challenges with Visiting

When a parent is incarcerated, some families may choose to bring their child to the jail for in-person visits. In fact, approximately 55% of parents in jail received visits from their child, with 25% receiving visits at least weekly (Shlafer et al., 2020). Depending on the policies at each facility, the nature of these visits may differ in form. For example, one study reported that families walked through a metal detector and had their bags searched upon entrance of the visitation area, where families sat at tables for a contact visit, or spoke with their family member through clear plastic barriers and a single corded phone (Pritzl et al., 2022). In a different study, Poehlmann-Tynan et al. (2015) described a case study in which a child visits her parent via closed-circuit video in a non-secure area of the facility, thus forgoing any security procedures. Additionally, policies tend to change over time, as evidenced by the COVID-19 pandemic. In an attempt to slow the spread of the virus, facilities completely closed any in-person visits, and some facilities adjusted by providing remote video visits in which families can call their incarcerated loved-one from home (Charles et al., 2021a, 2021b; Dallaire et al., 2021).

Parallel to the motley nature of visiting policies, past literature exploring the relationship between parent-child contact and child outcomes has resulted in mixed findings. For example, Trice and Brewster (2004) found that children who had more contact with their incarcerated mothers did better academically, but Dallaire and colleagues (2009) found that more contact was related to insecure parent-child attachments. Of course, this variability may be due to the fact that visits between parents in jail and their children may be experienced very differently based on several factors, including the carceral setting, as well as child's age and developmental stages, and the history of the parent-child relationship. Visits may be challenging if children do not understand the rules and policies they must follow, such as why they can see but not touch their parents in the case of Plexiglas visits. Indeed, evidence suggests that children are more likely to display negative emotions during Plexiglas than during in-person video or contact visits (Poehlmann-Tynan et al., 2015; 2017).

However, Poehlmann et al., (2010a), describe the importance of contact for children and families and the extent to which the visit environment plays into this, calling for more spaces to be designed to be child friendly. Schubert et al. (2016) explored an Extended Visiting program where minor children and their incarcerated mothers engaged with each other during 4 h long visits in prison. These visits were child-friendly as they provided opportunities for a variation of activities, free play, and positive physical contact such as hugging and holding hands throughout. Mothers who participated in the program described

how the Extended Visits allowed them to maintain connections with their children and re-assume their roles as mothers. Additionally, all the mothers and the participating children who had experienced typical visiting in the past preferred the Extended Visits over typical visiting (Schubert et al., 2016). In the UK, the Invisible Walls Wales project provided family-friendly visits with informally dressed staff, and utilizing plants, colors and art in the visiting space (Clancy & Maguire, 2017). Families who participated reported positive impacts in their personal relationships; families reported feeling closer, and children were happier as a result of the program. Taking this together, when institutions make dedicated efforts to support children, it has the potential to mitigate risk and enhance the degree to which children and families can connect. This calls into question how educational materials may help children gain a better understanding of the contexts of jail visits and shape how they cope with seeing their incarcerated parents.

Educational Materials to Support Parents and Children

There are several benefits for using media as a tool for support for young children. While a digital divide in media access exists between families with lower and higher household income, the majority of families in the US, including lower income families, have access to the internet, and almost all families have a smartphone in the home (Rideout & Robb, 2020). This is especially important as children who live in poverty are three times more likely to experience parental incarceration than their counterparts (Murphey & Cooper, 2015). Further, the digital format provides more flexibility to families who may not engage in more traditional interventions (e.g., support groups, formal therapy) due to work schedules and challenges with travel (Murry et al., 2019). Therefore, not only are online media resources widely available for families who experience parental incarceration, but the digital format reduces schedule and travel barriers, thus increasing accessibility and family engagement. Additionally, the private nature of media resources may help families to feel more comfortable talking about sensitive topics, which may be useful to parents who struggle to talk about parental incarceration with their children (Murry et al., 2019).

Sesame Workshop took advantage of the benefits of multimedia interventions and developed a series of educational toolkits, titled *Little Children, Big Challenges*. The toolkits are designed to help children navigate everyday challenges, transitions, and stressful life events (Oades-Sese et al., 2014). By leaning on resilience theory and the idea of the child as an active player in learning, Sesame Workshop designed a set of multimedia resources, which are freely accessible online for both parents/caregivers and child care providers. The toolkits include a story with a muppet experiencing a specific life challenge to explain what it means to be in that particular situation and to normalize the experience and validate that it is okay for families to be different in this way. Additionally, a complementary parent guidebook helps parents communicate with their children in a developmentally appropriate manner by providing a natural setting to spark conversation as the storybook is read together (Oades-Sese et al., 2014).

In 2013, a *Little Children, Big Challenges* toolkit was developed for children with incarcerated parents. This toolkit encourages three key protective factors including attachment relationships, emotional understanding, and a sense of self. It aims to provide

children with the tools and language necessary to cope, aid families in expressing emotions surrounding parental incarceration, expand children's vocabulary regarding feelings, provide the parent and caregiver with tips, and reassure children that they will still be cared for and loved and that they can adjust to the situation along with their families (Oades-Sese et al., 2014). These incarceration-specific materials follow Alex, a newly developed muppet whose Dad is incarcerated, navigating his relationships with friends, feelings of isolation and loneliness, and complex conversations with the adults on Sesame Street. This storyline is complemented by another animated video of a young girl going with her family to visit her father in prison, as well as a story book where another muppet character navigates stigma at school because her dad is unable to attend a school event due to being in jail. The lessons learned through these stories, as well as the caregiver support resources, give families the support to talk about emotions regarding parental incarceration and become more familiar with the process of visiting - hopefully prior to experiencing it first-hand.

These resources are publicly available at <https://sesameworkshop.org/topics/incarceration/> or found by searching "Sesame Workshop, Incarceration" on the web. Upon arrival to Sesame Workshop's webpage, users will be introduced via video to the muppet, Alex, who shares his story of parental incarceration with an adult and a fellow muppet friend. In addition, there are a number of links for all family-centered resources included in the printed toolkit, for example: an overview of strategies adults can use to help children cope with the changes of incarceration, tips for helping children stay connected with their incarcerated parents, and a caregiver exercise related to self-care. The website also features a free, read-aloud storybook that shows how a child may feel when an incarcerated parent misses a special event, along with a sweet song titled, "You Are Not Alone," that Alex and his muppet friends sing together which encourages children that they have a support system to help them. The webpage also links to other topics that may provide helpful resources for parents, caregivers, and providers, such as coping with traumatic experiences, helping children understand and express their emotions, and offering calming strategies. The webpage includes these resources in both English and Spanish.

In a randomized efficacy trial examining child behaviors and emotions, Poehlmann-Tynan et al. (2021), found that utilizing these videos and resources helped to regulate children's positive affect and behaviors before, during, and after a visit when children were told a simple, honest truth about their parent's incarceration. Comparatively, those who did not view the materials began visits with negative affect which plateaued over the course of the visit while those who watched but were not appropriately informed similarly exhibited negative reactions. This same study assessed what components of the resources that caregivers found to be most helpful two-weeks after the visit, with caregivers saying that the videos and story books helped to identify and respond to children's feelings, prepare them for jail visits, and engage in developmentally appropriate conversation about where their parents are. Indeed, caregivers who used these educational outreach materials at home were twice as likely to tell their child a developmentally appropriate honest explanation. Despite these promising results, children's reports of their own feelings before and after a visit as a result of these Sesame Street videos have not yet been examined.

Current Study

As mentioned, ambiguous loss theory has been applied to articulate the challenges young children may face during parental incarceration (e.g., Arditti, 2016) given its conceptual basis in contextualizing loss that is unclear, either physically or psychologically (Boss, 2006). In the case of children with incarcerated parents, this may manifest when they notice a physical absence of their parents in day-to-day life that is at odds with what they were used to, especially for those who lived together prior to the incarceration. Further confusion may arise depending on whether they understand the concept of incarceration, whether they know how to contact their parents, or whether they believe they participated in behavior which caused their parent's absence. Children may communicate this struggle with ambiguous loss through emotional distress, which is an indication of negative child adjustment (Arditti, 2016). This, in turn, may be a mechanism by which visits between children and their incarcerated parents may have mixed results for the child. However, when completed in a developmentally-appropriate context, visits have the potential to facilitate the creation and maintenance of positive family bonds.

Because of the sizable population of children with incarcerated parents and documented negative sequelae for their developmental outcomes (e.g., Poehlmann-Tynan & Turney, 2021), it is critical to find ways to support this vulnerable group of children. Limited interventions and resources have been created and made accessible for children and families impacted by parental incarceration, and existing materials or programming have rarely been evaluated (Wildeman & Wang, 2017). As such, the current study examines how incarceration-specific educational materials designed and developed by child development experts with Sesame Workshop have the potential to shape children's feelings over the course of a visit with their parents in jail. By directly assessing children's feelings with child-report measures, the study begins by descriptively examining differences and changes in children's feelings across the course of a visit for those who watched Sesame Street's *Little Children, Big Challenges: Incarceration* videos and those who watched Sesame Street control videos. From there, it considers the ways in which these materials may be associated with positive improvements in children's feelings, as well as the ways in which the information children are given about their parents' incarceration may alter these associations.

Method

Procedure

Data for this study come from a larger, multisite randomized efficacy trial of Sesame Workshop's *Little Children, Big Challenges: Incarceration* materials (Poehlmann-Tynan et al., 2021). The study began by sampling incarcerated parents and their families across four jails in separate Midwest counties, each of which were run by the county sheriffs' departments. In three of the jails, information about the study was shared by posting flyers in housing units and through weekly informational sessions. Those who were interested then completed a screening process; parents were deemed eligible if they were over 18-years-old, retained parental rights for a child between 3- and 8-years (if multiple, one was chosen at random), had not committed a crime against the family, were involved in the child's

life before the incarceration and expected them to visit the jail, were not expecting to be released within the next week, and could speak and read English. Those interested and eligible gave consent and provided contact information for the child's caregiver. Interested caregivers, then, provided consent for themselves and the child. In the fourth jail, children and caregivers were sampled directly by placing flyers in the visiting area to target families coming to visit. If caregivers were interested and consented, a research team member held a one-on-one meeting with the parent in jail to determine eligibility and gather consent. For additional information about the jail sites, visiting protocols, and daily population averages, please refer to Poehlmann-Tynan et al., 2021.

The intervention began at a child's upcoming visit with their parent at the jail. Prior to the visit (most often directly following informed consent), incarcerated parents completed a series of questionnaires regarding demographics, visit experiences, and attitudes toward the educational materials. When the family came to visit, a research team member met them in the jail waiting area where the study team administered a series of surveys to the caregiver and conducted warm-up assessments with the child (developmental screenings and family drawings). From there, children and caregivers were randomized into one of two conditions: the treatment condition where children watched Sesame Street's *Little Children, Big Challenges: Incarceration* educational videos or the wait-list control condition where children viewed a Sesame Street video about the weather. Regardless of condition, each video was viewed on an iPad with headphones. Following the video, children completed a pre-assessment of their feelings on the iPad and then proceeded with the visit. All visits on-site at the jail were non-contact visits. All child visits were accompanied by a caregiver, per jail facility and policy. Through either Plexiglas or over video, children and families could see the jailed parent, though only one family member could speak and hear the jailed parent at a time, listening through a headset similar to a phone receiver. After the visit, children again reported their feelings on the iPad. Those in the control condition were mailed the educational materials after study completion. Because of jail regulations, incarcerated parents were unable to be compensated for their participation, but following the visit caregivers received \$50 for their participation and children were given an age-appropriate book and stickers.

Sample

In total, sixty-seven children participated in the study all of whom ranged in age between 3–8 years ($M = 5.54$, $SD = 1.80$), as this is the recommended age for the Sesame Street materials. Just over half of the participating children were boys ($n = 37$, 55.22%) and two-thirds were Black, Indigenous, and people of color (BIPOC; $n = 44$, 65.67%). The majority (83%) of children had visited parents in the jail before and lengths of separation from parents due to the current jail incarceration ranged from a few days to over a year, with a median of 60 days. Nearly 90% of incarcerated parents were fathers (thus, 10% were mothers), and the majority of children's caregivers were their mothers (69%; others included grandparents, fathers, and extended family members). Half of the children were randomly selected to receive the treatment intervention ($n = 31$, 46.27%) and the other half were assigned to the control group. Please refer to Panel A of Table 1 for more complete demographic information and breakdowns by treatment assignment.

Measures

Intervention Materials—The intervention consisted of either one of two Sesame Street videos depending on group assignment, each of which was under 10-min in length. The first was for those in the treatment group and featured the new muppet character, Alex, whose dad is incarcerated. In this video, Alex’s friends decide to make toy box cars with their dads, making Alex feel sad because his dad was not present to participate. Alex’s friends are perplexed at his distress until he shares that his dad is incarcerated. An adult who shares Alex’s lived experience of parental incarceration validates his feelings and helps his friends to understand that “incarcerated” is when someone breaks the law, or what she describes as “a grown-up rule,” and then has to go to a place called jail. This segues into an animated video depicting the journey of a child visiting her dad in jail, from traveling to the facility, going through security procedures, waiting to see her dad, finally getting to talk to him, and the emotions experienced at the end of the visit and on the way home. The sequence ends with the muppets singing a song to Alex called “You are Not Alone.” Children in the wait-list control group watched a Sesame Street video discussing the weather. Following the study, these families in the control group were mailed the Sesame Street’s *Little Children, Big Challenges: Incarceration* resources. The analyses account for treatment assignment with an indicator as to whether the child watched the incarceration-specific Sesame Street video (=1) or the weather-related control video (=0).

Children’s Feelings—Prior to watching the videos, children completed an assessment on an iPad wherein they were instructed to touch a face (emoji icon) that represented how they were feeling on a variety of topics (Fig. 1). The scale ranged from a crying to neutral to smiling face and is similar to pain scales used in pediatrics research, clinical work, and previous research (e.g., Mares et al., 2015; Peebles et al., 2018). Children used this instrument to answer five questions: (1) How do you feel right now? (2) How do you feel about the grown-up who brought you today? (3) How do you feel about visiting today? (4) How do you feel about the parent you are here to see today? and (5) How do you feel about your family? Given that the five emoji icons were arranged in a likert scale format from crying to broad smiles, values from 1 to 5 were assigned indicating that higher values meant more positive feelings. After viewing the assigned video, children again reported their feelings to the same questions using the same scale.

Due to non-normal distributions for responses at each time point, children’s feelings were dichotomized as to whether they were feeling positively (slight to broad smile representing scores of 4 or 5; = 1) or more negative or neutral (crying, sad, or neutral faces representing scores of 1, 2, or 3 on the original scale; = 0) across each of these five items. Descriptive summaries of these variables for pre- and post-tests can be seen in Panel B of Table 1, both for the whole sample and then separately by treatment condition.

What Children were Told—During the caregiver interview, researchers asked “What has the child been told about their parent’s jail stay?” Researchers wrote down the caregivers’ responses verbatim, which were later coded. Responses, such as “Daddy is in jail, he will be home soon and he will always love you,” and “Well he knows he’s in jail and that he can’t live with us, but he will come back to live with us someday. He knows dad broke a rule,

and when you don't follow the rules there's time outs for adults too," were categorized as children receiving developmentally appropriate and honest information (=1). Explanations such as "He is at work and going to come home soon," "He was naughty," or otherwise providing too much information, not enough information, or a lie regarding the parent's whereabouts were coded as not developmentally appropriate and honest (=0). To determine interrater reliability, 40 cases were randomly selected and rated by three independent coders, yielding significant reliability coefficients ($k = 0.89$).

Demographic Covariates—The study also accounted for demographic and incarceration-related covariates reported in the jailed parent and caregiver interviews, including child age, gender, and race, as well as first-time visits and length of jail stays. A series of analyses were conducted to test for significant correlations between these variables and any of the pre- or post-test items as well as what information children were told. Yielding no significant correlations for child gender or race as well as for prior visits and length of jail stays, these variables are excluded from the covariates in the study's analysis in an effort to retain power. Thus, the sole covariate included within the regression models is child's age, which was initially measured in years but was dichotomized for analyses to account for younger children between the ages of 3- and 5-years (=0) and older children between 6- and 8-years (=1).

Analytic Plan

Prior to analyses, data were inspected for missingness, revealing that information on post-tests of children's feelings were missing for 3 participants (4.5%) and that information on what children were told was missing for 10% of the sample ($n = 7$). As such, a multiple imputation procedure was conducted using STATA statistical software by estimating models across 10 imputed datasets. The first reported analyses consist of a series of chi-square tests to describe differences in children's feelings at pre- and post-tests by key variables. Following this, a simple logistic regression analysis is used to examine the influence of the treatment conditions on children's feelings following visiting their jailed parents net of child age and baseline report of feelings. The results conclude by reporting on a moderation model looking at how what children were told about their parents' incarceration may change the direction and magnitude of the associations between intervention materials and children's self-reported feelings, holding constant child age and baseline reports of feelings.

Results

A series of chi-square tests was conducted to test if there were differences by demographics or key variables (e.g., what children were told) in children's overall feelings at either time point. At baseline, younger children (3–5 years) reported, on average, more positive feelings about visiting than older children (6–8 years) ($p < 0.05$). At the post-test time point, those who were given developmentally appropriate information were more likely to have positive feelings about the visit than those who were not given true or developmentally appropriate details about their parents' incarceration (marginal at $p < 0.01$).

At baseline, thus prior to treatment assignment or visiting (i.e., pre-test), the majority of children reported generally positive feelings across all five domains: how they were feeling

right now, about the grown up who brought them that day, about visiting, about the parent they were visiting, and about their family (see Panel B of Table 1). The highest percentages of positive responses pertained to feelings about caregivers and families (71.64% for each), the lowest percentage was in regard to how children were feeling in that moment (65.67%). However, when comparing this to children's feelings following viewing of the videos (i.e., post-test), the percentages of those feeling positively across these domains either plateaued or decreased. Pointedly, 70% were feeling positive about visiting prior to the visit but this dropped to 59% following the videos. Similarly, while 67% of children reported feeling positive about their incarcerated parent at the pre-test, this percentage dropped to 61% at the post-test.

That said, Fig. 2 displays how the decreases in positive feelings are largely concentrated among youth in the control group. Indeed, for children who watched the incarceration-specific Sesame Street videos, the percent of those feeling positively increased for all domains except for attitudes about visiting that day. The biggest percent increase was feelings about family, which increased by 14% between the pre- and post- tests. Conversely, for the children who watched only the Sesame Street video on the weather, the frequencies of those reporting feeling positively decreased across all domains from pre- to post-test. The biggest reported differences for the control group pertained to their feelings for the parent they were visiting that day (-13.89%) and feelings toward family (-11.11%).

A series of logistic regressions were conducted to test the association between treatment and children's feelings following the intervention, holding constant child age and pre-test measures of the outcome (Panel A, Table 2). The initial models show largely non-significant direct associations between treatment and children's feelings for the first four items. However, there was a statistically significant association in that the odds of children reporting more positive feelings about their family after visiting with their incarcerated parent was 3.75 times higher, on average, for children who watched the incarceration-specific Sesame Street video than those who watched the video on the weather ($p < 0.05$).

To examine whether contextual factors may change the direction or magnitude of these associations, a series of logistic regression moderation models were conducted by testing the influence of what information children were told about their parents' incarceration net of child age and baseline report of feelings (Panel B, Table 2). These results suggest that the previous link between treatment and feelings toward families was most robust for children who were also given developmentally appropriate information, with odds of more positive feelings towards family 9.22 times higher than children in the control group who were not given developmentally appropriate information ($p < 0.05$). Still, viewing the intervention Sesame Street video for those who were not given developmentally appropriate information about the incarceration was associated with 4.28 higher odds of positive feelings towards families (marginal at $p < 0.1$).

Discussion

The study set out to examine whether and how children's self-reported feelings may have changed following administration of developmentally appropriate and incarceration-specific

intervention materials just prior to visiting incarcerated parents in jail. This aim was born out of recognition that parental incarceration can be a salient ambiguous loss for young children (Boss, 2006), or a complicated and confusing mismatch in the physical and psychological presences of parents in children's lives. Findings suggest that the majority of young children reported generally positive feelings when coming to visit parents in jail, but while waiting for the visit, the proportion of children who reported positive feelings declined. Yet, developmentally appropriate intervention materials may buffer these consequences, as evident in the positive change in children's feelings from pre- to post-test for those in the treatment group. Contextual factors, such as the information children are given, add further nuance to children's feelings, though Sesame Workshop's *Little Children, Big Challenges: Incarceration* materials were consistently associated with positive feelings toward family.

These results are important given that many complex emotions surrounding ambiguous loss may come to a head for young children when they visit their parents in jail. For instance, without clarity regarding the parent's whereabouts, children may exhibit behavior problems while in the unfamiliar setting of the carceral facility, which can strain parent-child relationships and cloud attitudes surrounding the visit (Beckmeyer & Arditti, 2014). However, when visits are conducted in a child-friendly setting and are properly supported, children can better cope emotionally and reconnect with parents (Poehlmann et al., 2010a). Indeed, while invasive security procedures, frightening environments, confusion with not being able to touch parents during Plexiglas visits, and sadness in not being able to leave with the incarcerated parent may confuse and potentially retraumatize children (e.g., Arditti, 2003; Fraser, 2011), prepared and supported visits can reduce feelings of abandonment, anxiety, and emotional insecurity (Poehlmann et al., 2010a). The current study suggests that intervention materials may help children process these feelings by answering questions, validating emotions, and reassuring children that they are not alone. Despite reductions in positive feelings about visiting while waiting (which is consistent with prior research indicating longer wait times are associated with more negative behavior in young children; Poehlmann-Tynan et al., 2015, 2017), positive change scores were seen in children's feelings in the moment as well as towards their caregiver, incarcerated parent, and family for children who viewed the intervention materials.

The study shows how a multimedia intervention may be one way to support young children and families undergoing stressful situations. Other research that has used technology-centered treatment conditions in parenting interventions has found a positive link between media components and improvement in families' abilities to address challenging topics (Murry et al., 2019). Sesame Workshop's *Little Children, Big Challenges* initiative further emphasizes the supportive role that thoughtful, developmentally appropriate media can have for young children; indeed, evaluation of the series' materials finds consistent evidence of its ability to foster resilience in young children's coping with uniquely challenging situations, such as bullying, divorce, or relocation (Oades-Sese et al., 2014). The incarceration-specific materials have been even more rigorously tested using a randomized controlled trial design, finding that those who had been given more complete details of their parents' incarceration and then engaged with the *Little Children, Big Challenges: Incarceration* materials before a jail visit had more positive affect during the visit (Poehlmann-Tynan et al., 2021) While this previous work complemented parent-report instruments with observational methodologies,

the current study extends this by garnering evidence on children's feelings directly, yielding additional positive results. While it is challenging to obtain data directly from young children due to developmental constraints, this study suggests that methods can be crafted to adjust for children's levels of understanding. For example, visual cues and simple emojis, such as those used in this study, may be normalized for young children now as digital devices such as smartphones and tablets become more common across all households (Rideout & Robb, 2020). It is important, then, to continue expanding the use of child-report measures in future work, especially when evaluating resources aimed to support young children.

The child-report methodology provides interesting insight into the minds and feelings of children while at the jail. The descriptive results at baseline show that although children felt most positive toward their caregivers and families, the percentage of those reporting positive feelings in that moment and about visiting, generally, were lower. That said, positive feelings were comparatively higher for the youngest children (between 3- and 5-years). Still, these trends suggest that even when emotions toward family are positive, visiting can still feel challenging for many children – calling into question how to best support children as they go about maintaining relationships with parents, particularly for older children who may be coping in different ways. Over the course of time at the jail, those who had been given more developmentally appropriate information about their parents' incarceration beforehand had more positive feelings about the visit itself, and engaging with the incarceration-specific Sesame Street materials was associated with nearly four times greater odds of young children feeling positive toward their families. The latter of these points adds additional evidence for the link between the educational materials and resilience (e.g., Oades-Sese et al., 2014; Poehlmann-Tynan et al., 2021), extending it now to include voices of the children.

Nonetheless, the analyses also suggest that there may be nuance behind these associations – with findings enhanced when young children are told the simple truth about their parents' incarceration. As discussed, having conversations with children regarding their parents' involvement with the criminal legal system can be complex, challenging, and stigmatizing for any family (e.g., Enos, 2001, Poehlmann, 2005), with further layers of complexities for families of color raising children in an era of disproportionate mass incarceration (Elliott & Reid, 2019). While caregivers handle this in ways that they deem best for their children, a growing line of research suggests that providing young children with developmentally appropriate information about parents' incarceration is linked with more secure attachments and positive visiting experiences during incarceration as well as fewer behavior problems following release (Muentner & Eddy, 2023; Poehlmann, 2005; Poehlmann-Tynan et al., 2021). Findings from the bivariate analyses in this study extend these findings, shedding light on a link between developmentally appropriate information and children's self-reported feelings towards visits with incarcerated parents.

The results also suggest that the impact of the *Little Children, Big Challenges: Incarceration* for children's feelings may be influenced by what they know about their parents' incarceration. Pointedly, children were nine times more likely to report positive feelings toward families when they had been given developmentally appropriate information and then engaged with the incarceration-specific educational materials. Despite trends toward positive

emotions even for those who viewed the materials without being given developmentally appropriate information about the incarceration beforehand, previous work discusses how paradoxical it can be for a child to enter a correctional facility to visit or to watch the incarceration videos when not given accurate information ahead of time (Poehlmann-Tynan et al., 2021). It is plausible that viewing the intervention materials without the appropriate context is the first time that children are grappling with where their parents are and what led to their current separation, contributing to more negative feelings about the visit and even their family members. Thus, it may be advisable for the *Little Children, Big Challenges* videos to be used in tandem with the series' caregiver toolkit which offers language for adults to use when having conversations with young children about their parents' incarceration.

While the benefits of open dialog in combination with evidence-based resources are paramount in this study, the demonstrated outcomes of more positive feelings toward families should not be understated. For young children with jailed parents who have recently (and maybe even repeatedly) faced family instability, identifying supports that can contribute to a heightened sense of place and belonging proves to be of sincere importance. In the context of parental incarceration, children who feel more securely attached to their family members have improved well-being and developmental outcomes (e.g., Dallaire et al., 2012; Schlafer & Poehlmann, 2010). Indeed, the literature on parent-child connectedness more broadly is clear that even in instances of household conflict, stronger and more positive reciprocal feelings bolster children's well-being (Braithwaite et al., 2015). Conversely, if a child feels more negatively toward their family they may be less likely to lean on them for support and feel connected in a way that is meaningful, potentially detrimental as they cope with the loss of incarcerated parents. Previous work has emphasized the need to promote children's attachment relationships and feelings towards family across the course of parental incarceration (e.g., Murray & Murray, 2010; Poehlmann-Tynan & Arditti, 2018), and the findings from this study suggest that intervening during jail visits may be one pathway towards achieving these goals.

As the United States grapples with issues around reducing the incarcerated population (e.g., decarceration; Epperson & Pettus-Davis, 2017) and, in turn, decreasing the number of children impacted by parental incarceration, the study points to the urgent need to support children with jailed parents in the interim. Evidence that children's positive feelings deteriorate while waiting to visit with parents in jail suggests that correctional facilities instill evidence-based strategies that foster resilience and positive coping strategies in children before, during, and after visits. Speaking specifically to the materials tested in this study, jails can provide both incarcerated parents and caregivers the resources tailored to adults that have been shown to have a positive influence during challenging conversations with children about parental incarceration (Poehlmann-Tynan et al., 2021). It also may be advantageous for jails to invest in electronic tablets for children to use while in the jail waiting area before a visit with parents to watch the Sesame Street videos and engage with the other online resources that are specific to parental incarceration. Taken in tandem with the caregiver resources, providing children with appropriate information about the parent's incarceration coupled with the media content may lead to the most positive outcomes. Importantly, the materials are freely accessible online so caregivers can feel supported in

creating space for these opportunities at home and in shaping potentially more positive day-to-day feelings for children.

Limitations

Despite the study's strengths, there are limitations to consider. First and foremost, given that the study is an efficacy trial of the intervention materials, the sample is relatively small and thus the findings are preliminary and largely exploratory. To retain power in analyses (particularly within models that use interaction terms), covariates are limited. Future work should employ a larger sample size to make more robust claims across comparison groups and control for a larger set of confounding variables (such as parent gender, caregiver attachment, and sibling/social support). Future research may also consider examining differences based on whether (and how often) children have visited their jailed parents before, as well as how long the parents have been in jail. As such, the results cannot be generalized to all children with incarcerated parents; rather, they should serve as a springboard for subsequent work in the area. Given that the educational materials were designed for children aged 3–8 years, claims cannot be made to children outside of this age range and future work should identify and test support for both very young as well as older children and adolescents. The current analyses also rely exclusively on child self-report of feelings; future work may triangulate this information with adult reports or observational methodologies. While these child report measures were designed to be simple for young children, it may have missed some nuance in the reports of children who were older, as well as been challenging for those who were younger. Future research examining these materials may ask children open-ended questions to allow for more specificity, particularly in older children's responses, or combine the assessments with other methods such as family drawings. There may be temporal limitations, as well, given that children watched the Sesame Street videos just before visits and results may be different if children had more time to process the videos, watch them multiple times, or deliberately discuss them with caregivers prior to the visit. Finally, the videos may have primed children to experience various emotions, though previous work found few differences in ratings across other measures based on the type of videos watched (Poehlmann-Tynan et al., 2021).

Conclusion

Parental incarceration is a particularly challenging experience and visiting parents at jail can prove to be stressful for young children. This randomized efficacy trial set out to examine how educational intervention materials can shape children's feelings while at the jail for visits, as well as about caregivers, incarcerated parents, families, and visiting generally. The findings detail that more children in the treatment group reported positive feelings following visits, particularly regarding feelings toward their families. However, there may be nuance in this such that the greatest effect sizes were documented for those who engaged with the intervention materials and were also told developmentally appropriate information about the incarceration. Taken together with other work that finds that these materials are helpful in shaping positive visiting experiences and in facilitating challenging conversations between children and caregivers (Poehlmann-Tynan et al., 2021), the results implicate correctional facilities to expand dissemination of and access to these, as well as other, resources for children and families. Indeed, given the largely beneficial links between the intervention

materials and child-reported feelings, a dedicated effort to fostering resilience among all children with incarcerated parents is needed as systemic change is being advocated for that reduces the number of children finding themselves in the compromising position of parental jail incarceration.

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Highlights

- Exploratory findings suggest that the intervention was associated with positive changes in self-reported feelings for young children visiting parents at jail.
- Feelings about family were most significantly strengthened for young children following the multimedia intervention at jail.
- Strengthened feelings about family were most robust for children given developmentally appropriate information about the incarceration.



Fig. 1.

Children's Feelings Scale. Children reported on their feelings by touching the face emoticon on an iPad which most accurately represented how they were feeling on a variety of topics, including how they were feeling right now, about the grown-up who brought them to the jail visit, about the visit itself, about the jailed parent they were visiting, and about their family

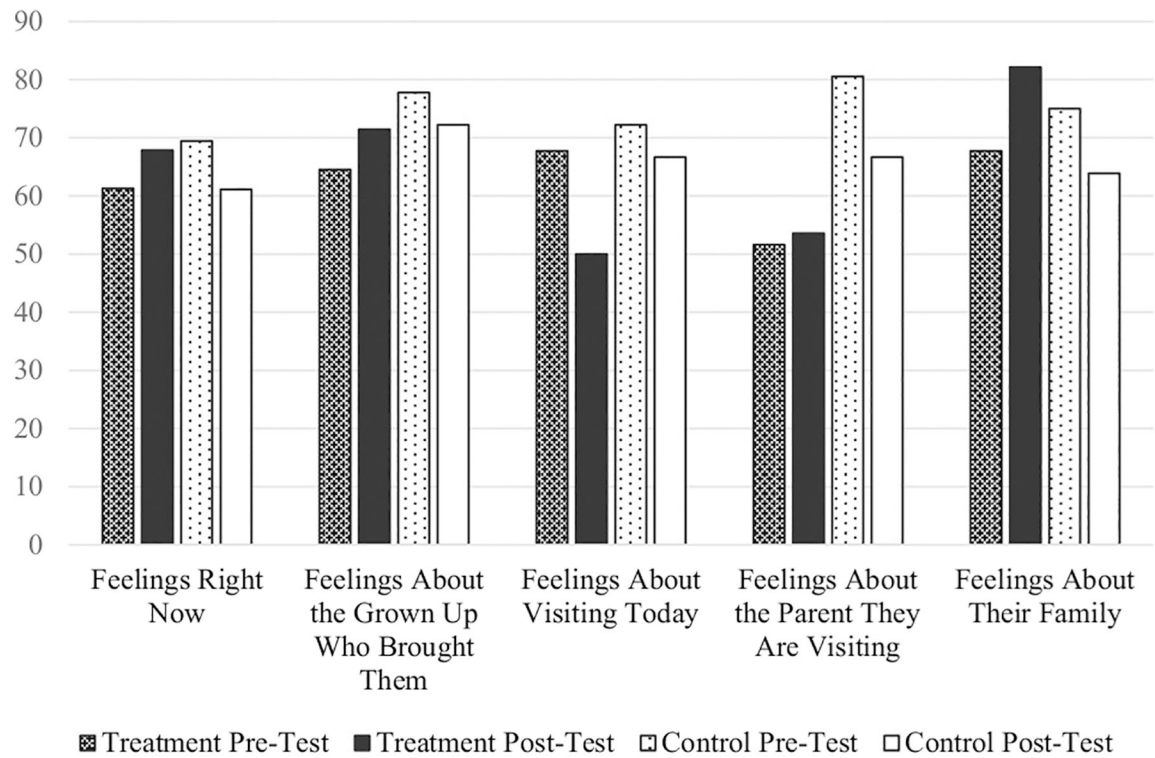


Fig. 2. Percentages of children reporting positive feelings by condition and wave. Children in the treatment group, who engaged with the incarceration-specific multimedia intervention, largely reported more positive feelings from pre- to post-test timepoints whereas children in the control group, who watched a video about the weather, reported decreases in positive feelings from pre- to post-test

Table 1

Participant demographics

	Full sample	Treatment	Control
	<i>n</i> = 67	<i>n</i> = 31	<i>n</i> = 36
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Panel A. Child demographics			
Child age			
Between 3- and 5-years	40 (59.70%)	23 (74.19%)	17 (47.22%)
Between 6- and 8-years	27 (40.30%)	8 (25.81%)	19 (52.78%)
Child gender			
Boys	37 (55.22%)	16 (51.61%)	21 (58.33%)
Girls	30 (44.78%)	15 (48.39%)	15 (41.67%)
Child race			
BIPOC	44 (65.67%)	23 (74.19%)	21 (58.33%)
White	23 (34.33%)	8 (25.81%)	15 (41.67%)
What child was told was... ^a			
Developmentally appropriate	27 (45.00%)	13 (46.43%)	14 (43.75%)
Not developmentally appropriate	33 (55.00%)	15 (53.57%)	18 (56.25%)
Panel B. Children's feelings			
Pre-test: child is feeling positive...			
Right now	44 (65.67%)	19 (61.29%)	25 (69.44%)
About the grown up who brought them	48 (71.64%)	20 (64.52%)	28 (77.78%)
About visiting today	47 (70.15%)	21 (67.74%)	26 (72.22%)
About the parent they're visiting	45 (67.16%)	16 (51.61%)	29 (80.56%)
About their family	48 (71.64%)	21 (67.74%)	27 (75.00%)
Post-test: child is feeling positive... ^a			
Right now	41 (64.06%)	19 (67.86%)	22 (61.11%)
About the grown up who brought them	46 (71.88%)	20 (71.43%)	26 (72.22%)
About visiting today	38 (59.38%)	14 (50.00%)	24 (66.67%)
About the parent they're visiting	39 (60.94%)	15 (53.57%)	24 (66.67%)
About their family	46 (71.88%)	23 (82.14%)	23 (63.89%)

^aFrequencies do not add up to the overall *n* because of missing data

Table 2

Multivariate logistic regression results ($n = 67$)

	Feelings right now		Feelings about adult who brought child		Feelings about visiting the child is visiting		Feelings about the parent		Feelings about the family	
	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR
Panel A. Simple logistic regression models										
Treatment	1.63	1.45	0.46	0.90	3.75*					
* 6-years and Older (ref: 3- to 5-year-olds)	0.67	1.73	0.40	0.40	1.39					
Pre-test Measure of the Outcome	3.56*	2.15	3.94*	5.60**	3.28 [†]					
Panel B. Logistic regression moderation models by what children were told										
Treatment * what children were told (ref: Control * No Dev. App. Info)										
Control * Dev. App. Info	1.61	0.54	1.88	1.71	3.05					
Treatment * No Dev. App. Info	2.42	1.31	0.30	0.92	4.28 [†]					
Treatment * Dev. App. Info	1.71	0.87	1.37	1.37	9.22*					
6-years and Older (ref: 3- to 5-year-olds)	0.63	1.75	0.44	0.39	1.43					
Pre-test Measure of the Outcome	3.56*	2.10	5.02*	5.61**	3.11 [†]					

Dev. App. Info is an abbreviated indicator for “Developmentally Appropriate Information”

[†] $p < 0.1$;

* $p < 0.05$;

** $p < 0.01$