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Predictors of Treatment Engagement for Young Children Exposed to Violence

HEATHER J. RISSER and PAUL A. SCHEWE
Interdisciplinary Center for Research on Violence, University of Illinois at Chicago, Chicago, Illinois, USA

This study examined factors associated with treatment engagement and child outcomes in 1,365 children receiving community-based services for exposure to violence. Data were collected on children and families who completed an intake interview. Children were categorized into groups based on whether they attended any therapy sessions after the intake, terminated prematurely from therapy, or completed treatment. Results demonstrated that child emotional and behavioral problems at intake, general parent stress, and income did not differ by treatment engagement. Type of violence exposure, parent–child stress, and race differed by category of treatment engagement. Strategies from Safe From the Start service providers to increase treatment engagement are included in the discussion.

KEYWORDS children exposed to violence, engaging and retaining families

A recent national survey of more than 4,500 children aged 0 to 17 years concluded that 60% of children had been exposed to violence within the last year (Finkelhor, Turner, Ormrod, & Hamby, 2009), and lifetime exposure rates were even higher. Finkelhor et al. (2009) reported that exposure to one
type of violent act is associated with exposure to other types of violence. In fact, the study demonstrated that 10% of children were exposed to five or more different forms of violence in the previous year.

Children exposed to violence (CEV) often demonstrate elevated trauma symptoms (e.g., fear, avoidance, clingy behavior), internalizing problems (e.g., depression, withdrawal), and externalizing problems (e.g., aggression; e.g., Evans, Davies, & DiLillo, 2008; Graham-Berman & Levendosky, 1998; Kiser, Heston, Millsap, & Pruitt, 1991; Kitzmann, Gaylord, Holt, & Kenny, 2003; McDonald, Jouriles, Tart, & Minze, 2009; Sternberg, Baradaran, Abbott, Lamb, & Guterman, 2006). Particularly in young children, violence exposure can lead to mental health problems and impact developmental trajectories by interfering with a child’s developing competencies such as forming relationships, emotional and behavioral regulation, and the development of autonomy and identity (e.g., Cicchetti & Lynch, 1993). An estimated 33% of children receiving services in community mental health agencies have a history of maltreatment (Walrath, Nickerson, Crowel, & Leaf, 1998).

Although aspects of violent contexts such as the severity of incidents and other vulnerabilities can exacerbate a child’s symptoms, protective factors can mitigate symptoms (e.g., Cicchetti & Lynch, 1993; McCloskey & Walker, 2000). One way to mitigate the long-term impact of violence exposure is by providing early intervention to children and families (e.g., Berkowitz, 2003; Creamer, 1996; Gordon, Farberow, & Maida, 1999). Child-centered approaches such as Safe From the Start have been suggested as a promising practice in addressing young children’s needs resulting from violence exposure (e.g., Geffner, Griffin, & Lewis, 2008; Schewe, 2008). The effectiveness of early intervention services, however, depends on the ability to access and engage in services.

TREATMENT ENGAGEMENT

Young children are dependent on their caregivers to access treatment and to promote positive attachment behaviors, the foundation of relationship formation (Kinniburgh, Blaustein, Spinazzola, & van der Kolk, 2005). Thus, it is important to assess both child and caregiver characteristics that contribute to treatment engagement and early termination. Treatment engagement can be conceptualized as a multistage process that begins with accessing treatment, and ends with successful completion of treatment (e.g., Koverola, Murtaugh, Connors, Reeves, & Papas, 2007; McKay & Bannon, 2004). Scheduling or completing an intake session is often the beginning of treatment services for families. However, many families fail to attend the intake session, or complete an intake but do not attend any subsequent sessions. Families that have scheduled or completed an intake and have accessed mental health...
services, but have not engaged in treatment, have been labeled nonengagers (Koverola et al., 2007). Families that attend sessions beyond the intake but terminate prematurely have been called dropouts or attriters (e.g., Kazdin & Mazurick, 1994; Koverola et al., 2007). Families who continue treatment through successful termination have been referred to as completers (e.g., Kazdin & Mazurick, 1994; Koverola et al., 2007).

Percentages of children with an identified mental health need receiving services range from 13% of Black children in a national sample to 94% of child victims of sexual abuse (e.g., Farmer et al., 2001; Horowitz, Putnam, Noll, & Trickett, 1997; Ringel & Sturm, 2001). Estimates of failure to attend an initial intake can be as high as 36%, with an additional 27% of families attending only one to three sessions (e.g., McKay, McCadam, & Gonzales, 1996). Studies suggest that between 15% and 45% of children never engage in treatment beyond the intake or terminate treatment prematurely (e.g., Burns et al., 2004; Jouriles et al., 2009; Koverola et al., 2007; McKay, Pennington, Lynn, & McCadam, 2001). Researchers have reported different predictors for families that discontinue services early, relative to late, in treatment (Burns et al., 2004; Kazdin & Mazurick, 1994).

Previous studies examining treatment engagement suggest that aspects of the child, family, and treatment context influence which children receive and complete treatment (e.g., Burns et al., 2004; Kolko, Baumann, & Caldwell, 2003; Koverola et al., 2007; McKay et al., 2001; Pfefferle & Spitznagel, 2009). However, research has been mixed regarding the impact of child and family factors on treatment engagement. The type of violence exposure, child’s behavioral and emotional problems, parent–child stress, income, minority status, and treatment modality might predict treatment engagement (e.g., Burns et al., 2004; Garland, Landsverk, Hough, & Ellis-MacLeod, 1996; Kazdin & Mazurick, 1994; Koverola et al., 2007; McKay et al., 2001; Pfefferle & Spitznagel, 2009).

Type of Violence Exposure

Research has been mixed in terms of the relationship between type of violence exposure and treatment engagement. For example, with the exception of children in protective custody, children with a history of maltreatment were more likely to terminate early from treatment (e.g., Farmer et al., 2001; Garland et al., 1996; Lau & Weisz, 2003). Koverola et al. (2007) found that children who were referred for treatment due to child abuse engage in treatment at a lower rate than children referred for exposure to domestic violence (DV). However, child victims of child abuse, relative to child witnesses of DV, completed treatment at higher rates once they began treatment. Kolko et al. (2003) found no differences for child maltreatment history or severity of abuse for children who engaged in services after the intake. There is some evidence to suggest that child victims of sexual or physical abuse were more
likely to receive services and to receive a higher number of sessions than child victims of neglect (Garland et al., 1996).

Child Behavior

Although some studies reported that children with behavior problems were more likely to receive services (e.g., Burns et al., 2004; Farmer et al., 2001; Garland et al., 1996), Kolko et al. (2003) reported no differences in externalizing behaviors between child abuse victims who did or did not receive treatment. Results from several studies suggest that children who completed treatment had less severe behavior problems than children who discontinued treatment (e.g., Kazdin, Mazurick, & Bass, 1993; Kendall & Sugarman, 1997). Kazdin and Mazurick (1994) reported higher rates of attrition early in treatment for children with more serious behavior problems, whereas Kendall and Sugarman (1997) found no difference in behavioral problems for children who did not engage in services versus those who discontinued services. Koverola et al. (2007) found a trend for more severe behavioral problems in children who completed treatment relative to children who did not engage in services or discontinued services.

Parent Stress

Koverola et al. (2007) reported that children of parents who experience high levels of parent–child stress are less likely to engage in treatment, whereas parents’ reports of daily stress did not predict treatment engagement. Kazdin and Mazurick (1994) found that parent–child stress predicted attrition early in treatment (attrition prior to the seventh session), but was not a significant predictor of attrition later in treatment (after the sixth session). McKay et al. (2001) found that higher levels of family stress contributed to poorer attendance. In fact, levels of family stress accounted for 22% of the variance of missed appointments.

Minority Status

Results regarding the relationship between race and treatment engagement are mixed. In a review of national service utilization, Ringel and Sturm (2001) reported that Black and Hispanic children exhibit the highest proportion of children with unmet treatment needs. Furthermore, minority children demonstrate lower rates of utilization even after controlling for insurance status. Kolko et al. (2003) reported no racial differences in children who received treatment, whereas Burns et al. (2004) found that Black, relative to White, children were less likely to receive treatment. Koverola et al. (2007) reported no racial differences between nonengagers, early terminators, or completers.
Kendall and Sugarman (1997), however, found that children identified as an ethnic minority were more likely to terminate prematurely from treatment.

Income
Farmer et al. (2001) reported that children living in poverty have a high proportion of unmet treatment needs. Access to mental health treatment, however, appears to be a function of economic resources as well as insurance status (e.g., Ringel & Sturm, 2001). Ringel and Sturm (2001) reported that children who receive Medicaid, relative to children covered by private insurance, demonstrated higher rates of mental health service use. Therefore, low-income families who do not qualify for or receive Medicaid but cannot afford private insurance might include children with the greatest unmet mental health needs.

Treatment Modality
Koverola et al. (2007) reported that children engaged in multiple treatment formats (e.g., individual and family treatment), relative to children engaged in individual or family treatment, were more likely to complete treatment.

TREATMENT OUTCOME
Research has demonstrated mixed results regarding the effect of treatment engagement on outcome. For example, families in which children received individual treatment services to meet basic needs or mentoring demonstrated lower rates of reabuse than families who received other services through programs such as Healthy Families America or family preservation (Kolko et al., 2003). In a study examining the effect of Project Support on children exposed to intimate partner violence, treatment was effective in reducing child behavior problems by reducing mothers’ ineffective parenting and reducing mothers’ psychiatric symptoms.

Previous research suggests that parent and child factors impact children’s treatment access, engagement, and completion. Given that early intervention for children exposed to violence can increase protective factors that can contribute to maintenance and return to typical developmental trajectories, it is important to understand parent and child factors that promote or inhibit treatment engagement and outcome.

This study used a quasi-experimental design to examine Safe From the Start community-based services for young children exposed to violence. Services were offered to children and their caregivers to reduce the negative impact of violence exposure on social-emotional functioning. Previous
research examining the impact of child, family, and treatment factors on treatment engagement has demonstrated mixed results. Although there are several potential reasons for mixed results (e.g., different presenting problems), one potential explanation is that samples that include young children and adolescents in the same analyses introduce variance related to different child factors in treatment engagement. That is, adolescents might have greater influence over their own attendance in therapy. Another potential reason for mixed results is the nature of the study samples. Previous studies have included samples of different presenting problems (e.g., child behavior vs. exposure to violence) and small between-group cell sizes ($n = 4$ to $n = 30$; Kolko et al., 2003; Koverola et al., 2007). This study used a large community sample to explore the potential moderating parent, child, and treatment factors related to treatment engagement and outcomes in young children exposed to violence.

**METHODS**

**Participants**

Data were collected on 1,365 children seeking services for exposure to violence. Services were provided at one of 12 sites throughout Illinois from 2001 through 2010. Children ranged in age from less than 1 year to 11 years old. The mean child age was 3.82 years ($SD = 2.16$). Forty-six percent of children were female and 54% were male. Fifty-one percent of the caregivers indicated their child's race as White, 15.9% Black, 15.4% Hispanic, 16.1% biracial, 0.8% Native American, 0.8% Asian American, and 0.3% “other.” Although 65% of the children were referred for services because of DV, 48% of children experienced two or more types of violence. Overall, children were exposed to DV only (41.2%); DV and community violence (25.2%); DV and child abuse (10.3%); DV, child abuse, and community violence (9.0%); child abuse only (6.6%); community violence only (4.3%); or child abuse and community violence (3.4%).

Female caregivers ranged in age from 15 to 50 years with a mean age of 28.2 years ($SD = 5.5$). Male caregivers ranged in age from 16 to 56 years with a mean age of 30.8 years ($SD = 6.7$). Female caregivers reported a range of one to six children ($M = 2.6, SD = 1.2$), and male caregivers reported a range of 0 to 12 children ($M = 2.8, SD = 1.7$). The primary caregiver of the child was most frequently the mother (85.7%), grandmother or great grandmother (6.4%), father (3.5%), or foster or adoptive parents (2.1%). Other caregivers included legal guardians (1.1%), mother and father or stepfather (0.6%), relative (0.4%), or family friend (0.4%).

Of the 1,365 children, 300 were coded as nonengagers (families that scheduled or completed an intake, but did not attend any sessions), 536 were coded as attriters (families that attended sessions beyond the intake, but
terminated prematurely), and 529 were coded as completers (families who continued treatment through successful termination). After completing the intake, 21.8% of children did not return for any sessions (nonengagers), and 78.2% engaged in therapy. Of those who engaged in therapy, 39.4% discontinued services prematurely as rated by their therapist (attriters) and 38.8% continued services through successful termination (completers). For children who engaged in treatment (attriters and completers), the number of sessions attended ranged from 1 to 124 with a mean of 10.1 sessions ($SD = 11.4$). The service length (from the date the case was opened to the date it was closed) ranged from 0 to 55 months with a mean of 6.3 months ($SD = 5.4$). Fifty-three percent of the families reported income at or below $15,000, 21% reported income between $15,001 and $25,000, 15% reported income between $25,001 and $40,000, and 11% reported income greater than $40,000.

Measures

**BACKGROUND INFORMATION FORM**

The Background Information Form (BIF) was designed to collect demographic information and information about presenting symptoms, type and severity of violence exposure, developmental history, risk factors, and family history. The BIF was administered in a semistructured interview format during intake sessions. Therapists indicated each type of violence that the child was exposed to on the BIF. The categories included DV, child abuse, and community violence. Categories were created that included one or more types of violence. The violence exposure for which the family was seeking treatment was used in the analyses that examined the type of violence as a predictor of treatment engagement. The BIF also assessed parental perceptions of general stress on a 10-point Likert-type scale where higher scores indicate higher levels of stress. General stress was used as a predictor of treatment engagement.

**CHILD BEHAVIOR CHECKLIST**

The Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2000) was designed to measure child emotional and behavioral problems. Two versions were used in this study: the parent report version for children aged 1½ to 5 years, and the parent report version for children aged 6 to 18 years. The two versions of the CBCL obtain caregivers’ ratings of 99 and 112 problem items, respectively. Items combine to create seven syndrome scales, two subscales, and a total score. Syndrome scales include Emotionally Reactive, Anxious/Depressed, Somatic Complaints, Withdrawn, Attention Problems, Aggressive Behavior, and Sleep Problems. The syndrome
scales Emotionally Reactive, Anxious/Depressed, Somatic Complaints, and Withdrawn are described as problems with the self and combine to form the Internalizing subscale. The syndrome scales Attention Problems and Aggressive Behavior are described as problems with others and combine to form the Externalizing subscale. The total score is derived by summing the Internalizing subscale, the Externalizing subscale, and Sleep Problems. T scores between 60 and 63 fall in the borderline clinical range (representing approximately the 83rd–90th percentiles). T scores 64 and greater fall in the clinical range (above the 90th percentile). The cut-point scores for the borderline and clinical ranges have been used to accurately identify children referred for services (Achenbach & Rescorla, 2000). Internal stability ranges from $\alpha = .89$ to .95 for Internalizing, Externalizing, and Total Problem scores. Test–retest reliabilities ranged from .87 to .90 for Internalizing, Externalizing, and Total Problem scores for an 8-day period. For this study, the Time 1 CBCL was administered at intake and Time 2 was generally administered around the eighth session or at termination. For nonengagers, CBCL forms were mailed to the parents to complete and mail back. Time 1 total scores on the CBCL were used to assess child behavioral functioning as a predictor of treatment engagement. Time 1 and Time 2 Total scores were used for treatment outcome analyses.

THE PARENTING STRESS INDEX

The Parenting Stress Index, Short Form (PSI–SF; Abidin, 1995) is a 36-item self-report questionnaire designed to measure the level of stress that caregivers experience in the parenting role. The PSI–SF produces scores for three subscales and a total score. The subscales are Parental Distress, Parent–Child Dysfunctional Interaction, and Difficult Child. Total scores provide a measure of the overall level of stress related to parenting. Total scores can range from 36 to 180 with higher scores indicating higher levels of stress. Scores between the 85th and 90th percentile are indicative of significant parent–child stress. Scores above the 90th percentile are considered to be in the “clinical” range. The PSI was administered at intake and total scores were used as a predictor of treatment engagement.

COMPLETION OF SERVICES FORM

The Completion of Services Form (CSF) was created specifically for this project, and was designed to measure the format, content, and outcomes of treatment from the therapists’ perspective. The CSF was completed by Safe From the Start service providers after services ended. The form collects data regarding the length of treatment, number of sessions, number and types of services received, the content of services, progress toward treatment goals,
and barriers to treatment (e.g., additional violence exposure). Type of service was grouped into categories for this analysis. The first category consisted of sessions described by treatment providers as case management and case collaboration. The second category consisted of individual child therapy. The third category consisted of family therapy and multiple family groups. The fourth category consisted of psychoeducation, family support, and support groups. The fifth category, termed multimodal treatment, included individual child therapy combined with family services including family therapy, multiple family groups, and family support. The number of sessions attended and therapist rating of successful completion were used to categorize children into nonengagers, attritors, and completers. Type of treatment was used as a predictor of level of treatment engagement.

Procedure

Caregivers seeking community mental health treatment for their children to address issues related to exposure to violence were asked to participate in an evaluation of services. Twelve community-based agencies throughout Illinois providing Safe From the Start programming participated. Family participation in the evaluation was voluntary, and access to services was not conditional on participation in the evaluation. The research was approved by the institutional review board of the University of Illinois at Chicago. Participants signed an informed consent and completed the BIF and Time 1 measures at the intake appointment(s). Separate measures were completed for each child in a family for which services were sought. Time 2 measures were administered between the fifth and eighth treatment session or on termination, whichever occurred first. If families discontinued treatment without completing Time 2 measures, when possible the measures were mailed to families to complete and return. For families that continued treatment for several months after completing Time 2 measures, posttreatment measures were administered again when services were completed. Therapists reported that individual child therapy, family therapy, multimodal therapy, and psychoeducation all primarily addressed the child’s ability to identify and express feelings, the reduction of symptoms, and the reduction of child stress.

RESULTS

Cross-tabulations (using the \( \chi^2 \) statistic) were used to examine the number of children from discrete groups in each of the engagement categories and clinical improvement (e.g., movement from the clinical to normal range on the CBCL). Analysis of variance (ANOVA) was used to examine the effect of discrete variables on continuous dependent variables. Multivariate analysis of variance (MANOVA) was used to examine the effect of discrete variables
on related dependent variables (subscales on the CBCL). Regression analysis was used to examine the relationship between continuous independent and dependent variables.

Retention

An ANOVA revealed that nonengagers, attriters, and completers demonstrated significant differences in the number of sessions of therapy attended, \( F(2, 1362) = 191.483, p < .001, \) partial \( \eta^2 = .219 \); see Table 1. Nonengagers did not attend any sessions, engagers attended an average of 6.81 sessions, and completers attended an average of 13.4 sessions.

**TABLE 1 Mean Number of Sessions by Treatment Engagement and Demographic Category**

<table>
<thead>
<tr>
<th>Sample Characteristics</th>
<th>Nonengagers</th>
<th>Attriters</th>
<th>Completers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Violence exposure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DV</td>
<td>0</td>
<td>7.8</td>
<td>13.8</td>
<td>10.5</td>
</tr>
<tr>
<td>Child abuse</td>
<td>0</td>
<td>6.9</td>
<td>13.3</td>
<td>9.6</td>
</tr>
<tr>
<td>DV &amp; child abuse</td>
<td>0</td>
<td>10.6</td>
<td>9.9</td>
<td>9.3</td>
</tr>
<tr>
<td>CBCL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>0</td>
<td>7.7</td>
<td>12.2</td>
<td>9.8</td>
</tr>
<tr>
<td>Borderline</td>
<td>0</td>
<td>6.3</td>
<td>17.2</td>
<td>12.5</td>
</tr>
<tr>
<td>Clinical</td>
<td>0</td>
<td>8.4</td>
<td>14.6</td>
<td>11.6</td>
</tr>
<tr>
<td>PSI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>0</td>
<td>7</td>
<td>12.8</td>
<td>8.3</td>
</tr>
<tr>
<td>Clinical</td>
<td>0</td>
<td>7.8</td>
<td>15.4</td>
<td>9.5</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>0</td>
<td>10.7</td>
<td>13.5</td>
<td>11.7</td>
</tr>
<tr>
<td>Black</td>
<td>0</td>
<td>5.4</td>
<td>11.1</td>
<td>7.8</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0</td>
<td>7.2</td>
<td>19.5</td>
<td>12</td>
</tr>
<tr>
<td>Biracial</td>
<td>0</td>
<td>4</td>
<td>12.8</td>
<td>7.8</td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$0–$15,000</td>
<td>0</td>
<td>8.1</td>
<td>12.4</td>
<td>9.6</td>
</tr>
<tr>
<td>$15,001–$25,000</td>
<td>0</td>
<td>9.6</td>
<td>13.1</td>
<td>10.9</td>
</tr>
<tr>
<td>$25,001–$40,000</td>
<td>0</td>
<td>6</td>
<td>15.8</td>
<td>10.9</td>
</tr>
<tr>
<td>$40,000+</td>
<td>0</td>
<td>6.5</td>
<td>15.3</td>
<td>12.5</td>
</tr>
<tr>
<td>Treatment modality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual</td>
<td>0</td>
<td>6.6</td>
<td>10.9</td>
<td>8.7</td>
</tr>
<tr>
<td>Family</td>
<td>0</td>
<td>4.6</td>
<td>10.7</td>
<td>7.6</td>
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<tr>
<td>Multimodal</td>
<td>0</td>
<td>11.4</td>
<td>18.2</td>
<td>15.8</td>
</tr>
<tr>
<td>Psychoed/support</td>
<td>0</td>
<td>12.5</td>
<td>12.7</td>
<td>12.6</td>
</tr>
<tr>
<td>Total</td>
<td>0</td>
<td>6.8</td>
<td>13.4</td>
<td>7.8</td>
</tr>
</tbody>
</table>

*Note. DV = domestic violence; CBCL = Child Behavior Checklist; PSI = Parenting Stress Index.*
TABLE 2 Percentage in Treatment Engagement Category by Demographics

<table>
<thead>
<tr>
<th>Violence exposure</th>
<th>Nonengagers</th>
<th>Attriters</th>
<th>Completers</th>
</tr>
</thead>
<tbody>
<tr>
<td>DV</td>
<td>10%</td>
<td>38%</td>
<td>52%</td>
</tr>
<tr>
<td>Child abuse</td>
<td>8%</td>
<td>27%</td>
<td>65%</td>
</tr>
<tr>
<td>DV and child abuse</td>
<td>8%</td>
<td>19%</td>
<td>73%</td>
</tr>
<tr>
<td>CBCL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>9%</td>
<td>29%</td>
<td>62%</td>
</tr>
<tr>
<td>Borderline</td>
<td>9%</td>
<td>30%</td>
<td>62%</td>
</tr>
<tr>
<td>Clinical</td>
<td>6%</td>
<td>35%</td>
<td>59%</td>
</tr>
<tr>
<td>PSI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>62%</td>
<td>48%</td>
<td>62%</td>
</tr>
<tr>
<td>Clinical</td>
<td>38%</td>
<td>52%</td>
<td>38%</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>7%</td>
<td>28%</td>
<td>65%</td>
</tr>
<tr>
<td>Black</td>
<td>10%</td>
<td>38%</td>
<td>52%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>9%</td>
<td>44%</td>
<td>46%</td>
</tr>
<tr>
<td>Biracial</td>
<td>10%</td>
<td>42%</td>
<td>48%</td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$0–$15,000</td>
<td>9%</td>
<td>37%</td>
<td>53%</td>
</tr>
<tr>
<td>$15,001–$25,000</td>
<td>8%</td>
<td>35%</td>
<td>57%</td>
</tr>
<tr>
<td>$25,001–$40,000</td>
<td>10%</td>
<td>34%</td>
<td>56%</td>
</tr>
<tr>
<td>$40,000+</td>
<td>7%</td>
<td>35%</td>
<td>57%</td>
</tr>
<tr>
<td>Treatment modality</td>
<td></td>
<td></td>
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<tr>
<td>Individual</td>
<td>0%</td>
<td>51%</td>
<td>49%</td>
</tr>
<tr>
<td>Family</td>
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<tr>
<td>Multimodal</td>
<td>0%</td>
<td>35%</td>
<td>65%</td>
</tr>
<tr>
<td>Psychoed/support</td>
<td>0%</td>
<td>36%</td>
<td>64%</td>
</tr>
</tbody>
</table>

Note. DV = domestic violence; CBCL = Child Behavior Checklist; PSI = Parenting Stress Index.

percentages. Children who were referred for treatment due to both exposure to DV and child abuse (DV + CA) were less likely to attrite and more likely to complete treatment than children exposed to either child abuse (CA) or domestic violence (DV). An ANOVA revealed that there was a significant difference in number of sessions attended by type of violence exposure, $F(2, 527) = 9.617, p < .001$, partial $\eta^2 = .035$; see Table 1. Student Newman–Keuls post-hoc analyses demonstrated that children who experienced DV + CA participated in significantly more sessions than children who experienced either DV or CA. There was not a significant interaction between violence type and treatment engagement for number of sessions, $F(4, 521) = 1.342$, $p = .253$, partial $\eta^2 = .010$.

1 Due to small numbers of children exposed to community violence (CV), to both DV and CV, or to both CA and CV, children exposed to both DV and CV were included in the DV category and children exposed to both CA and CV were included in the CA category. Children exposed to all forms of violence were included in the DV + CA category. Children experiencing only CV were dropped from the analysis of type of violence exposure.
CHILD BEHAVIOR

A MANOVA was used to examine the impact of child behavioral and emotional functioning at intake on the duration of treatment. Results demonstrated no difference between nonengagers, attriters, and completers on their CBCL total score, $F(2, 460) = 1.158, p = .315$, partial $\eta^2 = .005$; Internalizing score, $F(2, 460) = 1.455, p = .234$, partial $\eta^2 = .006$; or Externalizing score, $F(2, 460) = .841, p = .432$, partial $\eta^2 = .004$. An ANOVA revealed that there were no significant differences in number of sessions attended for children receiving CBCL total scores within the normal, borderline, or clinical ranges at intake, $F(2, 466) = 2.136, p = .119$, partial $\eta^2 = .009$; see Table 1.

PARENT STRESS

A MANOVA was used to examine the impact of parent-reported general stress (i.e., stress related to everyday life) and parent–child stress (i.e., stress directly related to the parent–child relationship) on the duration of treatment for children’s exposure to violence. Results indicated that nonengagers, attriters, and completers did not differ in their ratings of general stress, $F(2, 491) = .925, p = .397$, partial $\eta^2 = .004$; but demonstrated significant differences in parent–child stress, $F(2, 491) = 4.644, p = .010$, partial $\eta^2 = .019$. Student Newman–Keuls post-hoc analyses demonstrated that parents of nonengagers demonstrated lower parent-related stress than parents of attriters and completers.

Regression analyses revealed that parents reporting higher levels of parent–child stress attended more sessions than parents reporting lower levels of parent–child stress, $R^2 = .005, F(1, 1070) = 5.390, p = .020$, $\beta = .033$. An ANOVA revealed that there were no significant differences in number of sessions attended by PSI cutoff above the 85th percentile, $F(1, 1070) = 2.597, p = .107$, partial $\eta^2 = .002$; or 90th percentile, $F(1, 1070) = 2.093, p = .148$, partial $\eta^2 = .002$; see Table 1.

MINORITY STATUS

Cross-tabulation demonstrated that race was related to treatment engagement, $\chi^2(6, N = 586) = 16.552, p = .011$; see Table 2. A higher percentage of White children completed treatment relative to Black, Hispanic, and biracial children. An ANOVA revealed that there were no significant differences in number of sessions attended by race, $F(3, 574) = 1.952, p = .120$, partial $\eta^2 = .010$; see Table 1.

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2 Due to small cell sizes for some racial categories, only high-frequency racial categories were included in the analyses of race (White, Black, Hispanic, biracial).
A MANOVA revealed that there was a significant main effect of race on parental general stress, $F(3, 471) = 6.608, p < .001$, partial $\eta^2 = .040$, and parent–child stress, $F(3, 471) = 4.555, p = .004$, partial $\eta^2 = .028$. Student Newman–Keuls post-hoc analyses demonstrated that Black and White parents reported the least amount of general stress. Hispanic parents reported higher amounts of general stress than Black parents but did not differ from White or biracial parents. Biracial parents reported higher general stress than Black and White parents. Student Newman–Keuls post-hoc analyses demonstrated that White parents reported significantly lower parent–child stress than Hispanic and biracial parents. There were no significant differences between Black parents and all other racial categories.

INCOME

Cross-tabulation revealed no differences between treatment engagement and income level, $\chi^2(6, N = 544) = 8.560, p = .200$; see Table 2. There were no significant differences in number of sessions attended by income level, $F(3, 540) = 1.305, p = .272$, partial $\eta^2 = .007$; see Table 1. There was no significant interaction between income and treatment engagement for the number of sessions attended, $F(6, 532) = 0.967, p = .447$, partial $\eta^2 = .011$.

An ANOVA revealed that low-income parents did not report higher levels of general stress or parent–child stress than parents of other income levels, $F(1, 459) = 0.352, p = .553$, partial $\eta^2 = .001$. There was a significant interaction between income level and treatment engagement for general stress, $F(2, 459) = 6.293, p = .002$, partial $\eta^2 = .027$, and parent–child stress, $F(2, 459) = 3.229, p = .041$, partial $\eta^2 = .014$. Simple effects analyses demonstrated no difference in general stress or parent–child stress by income level for nonengagers, but low-income parents of attriters, $F(1, 152) = 14.984, p < .001$, partial $\eta^2 = .090$, and completers, $F(1, 271) = 6.878, p = .009$, partial $\eta^2 = .025$, reported higher levels of general stress than parents of other income levels. Low-income parents of attriters reported higher parent–child stress than parents of attriters in other income categories, $F(1, 152) = 10.976, p = .001$, partial $\eta^2 = .067$.

TREATMENT MODALITY

The type of treatment a child or family received was significantly related to whether the child engaged and successfully completed treatment, $\chi^2(3, N = 882) = 19.919, p < .001$; see Table 2. Relative to individual child treatment or family treatment, a higher proportion of families that received multimodal treatment completed treatment. A higher proportion of families who received psychoeducation and family support also completed treatment. However, this was a very small group of families relative to the other groups, so results should be interpreted with caution. Similarly, the type of
treatment the child or family received was significantly related to the number of sessions attended, $F(3, 878) = 30.173, p < .001$, partial $\eta^2 = .093$; see Table 1. Student Newman–Keuls post-hoc analyses demonstrated that families who received multimodal treatment completed the highest number of sessions. Families who received psychoeducation and family support completed significantly fewer sessions than those receiving multimodal treatment, but significantly more sessions than families who received only one type of treatment. Children who received individual child treatment and families who received only family treatment attended the fewest number of sessions.

Outcomes

A two-factor MANOVA (Treatment Engagement $\times$ Time) with repeated measures on the second factor examined the effect of treatment engagement (nonengagement vs. attrition vs. completion) on Internalizing, Externalizing, and Total CBCL scores (Time 1 vs. Time 2). There was a significant main effect of Time for Internalizing, $F(1, 280) = 20.062, p < .001$, partial $\eta^2 = .067$; Externalizing, $F(1, 280) = 14.547, p < .001$, partial $\eta^2 = .049$; and Total scores, $F(1, 280) = 23.294, p < .001$, partial $\eta^2 = .077$; see Table 3. There was a significant interaction of level of engagement by Time, $F(1, 280) = 3.117, p = .046$, partial $\eta^2 = .022$. Simple effects analysis demonstrated that nonengagers did not demonstrate a change in CBCL scores from Time 1 to Time 2 on any of the CBCL scales. Attriters demonstrated improvement in Internalizing, $F(1, 45) = 7.302, p = .010$, partial $\eta^2 = .140$; Externalizing, $F(1, 45) = 4.962, p = .031$, partial $\eta^2 = .099$; and Total CBCL scores, $F(1, 45) = 7.627, p = .008$, partial $\eta^2 = .145$. Completers demonstrated improvement in Internalizing, $F(1, 221) = 118.917, p < .001$, partial $\eta^2 = .350$; Externalizing, $F(1, 221) = 93.689, p < .001$, partial $\eta^2 = .298$; and Total CBCL scores, $F(1, 221) = 137.323, p < .001$, partial $\eta^2 = .383$.

The main effect of treatment on CBCL scores held even when adding race, income, and treatment type to the model, $F(1, 194) = 35.666, p < .001$, partial $\eta^2 = .155$. There were no significant interactions of treatment by race, income, or treatment type, suggesting that all children demonstrate similar patterns of improvement.

| TABLE 3 | Treatment Outcomes by Treatment Engagement |
| --- | --- | --- | --- |
| | Nonengagers | Attritors | Completers |
| | Time 1 | Time 2 | Time 1 | Time 2 | Time 1 | Time 2 |
| CBCL Internalizing | 49.3 | 45.2 | 55.9 | 51.4 | 57.1 | 48.2 |
| CBCL Externalizing | 52.1 | 47.6 | 56.7 | 52.5 | 57.5 | 49 |
| CBCL Total | 50.0 | 45.8 | 56.4 | 51.8 | 57.9 | 48.2 |

*Note. CBCL = Child Behavior Checklist.*
Supplemental Analyses

Supplemental analyses were run to explore the potential influence of including multiple children from the same family in the analyses. The sample size for one identified child from each family was 1,107. The vast majority of the analyses were identical to the original analysis with little change in p value or effect size. The exceptions are presented here. Results failed to replicate the finding that nonengagers, attriters, and completers differed on parent–child stress in the single child sample, $F(2, 328) = 1.317, p = .269$, partial $\eta^2 = .008$. Parent–child stress did not impact number of sessions attended in the single child sample, $R^2 = .005, F(1, 664) = 3.331, p = .068, \beta = .072$. Results failed to replicate the significant interaction between income level and treatment engagement for parent–child stress in the single child sample, $F(2, 308) = 2.056, p = .130$, partial $\eta^2 = .013$. Cross-tabulation failed to replicate the effect of race by treatment engagement, $\chi^2(6, N = 384) = 10.924, p = .091$.

DISCUSSION

The purpose of this study was to explore factors related to treatment engagement in Safe From the Start services for CEV. Analyses explored the effect of child functioning, parent stress, race, income, and treatment type on treatment engagement. Results indicate that children who successfully complete services demonstrate the largest improvements in behavioral and emotional functioning. Results suggest that children who engage in services but end treatment prematurely also demonstrate improvements in functioning; however, the effect sizes are smaller. Given that treatment might contribute to improvements in child functioning, it is important to understand factors that contribute to service use. Children demonstrated improvement after receiving treatment regardless of type of violence exposure, race, caregiver stress, income level, or treatment type. This result suggests that early intervention is effective in improving emotional and behavioral functioning in young children exposed to violence.

Results indicated no differences in behavioral and emotional functioning among the nonengagers, attriters, and completers at intake. Koverola et al. (2007) proposed that children with more severe behavioral problems might be more likely to complete treatment because parents see externalizing behavior problems as indicators of need for treatment. The results reported here suggest that, rather than waiting for children to demonstrate problematic functioning, parents might be seeking treatment for their children simply because of the potential negative impact of exposure to violence. Safe From the Start programming includes outreach and education about the potentially negative effects of violence exposure on child development. Safe From the Start staff interact with families within the community.
through participation in community events and partnerships with local organizations. It is possible that these outreach efforts have been effective in raising awareness of the importance of early intervention for CEV. It might be important for community-based centers offering services for CEV to provide outreach to the community to raise awareness of the potential benefits of early intervention.

Children exposed to both DV and CA demonstrated higher rates of treatment completion and attended more sessions than children exposed to either DV or CA. Although previous research suggested some differences in treatment engagement based on the type of violence exposure, no study examined the impact of number of types of violence on engagement (e.g., Farmer et al., 2001; Garland et al., 1996; Koverola et al., 2007; Lau & Weisz, 2003).

Consistent with previous research, White children in the full sample completed treatment at higher rates than minority children (e.g., Burns et al., 2004; Ringel & Sturm, 2001). However, in the single child sample this effect did not replicate. When examining the cell sizes in the cross-tabulation several cells were extremely small (n = 5). Thus, the supplemental analysis should be interpreted with caution. There were no significant differences in number of sessions attended based on the child’s race. Taken together, these results suggest that although White children and minority children demonstrate similar attendance rates, White children are successfully completing treatment at higher rates. This might suggest that the service provider’s recognition of the importance of culturally sensitive programming and services as well as racially diverse staff could contribute to decreasing disparities in treatment attendance. However, issues of cultural barriers and compounding effects of low socioeconomic status might contribute to lower treatment engagement for minority families (e.g., Ringel & Sturm, 2001; Shihadeh & Flynn, 1996). Service providers in the Safe From the Start agencies suggested that offering transportation, gas cards, public transportation passes, home-based services, free child care, and gift cards for attendance might contribute to overcoming some barriers to treatment.

Parental levels of general stress and parent-related stress were also examined as predictors in treatment engagement. Results varied based on the sample. Results from the full sample suggest that caregivers who experience higher levels of parent–child stress are more likely to engage their children in Safe From the Start services. Results from the single child sample did not replicate the finding. Caregivers of children who continued services to successful termination did not differ in levels of parent–child stress from caregivers of children who discontinued services prematurely in either sample. The disparate results for the two samples suggest that the association between parent–child stress and treatment engagement could be a function of number of children. Koverola et al. (2007) found that children of parents...
who reported higher levels of parent–child stress were less likely to engage in services. The current sample and the Koverola et al. sample had similar numbers of children in the home (\(M = 2.6\) and \(M = 2.9\), respectively). However, it is unclear what proportion of siblings, if any, were included in the Koverola et al. study. One possible reason for the disparate findings between the two studies is that Koverola et al.’s sample consisted of both young children and adolescents. Parenting an adolescent could contribute to high levels of parent–child stress, and adolescents might have more autonomy in deciding whether to engage and successfully complete treatment.

Another possible explanation for the disparate results is that Koverola et al.’s sample consisted primarily of Black children and this study had a higher percentage of White and Hispanic children. The results reported here suggest that despite having the same levels of parent–child stress as parents of White children, parents of Black children were less likely to engage in services. Parents of White children might have a lower threshold of parent–child stress for which they engage in treatment or lower levels of parent–child stress might allow parents of White children the capacity to engage in treatment. Despite reporting the same levels of parent–child stress as parents of White children, parents of Black children engage in treatment at the same rates as parents of Hispanic and biracial children, who report higher levels of parent–child stress. Results suggesting that minority families engage in treatment at lower rates than White families are consistent with other studies (e.g., Burns et al., 2004; Ringel & Sturm, 2001). In addition to cultural barriers to treatment, parents of minority children might live in communities in which higher rates of violence have normalized violence exposure (see Shihadeh & Flynn, 1996). Thus, parents of minority children might have a higher threshold for which violence exposure prompts them to seek treatment. The number of siblings receiving services could impact the relationship between parent–child stress and treatment engagement because parenting multiple children could be more stressful than parenting one child who has been exposed to violence.

Consistent with previous findings, the type of treatment received was significantly related to the degree to which a family engaged in treatment and was also significantly related to the number of sessions a family attended (e.g., Koverola et al., 2007). Children who were provided a course of treatment that included multiple formats (i.e., individual child therapy and family therapy) attended almost twice as many treatment sessions as children who received one type of treatment. Families that are more committed to treatment might be more open to multiple types of treatment and might be more engaged in their child’s treatment process. Families that participate in multiple types of treatment could feel that they are using multiple strategies to address their child’s symptoms and this might maintain their interest in attending sessions.
Income level did not predict treatment engagement, nor were there significant differences in the number of sessions attended based on family income level. These results might have occurred because services were offered at no cost to families. Thus, offering free care could have been successful in overcoming economic barriers.

Implications for Practice

In addition to analyzing child and family data collected by providers, service providers were polled regarding their advice for retaining high-stress, low-resourced families in services. Service providers include case coordinators and therapists. A summary of suggestions from service providers for improving family engagement in services for children exposed to violence in low-income communities follows.

PAPERWORK AND ASSESSMENT MEASURES

Service providers suggest the use of initial assessments as collaborative tools to gauge the needs of the client. Explaining the role of assessments in evidence-based practice might help demystify the therapeutic process for families. Explaining the function of assessments as tools for treatment and service planning and evaluating progress could help families to feel their treatment will be tailored to their needs, that interventions have specific goals, and that treatment success is important to the provider. Provider investment in outcomes might help families to feel the provider values their efforts and is collaborating with the family. Treatment and service planning should be seen as a team effort that can include extended family and other supportive people in the family’s life. Paperwork and assessments provide the opportunity to build rapport, generate discussion, develop a focus of treatment, and provide support in a structured format that can facilitate discussion of difficult topics. Some families might feel guarded in discussing personal issues or violence. Asking straightforward questions in a semistructured format might help families to feel more comfortable in answering questions knowing that the provider asks the same questions of every family.

BUILDING RAPPORT

Service providers report it is important to provide a welcoming and supportive environment on first contact. It could be important to validate a family’s decision to seek services, acknowledge some of the obstacles in doing so, and discuss the support service providers can give families to assist in overcoming obstacles. Providers also report that it is important for clients to have clear information about who their primary contact will be and how to contact
him or her. Providers should focus on families’ strengths and encourage them to recognize and maintain patterns, cognitions, and behaviors that serve as protective factors. Providers can also normalize child behaviors and family patterns that might be a normal reaction to difficult life experiences while discussing ways to keep the client accountable, including making reminder calls or dropping by their home.

**INTERVENTION DELIVERY AND FORMAT**

Service providers suggest a flexible approach to service delivery that includes meeting over the noon hour or evening and weekend hours. Providers also suggest the provision of child care, home-based services, or school-based services to meet the needs of the client. It might also become necessary to take more time with some families, beyond the therapeutic hour, to increase awareness of family patterns and have more of an opportunity to model calm, consistent responses to child behavior. Service providers also suggest the use of play-based intervention as a way to build rapport and to make therapy seem less like work, while working to support positive parent–child interaction.

**COMMUNITY OUTREACH**

Service providers suggest that agency involvement in the community increases access to families and family groups. Agencies can engage the entire family and educate all aspects of the community about violence prevention and the importance of early intervention. Outreach efforts that encourage families to engage with their communities might decrease social isolation and develop external supports.

**Limitations**

There were several limitations to this study. First, because data were collected by community-based sites that often collected data from families with multiple children, some data were not collected in an effort to begin treatment sooner. This resulted in quite a bit of missing data. Second, given the number of analyses run, there is always a chance that some of the significant findings occurred by chance. Third, without a control group, the outcome analyses cannot determine whether improvements in child behavior were due to treatment. Fourth, the disparate results between the full sample and the single child per family sample for the measure in which the same caregiver reports parent–child stress related to each of her children (PSI) suggests that the results of the full sample might be influenced by the increased weighting of measures from families with multiple children in treatment.
Future Directions

Racial disparities in exposure to violence and mental health treatment exist (e.g., Ringel & Sturm, 2001; Shihadeh & Flynn, 1996). Future directions could examine the complex role of race on treatment engagement to identify systemic or treatment factors that could increase rates of minority engagement.

REFERENCES


