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RESEARCH

Children and Trauma

An Evaluation of the Bronx Child and Adolescent Witness Support Program

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Executive Summary

The Bronx Child and Adolescent Witness Support Program provides mental health assessment and intervention services immediately following a child's exposure to violent crime. Receiving referrals from the Bronx District Attorney's Office, the Witness Support Program provides individual, family, and group therapy, as well as referrals to outside service providers, to help children and their families overcome their trauma. The Witness Support Program has now been in operation for four years.

The present evaluation is an exploratory study designed to indicate whether the program has a therapeutic impact on its participants. Evaluation findings are based on structured pre- and post-treatment assessments (administered by a licensed clinical social worker) with adolescents ages 11-15 and with the parent or guardian of younger children ages 3-10. Overall, 10 adolescents were administered the Trauma Symptom Checklist for Children (TSCC) at baseline (between April 2008 to December 2008) and follow-up (six months after baseline), of whom eight completed the instrument at follow-up. A total of 15 younger children had the Trauma Symptom Checklist for Younger Children (TSCYC) completed by their caretaker at baseline, of whom 11 had the same instrument completed at the six month follow-up. The assessments were designed to measure a wide range of trauma symptoms, including anxiety, depression, post-traumatic stress, and anger.

SUMMARY OF FINDINGS

- *Reduction in Symptom Severity*: There was a reduction in symptoms of trauma from baseline to follow-up in all clinical scales in both the child and adolescent cohorts.
- *Reduction in the Number of Clinically Significant Symptoms*: In both child and adolescent cohorts, fewer symptoms of trauma persisted at clinically significant levels by the time of follow-up. In the adolescent cohort, none of the 10 symptoms were significant, on average, at follow-up.
- *Association of Treatment Dosage with Symptom Reduction*: The raw data indicates that more therapy sessions were associated with a greater reduction of symptoms at follow-up. However, due to low sample size and statistical power, it is not possible to conclude that more sessions *caused* the difference from baseline to follow-up.

CONCLUSIONS AND RECOMMENDATIONS

The results of this study suggest that the Bronx Child and Adolescent Witness Support Program may be helpful in reducing the symptoms of trauma that follow a child's exposure to violence. However, due to extremely limited sample size and the absence of a control group, findings are not statistically significant or definitive. Findings are intended to spur further recommendations for both research and program development. (Future research should include a control group that did not receive the intervention and a larger sample size in both child and adolescent cohorts to generate greater statistical power). Future research should also incorporate an additional follow-up period beyond six months to measure the impact of therapy over a longer period of time. Finally, a supplemental survey module should be developed to capture, at both baseline and follow-up, a participant's involvement in school and extracurricular activities as well the quality and level of peer relationships and support during periods of trauma.

INTRODUCTION

Persons under the age of 18 experience the highest rate of victimization in the United States (BJS, 1997). They are more likely to be physically abused, sexually assaulted, or neglected than any other age category (BJS, 1997). Beyond direct victimization, children are also frequent witnesses to acts of violence that are inflicted upon relatives and members of their home and community. Being a victim or witness to a crime can have a major impact on a child's emotional development: child sexual abuse and domestic violence have been linked to low self-esteem, depression, anxiety, anger and other symptoms associated with post-traumatic stress syndrome.

While adult victim and witness support services are available in most family court jurisdictions across the country, there are limited criminal court-based resources that are explicitly designated to address child and adolescent trauma stemming from their experiences with violence.

The Child and Adolescent Witness Support Program, located in the Bronx District Attorney's Office, specializes in providing mental health assessment and intervention services immediately following a child's exposure to violent crime. Receiving referrals from the Bronx District Attorney's Office, which responds to thousands of cases of child sexual abuse and domestic violence involving child victims/witnesses, the Witness Support Program provides supportive services to help children and their families overcome their trauma. The Witness Support Program has now been in operation for four years.

The present evaluation is an exploratory study designed to indicate whether the program has a therapeutic impact on its participants. Evaluation findings are based on structured pre and post-treatment assessments with participants ages 11-15 and with the parent and guardians of participants ages 3-10. Findings are intended to spark further recommendations for both research and program development.

PROGRAM DESCRIPTION

The Bronx Child and Adolescent Witness Support Program provides mental health support, on-site trauma-focused therapy, and outside service referrals for children and adolescents exposed to violent crime. The goal of the program is to alleviate the trauma associated with being a child witness or victim. The participants are youth ages 3-15, who have been a witness or victim of physical abuse, sexual abuse, domestic violence, or homicide. Currently, there are approximately 50 clients that are receiving intensive individual therapy through the program.

Organizational Structure

The program consists of a program director who is a licensed clinical social worker (LCMSW), a licensed clinical social worker and social work intern. The two social workers and social work intern are responsible for providing therapy to the program clients as well as administering the Trauma Symptom Checklists appropriate for each age group.

Referral Process and Eligibility

A child is most often referred to the program by an assistant district attorney or crime victim advocate at the Bronx District Attorney's Office. The referral source provides the program with a referral form that contains the victim's identifying information, contact information, and a basic description of the crime. After receiving the referral form, the program director, determines whether the child is eligible to participate based on the following criteria:

1. *Timing*: The crime has occurred within the last six months;

2. *Criminal Case Status*: The crime is under active investigation or prosecution by the Bronx District Attorney's Office;

3. *Nature of Incident:* The child is the primary victim or a direct witness of a homicide or serious domestic violence incident;

4. *Criminal Charges*: The charges were for one of the following: incest, rape/sodomy, physical abuse by caretaker resulting in injury to the child, homicide, or domestic violence resulting in injury to a caretaker or the child.

If the child is not eligible to participate, the referral source is advised to seek outside services. If the client appears eligible, the program director (LCMSW), part-time therapist (a social worker with an LMSW credential) or the social work intern (an LMSW candidate) conducts outreach to the parent or guardian. Outreach involves an introductory phone call during which a basic description of the program is provided, and the parent or guardian is invited to make an intake appointment to express his or her concerns and to learn more about the program's services. If the program staff has difficulty reaching the parent by phone after 3-5 attempts, an introductory letter is sent encouraging the parent to make phone contact. If a parent agrees to an intake appointment but calls to cancel, the appointment is rescheduled. If a parent agrees to an intake appointment but does not attend or call to cancel, the program staff phones the parent to reschedule. If the parent is subsequently unable to be reached by phone, a letter is sent encouraging the parent to reschedule the appointment. If the parent does not respond, the referral is closed. If a parent agrees to an intake appointment but repeatedly cancels and reschedules, the referral remains open until either the parent attends the appointment or the parent discontinues rescheduling.

Once the parent participates in the intake appointment, a determination is made as to whether the program can appropriately serve the family – through family, individual, or group therapy; crisis intervention; or referral for outside services.

Treatment Modalities Offered at the Program

Based on the intake interview, a client may receive individual therapy once a week for 45 minutes or family or group therapy that may include siblings, other family members, or groups of 6-10 girls. Due to resource constraints, the duration of therapy is limited to six to nine months after client intake. After that point, program staff may conduct an exit interview with client and parent and refer them to outside service providers as needed.

RESEARCH DESIGN

Description of Instrument

The study employed two instruments. Based on the client's age, the social worker conducting intake interviews choose either the Trauma Symptom Checklist for Children (TSCC) (Briere, 1996) or the Trauma Symptom Checklist for Young Children (TSCYC) (Briere, 2005). Both

instruments measure the psychological impact of aversive life experiences in children. The TSCC, a self-report measure, was administered to adolescents ages 11-15, whereas the TSYCC, a caretaker report measure, was administered to parents/caretakers of children ages 3-10 years.

Trauma Symptom Checklist for Children (TSCC)

The TSCC (Briere, 1996) consists of 54 likert scaled items that measure two validity scales (Underresponse and Hyperresponse), six clinical scales (Anxiety, Depression, Anger, Post-traumatic Stress, Dissociation-2 Subscales, Sexual Concerns-with 2 subscales), and eight critical items (see Table 1 on the following page for a description of these scales). The instrument was standardized and normed on a group of more than 3,000 children in the United States. The critical items represent feelings and behaviors that the respondent may feel as a result of the traumatic event they experienced.

Scoring is generated as follows. Each item contributes to the calculation of raw scale scores for each clinical scale. Points are assigned (from a scoring sheet) based upon the respondents' rating of each item. The raw scores of the clinical scales and critical items are then converted into standard scores (e.g. so that a scale of 70 has an equivalent meaning across each scale).

Interpreting the validity scales (underresponsivity and hyperresponsivity) is based on answers to a select number of specific items on the instrument. It is understood that standardized scores on the underresponsivity scale that are higher than 70 are considered invalid. (Such respondents had a desire to underreport any symptoms.) Respondents who have standardized scores on the hyperresponse scale which are higher than 90 are characterized as presenting with a desire to appear especially distressed or dysfunctional, and such scores are also considered invalid.

***Trauma Symptom Checklist for Young Children (TSCYC*)**

The TSCYC (Briere, 2005) is a 90-item caretaker-report instrument that contains eight clinical scales (Anxiety, Depression, Anger/Aggression, Post-Traumatic Stress-Intrusion, Post-Traumatic Stress-Avoidance, Post-Traumatic Stress-Arousal, Dissociation, and Sexual Concerns), as well as a summary post-traumatic stress scale (Post-Traumatic Stress-Total). As with the TSCC, this instrument was also standardized and normed on a national sample of caretakers who responded on behalf of the children affected by trauma (see Table 2 for the validity and clinical scales). Scores for the TSCYC are calculated as follows. First, each of the items on the instrument corresponds to a specific scale. If there are three or more items that are blank, a scale cannot be calculated. Raw scores are generated by using a scoring worksheet (a form that identifies which items correspond to specific scales). Raw scores are then calculated into standardized scores, which determine whether the potentially trauma-related symptoms are deemed clinically significant. Standardized scores are determined based upon a profile form that is specific to the child's age and gender. Scores with values at or above 70 are considered statistically significant.

Table 1.DESCRIPTION OF TSCC VALIDITY AND CLINICAL SCALES

Type of Scale	Name of Scale	Item Content
Validity	Underresponse	Reflects a tendency toward denial, a general under endorsement response set, or a need to appear unusually symptom-free.
	Hyperresponse	Indicates a general overresponse to TSCC items, a specific need to appear especially symptomatic, or a state of being overwhelmed by traumatic stress.
Clinical	Anxiety	Generalized anxiety, hyperarousal, and worry; specific fears; episodes of free-floating anxiety; and a sense of impending danger.
	Depression	Feelings of sadness, unhappiness, and loneliness; episodes of tearfulness; depressive cognition such as guilt and self-denigration and self injuriousness and suicidality.
	Anger	Angry thoughts, feelings, and behaviors, including feeling mad, feeling mean, and hating others, having difficulty de-escalating anger, wanting to yell at or hurt people; and arguing and fighting.
	Post-Traumatic Stress	Post-traumatic symptoms, including intrusive thoughts, sensations, and memories of painful past events; nightmares; fears; and cognitive avoidance of painful feelings.
	Dissociation (2 Subscales)	Derealization; one's mind going blank; emotional numbing; pretending to be someone else or somewhere else: daydreaming; memory problems; and dissociative avoidance.
	Sexual Concerns (2 Subscales)	Sexual conflicts; negative responses to sexual stimuli and fear of being sexually exploited.
Critical Items	Wanting to hurt myself Wanting to hurt other people Feeling scared of men Feeling scared of women Not trusting people because they might want sex Getting into fights Feeling afraid somebody will kill me Wanting to kill myself	

Briere, J (1996)

Table 2. DESCRIPTION OF TSCYC VALIDITY AND CLINICAL SCALES

Scale	Name	Item Content
Validity	Response Level	Caretaker underreports normal problems in the children, due to generalized denial or a need to present the child as especially psychologically healthy or "good."
	Atypical Response	A tendency to endorse unusual symptoms in the child, typically because the caretaker is overwhelmed or based on a need to present the child as especially disturbed or symptomatic.
Clinical	Anxiety	Generalized anxiety and worry, specific fears, being easily frightened, and a sense of impending danger.
	Depression	Feelings of sadness, unhappiness, tearfulness, depressed appearance, depressive cognitions such as self blame and self-denigration, and self-injuriousness.
	Anger/Aggression	Angry feelings and behaviors, including feeling made, feeling mean, becoming easily angered, yelling, hitting, fighting, and cruelty to animals.
	Post-Traumatic Stress Intrusion	Nightmares, post-traumatic play, flashbacks, fear in response to traumatic-reminiscent events, and being upset by traumatic memories.
	Post-Traumatic Stress Avoidance	Avoiding people, places and situations reminiscent of a traumatic event, emotional numbing, unwillingness to speak about a traumatic event and difficulties fully remembering a trauma.
	Post-Traumatic Stress Arousal	Post-traumatic stress symptoms associated with autonomic hyper arousal, including jumpiness, tension, attention and concentration problems, and sleep problems.
	Post-Traumatic Stress Total	Summary scale of all post-traumatic symptoms assessed by the PTS-I, PTS-AV, and PTS-AR scales. Evaluates the overall level of posttraumatic symptoms experienced by the child. A raw score of 40 or greater in a child with a history of upsetting trauma, suggest a possible diagnosis of PTSD.
	Dissociation	Emotional disengagement, staring into space, living a fantasy world, absent mindedness, appearing to be in a trance, and reduced attention to the external environment.
	Sexual Concerns	Sexual knowledge, behaviors, feeling, or preoccupations that are atypical because they occur earlier than expected or with greater than normal frequency, and fearful responses to sexual stimuli.

See Briere, J (2005)

Data Collection
The data collection consisted of baseline and follow-up periods of assessments of the adolescent and the young children group. The baseline instrument is administered for program-related purposes at the point of intake; this study uses the baseline data for research-related purposes as well. The six-month follow-up survey allows for statistical analyses to be conducted to determine change over time. The baseline period began in April 2008 and ended in December 2009. The follow-up period consisted of administering the same instruments to the same group of respondents six months after the baseline assessment. Overall, 10 adolescents were administered the TSCC at baseline, of whom eight completed the instrument at follow-up, and 15 children had the TSCYC completed by their caretaker at baseline, of whom 11 had the follow-up instrument completed.

Current Study as Exploratory Research
This study serves as an opportunity to measure the impact of intervention for young crime victims and witnesses. As such, the results of the study could serve as a benchmark in developing future experimental efforts in assessing whether these interventions are likely to reduce childhood and adolescent trauma. The sample sizes of the two cohorts (young child=15, adolescent=10) can produce descriptive and suggestive information, but are insufficient to generalize. Attempts were made to include a control group (e.g. a comparable sample of clients from another agency where no services were available) but there was no agency available to participate. Subsequently, the results, while informative, cannot be considered conclusive due to the lack of control group or random selection. Despite these limitations, this evaluation can provide the impetus for further discussions about program design and further research possibilities.

Analytic Strategy
The most important issue considered in this evaluation is whether therapy sessions conducted at the program affect the outlook and behaviors of the clients who have experienced and witnessed trauma. Rather than compare individual questions from baseline to follow-up, the approach was to assess the final outcomes of trauma as measured in the clinical scales and critical items. Since each instrument contains different items and produces different scales (TSCC produces critical items; TYSCC does not), the analyses for each cohort will be performed separately. The analytic strategy is as follows:

1. Report descriptive information for child and adolescent cohorts at baseline;

2. Calculate the difference between the mean value of validity, clinical and critical items (by cohort) at baseline and six month follow-up to determine if there is an increase or decrease of trauma over time;

3. Conduct bivariate correlations of the mean scale differences (from step 1) of total therapy sessions by cohort to determine whether effect sizes appear greater for those receiving a greater dose of the intervention.

Table 3. Individual Characteristics by Cohort

N	Child 15	Adolescent 10
Age (in years)	7.2	13.5
Female	80%	90%
Black	60%	10%
Hispanic	40%	90%
Sexual Abuse/Assault	33%	90%
Physical Abuse/Assault	7%	0%
Intimate Partner Violence	40%	0%
Witness to Homicide	33%	0%
Average Sessions of Therapy	12	11

One respondent in the adolescent cohort did not report the type of assualt they experienced. Subsequently, the percentage will not add up to 100%

Variables Analyzed

Individual Characteristics in Both Child and Adolescent Cohort: Respondents' age, race, gender, type of trauma, and the number and type of therapy sessions the client participated in at the Bronx Child and Adolescent Witness Support Program.

Characteristics Specifically in the Child Cohort (TSYCC): Underresponse and Hyperresponse Validity Scales and Clinical Scales.

Characteristics Specifically in the Adolescent Cohort (TSCC): Validity Scales Response Level and Atypical Level, Clinical Scales and Critical items.

RESULTS

This section lays out simple analyses of individual, baseline, and follow-up characteristics of the child and adolescent cohorts. Table 3 presents the individual characteristics of the clients who were administered the trauma checklists. Female clients made up the bulk of each sample. In both cohorts, black and Hispanic clients made up the entire sample. Young children were more likely to have witnessed intimate partner violence, whereas adolescents were more likely to have been victims of sexual abuse and assault. Both cohorts had, on average, similar numbers of therapy sessions (averaging 11 to 12). When therapy is disaggregated by specific type in Table 4, both child and adolescent cohorts were found to have participated most frequently in individual therapy, parent-child therapy, and parent therapy of adolescent and child clients.

Child Cohort: Baseline vs. Follow-Up

Table 5 shows the mean values of the validity and clinical scales within the child cohort. As previously mentioned, caretakers of the child victim or witness were administered the instrument. These scales reflect the caretakers' impression of the effects of the traumatic experiences of the child in their care.

Table 4. TYPES OF THERAPIES (BY COHORT)

Type of Therapy	Child		Adolescent	
	Percent Receiving	Mean # Sessions	Percent Receiving	Mean # Sessions
Individual Therapy	93%	9	100%	8.1
Parent-Child Therapy	93%	1.8	80%	1.3
Family Therapy	7%	1	0	0
Parent Therapy	100%	1.9	80%	1.5
Sibling Therapy	7%	1	20%	3
GroupTherapy	0	0	10%	1

The validity scales measure whether a caretaker is underreporting traumatic experiences in order to present the child as psychologically healthy (Response Level) or is presenting the child as more traumatized than is actually the case (Atypical Response). The response level results showed that there was no difference in the mean values from baseline to the six-month follow-up and, based on the numeric mean values, the scale was deemed non-significant. The mean values for the atypical scale were also non-significant, however there was a 9-point reduction from baseline to follow-up, suggesting that caretakers in the follow-up period were marginally less likely to report and present their child as being traumatized from the experiences they had at baseline. Since the scales were non-significant at both periods, the general conclusion is that caretakers provided valid answers, responding to the best of their ability without under or over-repeating symptoms.

Table 5. BASELINE AND FOLLOW-UP SCALES FOR CHILD COHORT

Scales	Baseline N=15		Follow-up N=11		Mean Difference
	Mean	Std. Deviation	Mean	Std. Deviation	
Response Level	51	11	51	13	0
Atypical Response	61	22	52	9	-9
Anxiety Scale	72*	20	58	17	-14
Depression	66*	25	58	19	-6
Anger/Aggression	59	23	50	13	-9
Post-Traumatic Stress-Intrusion	76*	25	66*	22	-10
Post-Traumatic Stress-Avoidance	76*	25	73*	24	-3
Post-Traumatic Stress-Arousal	67*	24	56	13	-9
Post-Traumatic Stress-Total	78*	26	67*	23	-11
Dissociation	58	21	55	14	-3
Sexual Concerns	66*	28	57	20	-9
Number of Scales with reduction in trauma at Follow-up					**9**
Number of Scales with in increase in trauma at Follow-up					**0**
Number of Scales with no change at Follow-up					**0**

*Denotes that the clinical scale is statistically significant when the value is 65 or higher

Table 6. BASELINE AND FOLLOW-UP SCALES FOR ADOLESCENT COHORT

Scales	Baseline N=10		Follow-up N=8		Mean Difference
	Mean	Std. Deviation	Mean	Std. Deviation	
Underresponse	52	10	56	14	4
Hyperresponse	59	23	48	4	-11
Anxiety	55	16	47	9	-8
Depression	52	11	46	9	-6
Anger	52	9	43	7	-9
Post-Traumatic Stress	57	14	49	10	-8
Dissociation	58	12	49	8	-9
Overtly Dissociative	59	12	49	10	-10
Fantasy Dissociation	55	12	49	9	-6
Sexual Concerns	66*	44	56	23	-10
Sexual Preoccupation	63	43	55	19	-8
Sexual Distress	68*	36	58	29	-10
Number of Scales with reduction in trauma at Follow-up					**10**
Number of Scales with in increase in trauma at Follow-up					**0**
Number of Scales with no change at Follow-up					**0**

The mean values of the clinical scales show that, at baseline, there were seven scales that were significant (score of 65 or higher). Only anger/aggression and dissociation did not yield significant mean values at baseline. However, all nine of the clinical scales reported a reduction in the mean scale values from baseline to follow-up. Most notably, the anxiety, post-traumatic intrusion, and total post-traumatic stress scales were reduced at follow-up by double digits. Three of the scales (post-traumatic stress, intrusion, avoidance, and total types of post-traumatic stress) remained significant at the follow-up, compared with seven that were significant at baseline. The results suggest that caretakers reported that the children were still impacted by traumatic experiences at follow-up but that the number and severity of their clinical symptoms were reduced.

Adolescent Cohort: Baseline vs. Follow-Up

For the adolescent cohort (Table 6), the mean values of the validity scales were all non-significant, although varying slightly from baseline to follow-up. In other words, the adolescents did not under- or over-report their symptoms when answering the questions.

At baseline, sexual concerns and sexual distress were the only ones out of 10 clinical scales that yielded significant values. Hence the adolescent cohort began with fewer clinically significant symptoms that the younger child cohort. The significance of sexual concerns and sexual distress was consisted with the fact that this cohort consists almost entirely of female adolescents who had been victims of sexual abuse or assault. Subsequently, all ten of the clinical scale means values were reduced at follow-up, and all scales yielded non-significant values at this period.

Table 7. CRITICAL ITEMS OF ADOLESCENT COHORT

Critical Items	Baseline N=10				Follow-Up N=8			
	Never	Some-times	Lots of Times	Almost all of the time	Never	Some-times	Lots of Times	Almost all of the time
Wanting to hurt myself	6	3	1	0	6	2	0	0
Wanting to hurt others	8	2	0	0	6	2	0	0
Scared of men	6	1	1	2	5	2	1	0
Scared of women	9	1	0	0	8	0	0	0
Not trusting people because they might want sex	5	3	1	1	5	2	0	1
Getting into fights	3	5	0	2	6	2	0	0
Feeling afraid somebody will kill me	5	3	0	2	6	1	1	0
Wanting to kill myself	7	3	0	0	7	1	0	0

Critical Items

For the adolescent cohort only, the critical item table (Table 7) presents eight statements that measure the respondents' potential to harm themselves or others. At baseline and follow-up, the table shows that most of the respondents reported that they had never felt a need to engage in harmful or self-injurious behavior. The table also shows that there were fewer respondents who reported that they wanted to engage in these behaviors "almost all of the time" at follow-up than at baseline (fewer reported that they were almost always scared of men, getting into fights and feeling somebody was going to kill them).

Effect of Therapy on Follow-up

The final component of the evaluation was to determine whether the number of therapy sessions had any effect on the final outcomes of the clinical scales in the child and adolescent cohorts. Bivariate correlations were performed using the total number of sessions of therapy and the mean difference in value between the baseline and follow-up of the clinical scales. The findings revealed that more sessions were associated with a lower value at follow-up on all clinical scales within both cohorts. Hence, the results suggest that a greater dosage of the intervention may have corresponded with a greater reduction in symptoms. However, none of these relationships were significant. Due to low sample size and statistical power, it is not possible to conclude that more therapy sessions led to a difference in clinical scales from baseline to follow-up.

SUMMARY OF KEY FINDINGS

This exploratory research allowed an opportunity to assess whether therapeutic interventions influence the reduction of trauma among court-involved minors. The findings showed that there was a reduction in symptoms from baseline to follow-up in all clinical scales in both the child and adolescent cohorts. The findings also showed that in both cohorts, fewer symptoms persisted at clinically significant levels by the time of follow-up; and in the case of the adolescent cohort, none of 10 symptoms were significant at follow-up. However, due to the absence of a control group, it is not possible to conclude that therapy sessions provided by the program were instrumental in achieving these positive effects, as opposed to other factors.

STUDY LIMITATIONS AND STRENGTHS

There were several study limitations that, if addressed in future evaluations, could lead to a better understanding of the relationship between the program intervention and trauma. First, the small sample sizes within each cohort did not allow inferential analyses (i.e. regression modeling) to be

performed due to a lack of statistical power. For the same reason, it would be imprudent to generalize study findings to any larger population. Second, there may be one or a series of confounding variables that were not captured in this evaluation, but that may explain why the mean clinical values were lower at the follow-up period. Most obviously, trauma symptoms may naturally have subsided over time. Third, caretakers who were administered the trauma checklist for young children (TSCYC) served as a proxy for the child who was exposed to the traumatic experience. The caretakers may or may not have answered accurately on behalf of their children. The final and most critical limitation is the lack of a control group that was not exposed to the program intervention. Future research in the Bronx or elsewhere should incorporate a quasi-experimental design that includes similarly matched cohorts from a court jurisdiction that is unable to offer comparable child/adolescent services.

The strength of this research effort is that the samples in both cohorts provided considerable descriptive detail in regards to individual characteristics, different therapeutic modalities and the clinical and critical items. The program serves clients who have experienced a wide range of violent experiences and provides therapeutic supports to deal with those circumstances. While this evaluation could not statistically document that therapy was responsible for the reduction in traumatic symptoms, the results are certainly consistent with the notion that therapy can yield benefits to children who have been witnesses to violence.

RECOMMENDATIONS FOR FUTURE RESEARCH

In order to yield more reliable inferences, future research should include a larger sample size in both child and adolescent cohorts to generate greater statistical power (and to reduce the risk of type 1 and type 2 errors). Future evaluation efforts should also incorporate an additional follow-up period beyond six months to measure the impact of therapy over a longer period of time. In addition to collecting the number of therapy sessions and the pre-test and post-test scores on the clinical scales, supplemental information should be obtained to control for confounding influences, and a quasi-experimental control group should be included. It is also recommended that a supplemental survey module be developed to capture, at both baseline and follow-up, a participant's involvement in school and extracurricular activities as well the quality and level of peer relationships and support during periods of trauma.

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