

Mental Health and Dangerousness: Characteristics and Outcomes of Children and Adolescents in Residential Placements

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Violence has been identified as a significant risk behavior among children and adolescents. Dangerousness is a factor in psychiatric hospitalizations and out-of-community placements. However, there is only a small amount of research that has investigated the mental health co-morbidities and treatment outcomes of violent children and adolescents. A random sample of children and adolescents in residential placements through the State of Florida's child welfare system were studied. Cases were classified into three levels of dangerousness. Results indicated that dangerousness was associated with much elevated mental health co-morbidity. Also, cases who were dangerous at the time of admission had less developed peer and moral/spiritual strengths than did other cases. Although dangerous cases had worse dispositional outcomes, there was strong evidence that these cases derived the most clinical benefit from residential treatment.

KEY WORDS: violence; dangerousness; residential placements; mental health co-morbidity.

The sharpest increase of arrests for homicide in the United States has been among teenagers. Between 1985 and 1994, arrests increased 150% among youth under the age of 18 (Snyder, Sickmund, & Poe-Yamagata, 1996). Violence not resulting in fatality also is serious and common among adolescents. The national 1992 Youth Risk Behavior Survey reported that 49% of youth ages 12 to 13 and 44% of youth ages 14 to 17 had been involved in physical fights in the previous

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year. One in seven youth ages 12 to 21 reported having carried a weapon (Sells & Blum, 1996).

The clinical management of dangerous behavior in adolescents has become increasingly controversial. Often aggressive youth are treated in hospitals or residential treatment facilities (LeCroy & Ashford, 1992; Meller & Borchardt, 1996; Pothier, 1988). As a result, high number of physically aggressive acts occur within residential treatment centers and psychiatric wards (Connor, Melloni, & Harrison, 1998; Gabel & Shindledecker, 1991, Garrison et al., 1990). For example, Connor et al. (1998) found that 90% of youth residing in a residential treatment center were involved in physical assaults, and 98% were verbally aggressive. There is little evidence regarding the outcomes of these interventions and whether the increased level of treatment and supervision in residential placements translates into reduced violence following discharge.

At least half of the youth admitted to residential treatment programs or hospitals have had a past history of aggressive behaviors (Grosz et al., 1994). Also, history of aggressive behavior seems to be a predisposing factor predictive of assaultive behavior while residing in out-of-home placement (Connor et al., 1998; Fritsch, Heinssen, Delga, Goodrich, Yates, 1992; Garrison et al., 1990).

Research investigating the behavior of violent youth have focused primarily on demographic factors of youth, mental illness coexisting with violent youth, risky behaviors accompanying violence, and predictors of violent behavior and unmanageability. In terms of demographics, gender is the best predictor of dangerousness with boys being far more likely than girls to engage in violent behavior (Connor et al., 1998; Gabel & Shindledecker, 1991; Fritsch et al., 1992; Garrison et al., 1990). Among children, violence is the behavior that has the greatest impact on their risk for hospitalization or residential placements (Gabel & Shindledecker, 1992; Garrison et al., 1990). A number of diagnostic categories are associated with increased violence, including conduct disorder (Gabel & Shindledecker, 1991; Fritsch et al., 1992), impulse control disorder, borderline personality disorder (Grosz et al., 1994), psychosis (Inamdar, Lewis, Siomopoulos, Shanok, & Lamela, 1982), and the absence of depression or anxiety (Apter et al., 1995; Grosz et al., 1994; Meller & Borchardt, 1996). Substance abuse, suicide, self-injurious behavior, history of physical abuse, and parental substance abuse have been reported to coexist in dangerous youth (Connor et al., 1998, Gabel & Shindledecker, 1991; Grosz et al., 1994; Hillbrand, 1995).

Few studies have measured the difference in treatment outcome of violent youth versus non-violent youth. However, Gabel and Shindledecker (1992) found that aggressive assaultive behavior by youth predicts poorer outcome. These authors also found that youth residing in a placement for a longer length of time are generally placed in more restrictive settings at discharge than those with shorter lengths of stay. Connor et al. (1998) reported that youth with violent behaviors do not differ in outcome from non-violent youth. However, the measure of outcome

employed was the level of restrictive placement after discharge, allowing for environmental factors such as home dysfunction to potentially confound these results.

As a step towards increasing our understanding the effects of treatment of violent youth, it is important to identify whether they have unique mental health treatment needs as compared to other youth. In this study we compared the clinical characteristics of violent and non-violent youth in residential child welfare placements and their clinical and dispositional outcomes.

METHOD

Sample and Setting

We utilized data collected for a larger study of the feasibility of Medicaid bundled rate reimbursement in residential child welfare placements. Data were obtained through an assessment of residential treatment centers billing Medicaid in the state of Florida. A random sample of between 14 and 30 cases was reviewed and rated (Total N = 392) at 15 residential treatment sites. One additional site, which expressed interest in billing Medicaid, was also included.

The sample consisted of children and adolescents between the ages of 3.3 and 18.5 years, with a mean age of 12.4 years. Gender distribution was relatively equal, with boys making up a little over half of the sample (52%). Caucasian and African-American children represented over four-fifths of the cases reviewed.

Instruments

The assessment measures employed were The Child and Adolescent Strengths Assessment (CASA) and the Childhood Severity of Psychiatric Illness (CSPI) (Lyons, 1998; Lyons, Mintzer, Kisiel, & Shallcross, 1998). The CASA consists of 30 items allowing for the rating of strengths in six different domains, including Family, School/Vocational, Peer, Psychological, Moral/Spiritual, and Extracurricular. Three anchored responses indicate either no evidence of the strength, potential or interest, or the presence of the strength. In the present sample, the 30-item CASA scale had an internal consistency reliability of .92. The six CASA component scales also demonstrated reasonable internal consistency reliabilities, ranging from .57 for the "Extracurricular" scale to .88 for the "Psychological Strengths" scale.

The CSPI is a 27-item assessment tool designed to measure impairment along five domains: symptoms, risk behaviors, functioning, mental health co-morbidities, and caregiver capacity. Within each item, raters are required to assess the degree of severity corresponding to four levels of functioning, yielding high levels of inter-rater reliability and interpretability for each item (Lyons, 1998). In addition, items within the symptoms, risk behaviors, and functioning domains may be averaged

to yield moderate to low internal consistency reliabilities but high inter-rater reliabilities. After training on the CSPI the reliability is over .85 after training, and for the present study reliability was estimated to be .87 (weighted kappa) based on a sample of 15 paired ratings.

Procedures

Teams consisting of representatives from various agencies, including Child Welfare, Mental Health, and the Agency for Healthcare Administration rated each case twice: once based on the child or adolescents status at admission and a second time based on the 30 days prior to the time of the retrospective review site visit. A current status assessment was not done if the child or adolescent had been in the residential placement for less than 60 days. A subset of selected cases had been discharged prior to the review. For these cases, the CSPI was based on the child or adolescent's status at discharge. Discharge placement disposition was obtained for these cases. The CASA was completed independently by either a house parent, the primary therapist or a caseworker prior to the review site visit.

Using the Danger to Others scale of the CSPI, cases were classified into three groups. Cases given a '0' on this item had no known history of violence and were classified as 'Non-violent' cases. Cases given a '1' on this item had a history of violent behavior but had not engaged in any such behavior in the 30 days prior to admission. These cases were classified as 'Historically Dangerous'. Finally, cases given either a '2' or '3' on this item had engaged in violent behavior during the 30 days prior to admission and were classified as 'Currently Dangerous'.

RESULTS

Table 1 presents the comparison of currently dangerous, historically dangerous, and never dangerous children on all dimensions of the CSPI at admission into the residential program. ANOVAs demonstrate statistically significant differences on 17 items of the 24-item CSPI.

The children and youth in the three levels of dangerousness were compared on change in the total CSPI from admission to current status. Table 2 presents the means for each group at these two time points. Statistical comparisons reveal that the three groups are significantly different from each other at admission $F(2,368) = 163.4, p < .001$ and current status $F(2,309) = 49.2, p < .001$. The three groups also demonstrated significantly different rates of change $F(1,298) = 14.2, p < .001$. The Currently Dangerous cases were the most severely ill but improved significantly more than did either other two groups. The Historically Dangerous cases were more severely ill but improved significantly more during residential treatment compared to the Not Dangerous cases.

In terms of dispositional outcomes, for each higher level of dangerousness, there was a decreasing likelihood of a positive dispositional outcomes Spearman

Table 1. Comparison of Levels of Dangerousness Risk on Other Dimensions of the Childhood Severity of Psychiatric Illness

CSPI Dimension	Not Dangerous	History	Current	F
Neuropsychiatric	.01a	.25b	.55c	29.54***
Emotional	1.27a	1.50b	1.76c	18.11***
Conduct	.42a	1.04b	1.43c	63.38***
Oppositional	.82a	1.34b	1.71c	48.43***
Impulsivity	.65a	1.24b	1.61c	66.49***
Contextual	1.99a	2.14a	2.63b	11.22***
Temporal	1.43a	1.99b	2.19b	21.77***
Suicide Risk	.20a	.44b	.74c	31.24***
Elopement	.42a	.90b	.89b	15.40***
Crime/Delinquency	.25a	.69b	.88b	23.50***
Sexual Aggression	.01a	.32b	.51c	15.82***
School Dysfunction	1.09a	1.42b	1.86c	28.48***
Family Dysfunction	2.27b	2.00a	2.36b	6.27**
Peer Dysfunction	1.17a	1.50b	1.97c	26.90***
Adjustment to Trauma	1.44	1.40	1.54	.08
Medical	.25	.28	.33	.54
Substance Abuse	.27a	.58b	.38ab	7.87**
Severity of Abuse	1.54	1.50	1.67	.90
Sexual Development	.66a	.81ab	1.00b	3.61*
Developmental Delay	.45a	.48a	.79b	5.98**
Supervision	1.00	1.04	1.11	.35
Motivation for Change	.61	.59	.62	.04
Knowledge of Child	.46	.42	.51	.45
Placement Safety	.38	.40	.53	1.03

Note. Different letters indicate significantly different group means using Tukey’s HSD post hoc tests.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 2. Comparison of Admission and Current Status on the Childhood Severity of Psychiatric Illness for Three Levels of Dangerousness

Group	Admission CSPI		Current Status CSPI	
	Mean	SD	Mean	SD
Not Dangerous	8.7	4.0	7.8	4.5
Historically Dangerous	13.7	3.7	11.4	4.8
Currently Dangerous	18.3	3.9	14.7	5.2

$r = -0.19$, $df = 127$, $p < .05$. Of the Not Dangerous cases 73.9% of those discharged experienced positive dispositional outcomes. This rate was 63.3% for the Historically Dangerous and 51.7% for the Currently Dangerous cases.

The three levels of dangerousness also were compared on strengths as measured by the CASA. Using the total score, there was a significant difference among the three groups $F(2,399) = 4.05$, $p < .02$. Tukey’s HSD post hoc tests revealed the only significant difference was that the Currently Dangerous cases had significantly fewer strengths than did the Non Dangerous cases. The average for the Historically Dangerous cases was between these groups and not significantly different from either.

Comparison across the strength domains within the CASA revealed the predominant differences in strengths across levels of dangerousness came on two dimensions—Peer Strengths $F(2,427) = 7.91, p < .001$ and Morality/Spirituality $F(2,427) = 9.02, p < .001$. The Currently Dangerous cases had significantly fewer Peer strengths and Morality/Spirituality strengths than either the Not Dangerous or Historically Dangerous cases.

DISCUSSION

The results of our study demonstrate that among children and adolescents in residential placements, those who engage in violent behavior have among the greatest level of mental health co-morbidities and needs. Those who have engaged in violent behavior were significantly higher on all other dimensions of the CSPI with the exception of Adjustment to Trauma, Medical Co-morbidity, and Severity of Abuse. Dangerousness was not associated with prior abuse experience or adjustment reactions to these traumas nor was it associated with having (or not having) medical problems. Otherwise, dangerousness was associated with a significantly higher level of every other factor measured.

Dangerousness was associated with higher levels of all symptom classes. Even emotional disorders (e.g., depression, anxiety) were more severe among those who are or have been dangerous than those who are not. All other risk behaviors were more common and functioning domains were more impaired among currently dangerous children and adolescents. They were more likely to have learning disabilities or mental retardation as well.

Interestingly, our results suggest that residential treatment provides the greatest benefit to more dangerous cases. In part, this is due to the fact that, given their high level of mental health need, dangerous children and adolescents have the greatest room for clinical improvement. Regardless, those who are admitted while still dangerous evidenced significantly greater clinical benefit from the treatment. Historically, dangerous cases had significantly greater clinical benefit than did the cases without any history of violence.

Despite the clinical improvement, dangerous cases were more likely to have poor dispositional outcomes. The greater the level of dangerousness, the more likely a child or adolescent would be discharged to the same or higher level of care (or runaway). Thus, if the residential placement is able to maintain the case, the clinical benefit accrues; however, dangerous cases are the most likely to leave residential placements to hospitals and detention centers or to runaway.

Currently dangerous children and youth had fewer strengths than did other cases. This is provocative for the design of strength-based approaches to violence. In particular it appeared the non-violent and those who were no longer violent at admission had more developed positive peer relationships and had a more developed moral and spiritual strengths, including developed value systems and religious and spiritual beliefs. The fact that Historically dangerous cases were more similar

to Not Dangerous cases suggests that the development of strengths in these areas may be ameliorative in the secondary prevention of violence.

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