

# Safety at a girls secure juvenile justice facility

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## Abstract

**Purpose** – *Serious juvenile delinquency is a significant and costly problem in the society. However, custodial environments often exacerbate current problems and promote recidivism. Girls' delinquency, in particular, may call for trauma-informed approaches within organizations that serve the most serious offenders. The purpose of this paper is to explore whether implementation of a trauma-informed intervention that aims to change the therapeutic stand of the organization, the Sanctuary Model<sup>®</sup>, corresponded with improved indicators of physical and psychological safety of staff and youth at a female secure juvenile justice facility.*

**Design/methodology/approach** – *This study utilizes quantitative administrative and performance-based standards (PbS) data routinely collected at the facility.*

**Findings** – *Findings suggest that the facility was a safer place for both residents and staff after implementation of the model. Its safety indicators also compare favorably to those of the juvenile justice correctional field in general.*

**Research limitations/implications** – *This study was constrained by a number of limitations, including lack of some desirable detail on the PbS measures and on a comparable field group of girls' facilities. It is also hard to assess the impact of other concurrent changes in the facility. Future research that addresses these issues would be useful in further determining the utility of the model.*

**Originality/value** – *This study is the first to examine the impact of a structured trauma-informed organizational change intervention based on therapeutic communities principles, namely the Sanctuary Model, on staff and youth in a secure juvenile justice facility. Findings may be of value to practitioners, administrators, policy makers, and researchers in the corrections field.*

**Keywords** *Organizational change, Organizational culture, Trauma, Female delinquency, Juvenile justice institutions, Trauma-informed*

**Paper type** *Research paper*

## Safety at a girls juvenile justice facility

Despite much research and investment, juvenile delinquency remains a significant problem, carrying long-term implications for individuals, families, and society as a whole. Outcomes include adult re-offending as well as other negative consequences such as substance abuse, mental health challenges, and family violence (Moffitt *et al.*, 2002; Nagin and Paternoster, 1991; Pajer, 1998). The most restrictive sanction for juvenile offenders is secure residential placement (Skowrya and Coccozza, 2007). Since custody is not only costly, but is generally ineffective in reducing re-offending and addressing mental health and other rehabilitative needs, current approaches seek an evidence base to establish improved outcomes (Holman and Ziedenberg, 2006; Skowrya and Coccozza, 2007).

Although only about 15 percent of juvenile delinquents in secure custody are female, this percentage is of concern because female delinquents tend to be younger, their offenses less severe, and yet their arrest rates have risen (Hockenberry, 2013; Zahn *et al.*, 2010). Crucially,

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safety and responsiveness in the organizational milieu itself seems linked to outcomes (Prescott, 1998). In response, this study explores whether the implementation of a trauma-informed organizational intervention, the Sanctuary Model, corresponded with trends in physical and psychological safety at the only secure juvenile justice facility for girls in Pennsylvania.

### **Trauma in juvenile justice populations**

Research suggests that, in comparison to boys, girls in the juvenile justice system have experienced more types of trauma, particularly interpersonal traumas in the context of close relationships with family members and peers, such as physical abuse, sexual assault, and abandonment by caregivers (Kerig and Schindler, 2013). These traumas tend to be multiple, cumulative, and ongoing rather than a sudden, non-repeated event. Several mechanisms have been suggested that link trauma with challenging behavior that includes impulsivity, aggression, and unrestrained reactions (Griffin *et al.*, 2012) that in turn can lead to difficulty in simultaneously managing and “treating” residents of juvenile facilities. Importantly, policies and procedures of confinement in residential facilities can exacerbate traumatic reactions and problem behaviors, and undermine safety and rehabilitative climate (Benedict, 2014; Prescott, 1997). Thus, the need for trauma-informed approaches within organizations and services is increasingly recognized (e.g. Benedict, 2014).

### **Therapeutic approaches to services**

There has been historic debate about the best approaches specifically for female juvenile delinquents. Researchers suggest that more important than the specific therapeutic approach (e.g. cognitive-behavioral, psychoanalytic) or the targets of intervention (e.g. substance abuse, antisocial attitudes) is the manner in which services are delivered (Hubbard and Matthews, 2008). They support therapeutic approaches that are trauma-informed and based on a relational model which recognize that girls’ healthy development is dependent on the affiliation with others through positive interpersonal relationships (Gilligan, 1982; Miller, 1986). Due to histories of disconnections or violations with past relationships (Covington, 2002), positive change for girls is dependent on mutually trusting and empathetic relationships that help break the cycle of exposure to damaging relationships (Hubbard and Matthews, 2008). Being trauma-informed requires service providers to be aware of the consumers’ history of past abuse, to understand the role that abuse plays in victims’ lives, and to use this understanding to create services that facilitate their participation in treatment (Harris and Fallot, 2001, p. 4).

Trauma-informed models of intervention that are applied at the organizational level build on relationship models that have historically been key components in therapeutic community approaches to institutional services. A trauma-informed intervention has the potential to change the entire milieu in the juvenile justice residential facility in addition to providing youth and staff with skills for anticipating, coping with, and resolving posttraumatic stress and vicarious trauma reactions (Ford and Blaustein, 2013).

### **Therapeutic communities for offenders**

The term “therapeutic communities” was coined by the psycho-analytically informed psychiatrist, Tom Main (1946) and originated out of a recognition of the potential value of harnessing the therapeutic potential of a supportive and affirmative social climate (Shuker, 2010). Their earliest origin stemmed from the Quaker movement and beliefs emphasizing humane or “moral” treatment (Tuke, 1813). One of the first prisons to open as a TC was Grendon in the UK in the early 1960s; prisoners (or residents) took responsibility within the treatment setting (Shuker, 2010). Lees *et al.* (1999) suggest that TCs can be seen as “a consciously designed social environment and program in which social and group processes is harnessed with therapeutic intent” (p. 1) and where “therapy” constitutes the learning which occurs through involvement, participation, problem solving, personal and social responsibility, and interpersonal feedback, which are all structured components of TCs (Shuker, 2010).

## Sanctuary Model

The Sanctuary Model represents a theory-based, trauma-informed, evidence-supported (National Child Traumatic Stress Network, 2008; Rivard *et al.*, 2005) whole culture approach to creating or changing an organizational culture (Esaki *et al.*, 2013). A fundamental premise of the Sanctuary Model, modeled after that of therapeutic communities (Main, 1946), is that the treatment environment is a core modality for modeling healthy relationships among interdependent community members. The Sanctuary Model challenges organizations to re-examine their basic assumptions concerning the extent to which treatment environments promote safety and non-violence across physical, psychological, social, and moral domains. As such, the intervention is aimed both at strengthening the therapeutic community environment and at empowering youths to influence their own lives and communities in positive ways (Rivard *et al.*, 2005).

The four core elements of the Sanctuary Model include: first, Trauma Theory; second, the Seven Sanctuary Model Commitments – namely non-violence, emotional intelligence, democracy, open communication, social responsibility, commitment to social learning, and growth and change; third, S.E.L.F. – an acronym for the organizing categories of safety, emotion management, loss, and future, which is used to formulate plans for client services or treatment as well as for interpersonal and organizational problem solving; and fourth, the Sanctuary Tool Kit, which includes a set of ten practical applications of trauma theory. Adherence to these four elements of the model is designed to facilitate improvements in organizational culture, most importantly in improving physical, psychological, social, and moral safety for staff and clients.

Typical implementation consists of an initial five-day training on the model for key leaders in an organization. The leaders are then tasked with returning to their agency and forming a Core Team, a representative group of employees from all levels and departments, who are the primary change agents to work with colleagues to implement the model. The Core Team is provided technical assistance from a trained Sanctuary Model faculty during a three-year implementation period. Full details of the model and its intermediate objectives and processes are provided in a logic model article (Esaki *et al.*, 2013).

Although studies document the need for changes in rehabilitative practices and standards relating to children and youth in care, few studies have identified service system factors as critical to outcomes (Glisson and Green, 2006). Yet this is a missing piece since a custodial milieu with high control, staff stress, and turnover clearly contributes to lack of safety and weakened potential for rehabilitation (Barton and Mackin, 2012; Wells *et al.*, 2009). Given the increasing research on the impact that organizational factors have on quality of service delivery, there has been growing interest in the evidence base for trauma-informed organizational interventions (Bloom, 2005; Holden *et al.*, 2010).

This study examines the implementation of the Sanctuary Model at the North Central Secure Treatment Unit Girls Program (NCSTU) in Pennsylvania. Specifically, we ask: was the NCSTU Girls Program a safer environment after Sanctuary Model implementation?

## Methods

This study utilizes administrative and performance-based standards (PbS) data routinely collected at the facility. The period of focus for the study is from 2008, when the Sanctuary Model was first introduced, through 2012, when the model had been fully implemented for two years. All human subject research protections were observed during the study which was monitored by the Institutional Review Board of the University at Albany – State University of New York.

### *Facility and residents*

The NCSTU Girls Program is the only secure juvenile justice facility for adjudicated delinquent females in Pennsylvania. With a capacity of 30 residents, NCSTU accepts girls between the ages of 13 and 21. In 2008 the average age was 16 and, in 2012, was 17. In both years, more than half the residents were African-American, around 10 percent were Latina, and between 10 and 20 percent were bi-racial or white (see Table I).

Charges ranged from harassment and drug possession to assault, arson, and homicide. The typical length of stay at the Girls Program was nine to 12 months but could last two to three years.

**Table I** Description of NCSTU Girls Program residents in 2008 and 2012

	2008	2012	<i>p</i>
Average number of residents	26	30	–
Mean age (years)	16	17	< 0.001
Age range	13-18	14-20	–
% Hispanic or Latina	14	7	ns
% Black or African-American	54	63	ns
% White	19	13	ns
% Bi-racial or Other	12	19	ns
% From Philadelphia	31	40	ns
Average number previous placements for delinquency	2.1	2.3	<sup>a</sup>
Average number previous placements for mental health	1.0	2.1	<sup>a</sup>

**Note:** <sup>a</sup>Insufficient information available to test mean difference

### Measures

Measures were from two sources. Demographic and related information is routinely entered in the Bureau of Juvenile Justice Services Automated Intake and Incident Reporting System (AIIRS). The primary quantitative indices used to assess change in the facility are the PbS measures.

### AIIRS

In order to assess any change in the resident population from before to after Sanctuary implementation, we used demographic information from AIIRS. This information was provided in aggregate percentages (e.g. percentage of residents aged 15) and includes number of residents, age, race and ethnicity, and percentage from Philadelphia, given the challenges that may arise as a result from them possibly knowing each other. It also included average number of previous placements for delinquency and mental health. These measures were only available for NCSTU.

### PbS

In 1995, the Office of Juvenile Justice and Delinquency Prevention initiated the development of PbS. Under the auspices of the Council of Juvenile Correctional Administrators and the PbS Learning Institute, participating facilities collect information and submit it through the PbS web site for the months of April and October of each year. For this study, the researchers compared selected PbS measures from 2008 (prior to Sanctuary implementation) to 2012 (two years after NCSTU received Sanctuary certification) and also compared PbS measures for NCSTU with the same measures for the field average, i.e., all corrections facilities participating in PbS nationally representing approximately 100 facilities and thousands of residents. Although the field average includes NCSTU, the numbers for NCSTU comprise less than 1 percent of the average and have no substantive effect on the means. As presented in the following list, we selected 12 measures of safety and perceived safety. Selected PbS measures:

1. incidents of youth misconduct resulting in injury, confinement, and/or restraint per 100 person-days of youth confinement;
2. physical restraints per 100 person-days of youth confinement;
3. isolation, room confinement, segregation/special management use per 100 person-days of youth confinement;
4. confirmed cases of abuse or neglect over last six months per 100 person-days of youth confinement;
5. injuries to youth per 100 person-days of youth confinement;
6. injuries to staff per 100 staff-days of employment;
7. assaults and fights on youth per 100 person-days of youth confinement;
8. assaults on staff per 100 person-days of youth confinement;

9. grievances and complaints filed by youth per 100 person-days of youth confinement;
10. grievances and complaints filed by staff per 100 staff-days of employment;
11. percentage of interviewed youth who report that they feared for their safety within the last six months at this facility; and
12. percentage of interviewed staff who report that they feared for their safety within the last six months at this facility.

## Results

The following examines evidence from the PbS measures that bears on potential changes in safety at the NCSTU Girls Program from before to after Sanctuary Model implementation. The measures, which are proportions (or percentages), were compared using Fisher's exact test in *R*. Fisher's exact test calculates an exact statistical probability from a binomial distribution rather than an approximation, and can therefore be used to accurately test differences in proportions in data such as those for this study where proportions may be in extreme ranges (e.g. 100 percent) and where the number of cases (i.e. for the NCSTU Girls Program) may be low.

We first briefly look at the AIIRS data to determine any changes in resident population that may have made the facility more or less safe. Table I presents average demographics for two months (April and October) in 2008 and 2012. An increasing number of residents (31 percent in 2008 and 40 percent in 2012) were from the city of Philadelphia although the difference was not statistically significant. The average number of previous placements for delinquency increased very slightly from 2.1 to 2.3. The average number of previous placements for mental health increased from one in 2008 to 2.1 in 2012. The only statistically significant difference between the two data point years was in age: residents in 2012 were likely to be older (average 17 years with a range of 14-20) than residents in 2008 (average 16 years with a range of 13-18). These data suggest that the resident population in 2012 was older, was more likely to have serious mental health problems, and was more likely to come from Philadelphia, than the resident population in 2008. There is no indication from these data that differences in resident characteristics between 2008 and 2012 resulted in a safer facility environment; if anything, it suggests the opposite.

We now turn to the ratings on the PbS measures of safety and perceived safety. We have three interests: first, did measures of safety indicate improvement at the NCSTU Girls Program; second, how did change at NCSTU compare with change in other juvenile corrections facilities during the same time period; and third, how did NCSTU rank against the comparison group at both time points. Table II compares averages of PbS measures for 2008 and 2012 for the NCSTU Girls Program and PbS measures comparing across the same period within the entire field of juvenile corrections facilities participating in PbS.

A positive difference indicates that the measure improved between 2008 and 2012, a negative difference that performance declined. In 2008, the NCSTU Girls Program had a rate of 6.6 incidents of youth misconduct resulting in injury, confinement, and/or restraint per 100 person-days of youth confinement; by 2012 this rate had dropped to 1.0, a difference of 5.6 that is statistically significant according to Fisher's exact test ( $p < 0.001$ ). Looking at the field averages on the right of the table, however, the average rate of incidents of youth misconduct increased during the same period from 1.2 in 2008 to 2.3 in 2012 with a difference of 1.1 ( $p < 0.001$ )[1]. A similar pattern is seen in the number of physical restraints. In 2008, the NCSTU Girls Program had a rate of 7.6 physical restraints per 100 person-days of confinement but by 2012 this had decreased to 1.1, a difference of 6.5 ( $p < 0.001$ ). The field average showed a small increase (0.4 to 0.7). Incidents of isolation, room confinement, or segregation per 100 person-days of youth confinement also decreased for the NCSTU Girls Program from 0.5 in 2008 to 0.05 in 2012 ( $p < 0.01$ ). The field average increased from 1.9 to 3.8. The next three measures listed are confirmed cases of institutional abuse or neglect over the last six months per 100 person-days of youth confinement, the number of injuries to youth per 100 person-days of youth confinement, and the number of injuries to staff per 100 staff-days of employment. None of these showed statistically significant differences between 2008 and 2012 for the NCSTU Girls Program. For the entire field, all these measures showed minor changes for the worse. Assaults by youth on youth

**Table II** Comparison of PbS measures in 2008 vs 2012

PbS measure	NCSTU			Entire field		
	2008	2012	Diff.	2008	2012	Diff.
1. Youth misconduct	6.6	1.0	5.6***	1.2	2.3	-1.1***
2. Physical restraints	7.6	1.1	6.5***	0.4	0.7	-0.3***
3. Isolation/confinement	0.5	0.05	0.45**	1.9	3.8	-1.9***
4. Abuse/neglect	0	0.05	-0.05	0.02	0.04	-0.02***
5. Injuries to youth	0.7	1.0	-0.3	0.5	0.6	-0.1***
6. Injuries to staff	0.3	0.2	0.1	0.06	0.1	-0.04***
7. Assaults/fights on youth	0.3	0	0.3*	0.38	0.42	-0.04***
8. Assaults on staff	1.4	0.4	1.0**	0.07	0.2	-0.13***
9. Youth grievances filed	1.7	0.5	1.2***	0.4	0.7	-0.3***
10. Staff grievances filed	0.4	0	0.4*	0.08	0.1	-0.02***
11. Youth feared for safety	44	11	33**	18	19	-1
12. Staff feared for safety	17	9	8	17	23	-6***

Notes: \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

(or fights between youth) did decrease for the NCSTU Girls Program from 0.3 per 100 person-days of youth confinement in 2008 to 0 in 2012, a change that was statistically significant ( $p < 0.05$ ). The entire field had a small increase of youth on youth assaults. Assaults on staff also decreased at the NCSTU Girls Program from 1.4 in 2008 to 0.4 in 2012 ( $p < 0.01$ ). The field as a whole saw a very small rise from 0.07 to 0.2.

Fewer youth and staff filed grievances in 2012 compared to 2008 at the NCSTU Girls Program. In 2008, 1.7 youth grievances or complaints were filed by youth per 100 person-days of youth confinement, but by 2012 this had decreased to 0.5 for a statistically significant difference of 1.2 ( $p < 0.001$ ). Again, the field as a whole showed a small increase. In 2008, staff members at the NCSTU Girls Program filed grievances and complaints at a rate of 0.4 per 100 staff-days of employment but by 2012 this had dropped to 0 ( $p < 0.05$ ). The field as a whole showed a small increase.

Youth perception of safety also showed substantial improvement at the NCSTU Girls Program. In 2008, 44 percent of interviewed youth reported fearing for their safety in the facility, but by 2012 this had declined to 11 percent, a 33-percent difference that was statistically significant ( $p < 0.001$ ). The field as a whole showed essentially no change on this measure. Staff perception of safety also improved from 17 percent of NCSTU staff fearing for their safety in 2008 compared to 9 percent in 2012, but this change was not statistically significant. Staff reporting that they feared for their safety for the entire field increased modestly between 2008 and 2012.

Out of these 12 measures of safety and perception of safety for youth and staff, the NCSTU Girls Program showed statistically significant and generally substantial improvement on eight of them. The field as a whole, on average, did worse on these indicators of safety between 2008 and 2012, although with a couple of exceptions the differences were slight. We now turn our attention to how the rates of these safety measures at the NCSTU Girls Program compare to the rates for the entire field average both in 2008 and 2012. Was the NCSTU Girls program safer or less safe compared to the field average at both times or did this ranking change?

Table III presents differences in the rates for these safety measures between the NCSTU Girls Program and the entire field average within each of the two time points.

In 2008, the Girls Program was substantially worse than the field average in rates of youth misconduct resulting in injury, confinement, or restraint (6.6 for NCSTU vs 1.2 for the field average), physical restraints (7.6 vs 0.4), injuries to staff (0.3 vs 0.06), youth assaults on staff (1.4 vs 0.07), youth grievances filed (1.7 vs 0.4), staff grievances filed (0.4 vs 0.08), and youth reports of fearing for their safety (44 vs 18 percent). All of these differences were statistically significant. The only statistically significant difference where the average rate for the field was worse than the NCSTU Girls Program in 2008 was incidents of isolation, room confinement, or segregation (0.5 vs 1.9). On the remaining four measures there were no statistically significant differences between the NCSTU Girls Program and the field average. Thus, in 2008 the NCSTU

**Table III** NCSTU girls vs average for field in 2008 and 2012

<i>PbS measure</i>	2008			2012		
	<i>NCSTU</i>	<i>Field</i>	<i>Diff.</i>	<i>NCSTU</i>	<i>Field</i>	<i>Diff.</i>
1. Youth misconduct	6.6	1.2	-5.4***	1.0	2.3	1.3***
2. Physical restraints	7.6	0.4	-7.2***	1.1	0.7	0.4
3. Isolation/confinement	0.5	1.9	1.4***	0.05	3.8	3.75***
4. Abuse/neglect	0	0.02	0.02	0.05	0.04	-0.01
5. Injuries to youth	0.7	0.5	-0.2	1.0	0.6	-0.4
6. Injuries to staff	0.3	0.06	-0.24*	0.2	0.1	-0.1
7. Assaults/fights on youth	0.3	0.4	0.1	0	0.4	0.4***
8. Assaults on staff	1.4	0.07	-1.33***	0.4	0.2	-0.2**
9. Youth grievances filed	1.7	0.4	-1.3***	0.5	0.7	0.2
10. Staff grievances filed	0.4	0.08	-0.32***	0	0.1	0.1
11. Youth feared for safety	44	18	-26**	11	19	8
12. Staff feared for safety	17	17	0	9	23	14*

Notes: \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

Girls Program had a better rating than the entire field on one measure, the same rating on four measures, and worse ratings on seven measures. These results suggest that in 2008, prior to implementation of the Sanctuary Model, the NCSTU Girls Program had a substantively more dangerous environment than the average field facility.

By 2012, the picture looked different. The rate of incidents of youth misconduct resulting in injury, confinement, or restraint was now lower at the NCSTU Girls Program than for the field as a whole (1.0 vs 2.3,  $p < 0.001$ ). Although the rate of physical restraints at the Girls Program was still slightly higher (1.1 vs 0.7), the difference was much less than in 2008, and no longer statistically significant. The difference in rates of isolation or room confinement favoring the Girls Program was greater than it had been in 2008 (0.05 vs 3.8), and the rate of assaults by youth on youth also showed a greater and statistically significant difference in 2012 (0 vs 0.4). The only statistically significant difference where the field average continued to be better than the NCSTU Girls Program was youth assaults on staff (0.4 vs 0.2). However, staff perception of safety had now improved at NCSTU with only 9 percent of interviewed staff reporting that they feared for their safety compared to 23 percent for the entire field ( $p < 0.05$ ). Thus, whereas in 2008, the NCSTU Girls Program had worse rates than the field average on seven out of 12 safety measures, were similar on four, and were only better on one measure, by 2012 they were worse than the field average on only one measure, similar on seven, and better on four.

These quantitative results indicate that, in response to our general questions: first, the NCSTU Girls Program was substantively safer in 2012 than in 2008; while relatedly, second, the field average saw little change during the same time period; and finally, the NCSTU Girls Program was less safe than the field average in 2008 but, on the whole, safer than the field average in 2012.

## Discussion

Our results indicate that the Girls' secure juvenile justice facility at NCSTU was a safer place for both residents and staff in 2012 after implementation of the Sanctuary Model than it was prior to implementation. Its safety indicators in 2012 also compare favorably to those of the juvenile correctional field in general. This is consistent with a major focus of the Sanctuary Model to make organizational cultures safer by educating staff and residents in the behavioral responses engendered by traumatic experience, by promoting adherence to non-violence and other related commitments such as emotional intelligence, and by implementing protocols, such as regular forums for open communication, that reinforce the need for a safe environment as a prerequisite to personal change and growth.

Despite the change evident in safety indicators at NCSTU, it is not yet possible to conclude that implementation of the Sanctuary Model "caused" observed improvements in safety at the NCSTU Girls Program, or to know how changes in the organizational/therapeutic milieu might have

influenced change. Common to other studies of organizational change, it is hard to separate the impact of concurrent factors and, more especially, to be clear what brought about the improvement in the PbS measures. Better designs for determining these issues would require types of designs that involve control groups of comparable facilities tracked over time. This would include quasi-experimental designs, and randomized control trials of the Model's utilization. Broader outcome measures including outcomes for the residents would also determine the efficacy of the model in alleviating mental health problems such as trauma and other behavioral indicators.

Changes in concurrent factors that are candidates for further research and exploration include leadership, and the role of external mandates. Changes in leadership on several levels at the NCSTU facility coincided with the initiation of Sanctuary Model implementation, and this leadership remained consistent throughout the following years. The capacity of this leadership to bring about change at the facility is inextricably linked with Sanctuary Model implementation and a large factor in the success of that implementation. Another qualitative article is planned which will assess the process of implementation, including the role of leadership and communication, using qualitative feedback from staff.

There were also other changes that may have influenced the increase in safety including the implementation of the PbS measures themselves, which began in 2007, providing standardized feedback to the facility on performance. Also, according to NCSTU administrators, there were many directives from different sources to reduce restraints. Finally, cameras were added to the facility allowing recording of incidents and thus more transparency to protect both residents and staff members. However, institution of PbS and, perhaps, the directives to reduce restraints affected the entire field of correctional facilities used as a comparison with the NCSTU Girls Program. As the entire field did not show the same improvement as the NCSTU Girls Program, it can be inferred that other, local factors were operating at this facility to bring about the changes in safety which supports the importance of the Sanctuary Model and the change effort.

This study was constrained by a number of limitations other than the main design limitation. Although the PbS and demographic measures were available from both time points, they were provided in aggregate format (although with base numbers provided), lacked some desirable detail, and were available only at two months during a given year. Additionally, there was insufficient information available on a small comparable field group of facilities (i.e. secure juvenile justice girls' facilities with similar populations, size, and management), to provide for a more accurate comparison analysis. As indicated above, future research that addresses these issues would be useful in further determining the utility of implementation of trauma-informed care models in juvenile justice facilities.

Nevertheless, the findings of this study suggest that implementation of trauma-informed models that target organizational culture, such as the Sanctuary Model, may be a fruitful approach for creating safer and more therapeutic environments in juvenile justice facilities for girls and, perhaps, more generally (e.g. boys' facilities, detention, or residential treatment facilities). In turn, a safer environment provides the basis for treatment and rehabilitation that can achieve better outcomes for juveniles in correctional facilities (Briggs *et al.*, 2012; Sedlack and McPherson, 2010). Focusing on change in organizational climate and culture to create an environmental milieu that promotes change and growth in juveniles, rather than specific clinical treatments alone is not a new concept, but may be one that deserves renewed attention by practitioners and administrators in the fields of juvenile justice and residential treatment.

### Note

1. Although the magnitudes of the differences are often small and even trivial, the differences in field averages are generally statistically significant because the *n* (e.g. the 100 person-days of youth confinement) tends to be very high (i.e. in the 100,000s).

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