Article

Reducing Seclusion Timeout and Restraint Procedures With At-Risk Youth

Joseph B. Ryan, Reece Peterson, George Tetreault, and Emily Vander Hagen

Abstract: *The purpose of this pilot study was to review the effects of professional staff training in crisis management and de-escalation techniques on the use of seclusion timeout and restraint procedures with at-risk students in a K-12 special day school. An exploratory pre-post study was conducted over a two-year period, comparing the use of these behavior management interventions when all staff members were provided crisis intervention training. In addition, a brief survey was administered to all staff members concerning their training in and use of behavioral interventions. Results indicated professional staff training was effective in reducing (a) seclusion timeout procedures by more than one-third (39.4%) and (b) physical restraints (17.6%). This study also found staff members were not initiating seclusion timeout procedures primarily for the reasons they were trained (e.g., physical aggression) but rather for nonviolent behaviors such as leaving an assigned area and disrupting the classroom environment.*

Seclusion timeouts and physical restraint are two of the most restrictive behavioral interventions schools rely on to manage the inappropriate and aggressive behavior frequently displayed by at-risk youth. Recently, however, public awareness has been raised regarding the inherent dangers associated with the use of these aversive procedures. An investigative series in the *Hartford Courant*, a Connecticut newspaper, reported there were 142 restraint-related deaths across the United States over a 10-year period (Weiss, 1998). Similar findings regarding the hazards of restraint and seclusion have been issued by the Government Accounting Office (USGAO, 1999) and the Child Welfare League of America (CWLA, 2002).

Timeout Procedures Used in Schools

Timeout is a behavior management procedure that has long been used in the field of education to address a broad range of maladaptive behaviors across educational placement settings (Costenbader & Reading-Brown, 1995). It is actually a form of punishment implemented to reduce inappropriate behaviors by denying a student access to any type of reinforcement (Alberto & Troutman, 1999; Ryan, Sanders, Katsiyannis & Yell, In Press). There are three variants of this procedure, differing in respect to the degree they separate students from their peers and academic instruction. Timeout procedures ranging from the least to most restrictive interventions include (a) inclusion, (b) exclusion, and (c) seclusion. Inclusion (e.g., contingent observation, timeout ribbon), the least aversive of the three procedures, entails placing the student in a classroom area in which the student can observe the class but denies the him/her the opportunity to participate in activities and receive reinforcement for a given period of time (Yell, 1990). Exclusion (e.g., think time), the second and most frequently used timeout procedure (Costenbader & Reading-Brown, 1995; Gast & Nelson, 1977), denies the student the opportunity to either observe or participate in any classroom activities. The third and most restrictive form of timeout, seclusion (e.g., isolation room, cool down room), removes students from the classroom environment, placing them in an involuntary confinement in a room or area where they are physically prevented from leaving (Busch & Shore, 2000).

Restraint Procedures Used in Schools

There are two common forms of restraints used in schools today: (a) mechanical, and (b) ambulatory. Mechanical restraint entails the use of any device or object (e.g., tape, tie downs, calming blanket, body carrier) to limit an individual's body movement to prevent or manage out-of-control behavior. The second and more common form of physical restraint is often referred to as ambulatory restraint, manual restraint, or "therapeutic holding" (American Academy of Pediatrics Committee on Pediatric Emergency Medicine, 1997). This type of restraint involves one or more people using their bodies to restrict another's body movement as a means of reconstituting behavioral control, and establishing and maintaining safety for the out-of-control student, other students, and staff (American Academy of Child and Adolescent Psychiatry, 2000).

The use of physical restraint in schools, discussed since the 1950s, was included in a list of "techniques for the antiseptic manipulation of surface behavior" by Redl and Wineman (1952)

for the use of controlling students displaying aggressive behavior. To date, however, research investigating the use of restraint in our nation's schools has been limited. Recent literature reviews failed to identify how widespread the use of restraint in schools has become (Persi & Pasquali, 1999; Ryan & Peterson, 2004). However, anecdotal information based on court cases and legislation indicates their use has become common among students with special needs, at least for larger school systems (Ryan & Peterson, 2004).

One of the criticisms schools have received regarding the use of restraint and seclusion procedures has been the lack of any established accreditation requirement or governing body to establish policy and monitor their use. Other professional fields, such as the medical, psychiatric, and law enforcement domains, have all established strict guidelines to govern the use of restraint procedures. Often these standards include accreditation requirements from governing bodies such as the Joint Commission on Accreditation of Healthcare Organizations or other agencies such as the National Association of Psychiatric Treatment Centers for Children (Cribari, 1996) and the American Academy of Pediatrics (American Academy of Pediatrics, 1997). These requirements have resulted in widespread training and certification for staff in these programs. The lack of these commonly accepted guidelines or accreditation standards in schools makes those who use physical restraint more susceptible to misunderstanding and abuse, in addition to leading to improper implementation. To make matters worse, school staff may lack training regarding the effective behavioral interventions necessary for the prevention of the emotional outbursts typically associated with children with severe behavioral problems (Moses, 2000). Such interventions are critical in preventing student behavior from escalating to potentially dangerous levels where restraint may be needed.

Given the inherent safety risks associated with the use of seclusion timeouts and restraint procedures, it is incumbent upon schools to ensure the use of these behavioral interventions is minimized. One means of ensuring these procedures are used only when necessary is by providing crisis intervention training to the staff members working with students who display aggressive behaviors (Jones & Timbers, 2003). The purpose of this pilot study was to determine if such a schoolwide staff training program emphasizing behavior management and de-escalation strategies would effectively reduce the number of seclusionary timeouts and physical restraints performed on at-risk students placed in a special day school.

Methods

Subjects

This pilot study was conducted in a Minnesota public special day school serving students from grades K through 12. Students were placed in the school from the surrounding public school districts and a local residential facility on both a short- and long-term basis due to inappropriate behaviors. The school had an average daily enrollment of 90 students during the course of the study but provided educational services for a total of 316 students throughout the school's 171 day academic calendar year. Participants for this study were 42 students who attended at least 75 school days during both the 2002/03 (Year 1) and 2003/04 (Year 2) academic school years. They included 40 males and 2 females, comprised of 37 Caucasian, 3 American Indian and 2 African American students.

Staff Training

All staff members underwent extensive training, spending one hour twice each month throughout the academic school year in de-escalation training. Staff members all initially underwent Crisis Prevention Institute's (CPI) Nonviolent Crisis Intervention Training. The focus of this training program is to teach staff members how to handle crisis and stressful situations successfully, with low anxiety and high security for all individuals involved (Crisis Prevention Institute, 2002). The largest portion of the program focuses on training on such preventative techniques as (a) identifying maladaptive behaviors, (b) choosing appropriate interventions, (c) using nonverbal techniques for de-escalating behaviors, and (d) the ideology of personal well being. Another unit of the program focuses on nonviolent physical crisis intervention and team interventions, for example, such techniques that may be used in a situation where student behavior has escalated despite preventive techniques and safety becomes an issue. All staff members practiced and rehearsed the procedures in the training sessions. The program concluded with the staff members applying the material learned in situational role plays and discussing post intervention techniques. In addition, staff received additional training during bimonthly staff meetings on alternative strategies to de-escalate aggressive students using Therapeutic Intervention, a curriculum developed by the Minnesota Department of Human Services.

Schoolwide Behavior Intervention Plan

All staff members were expected to follow a "gated" schoolwide behavior intervention plan when dealing with aggressive behavior. This gated procedure mandates that staff members attempt a less restrictive form of intervention (e.g., inclusion timeout) prior to using more restrictive procedures (e.g., seclusion timeout). When staff members first observe maladaptive behavior, they initiate simple intervention techniques such as discussing the problem privately with the student or suggesting another activity. If simple techniques fail, the next step in behavior intervention is problem solving. In this technique, the staff member(s) and student calmly discuss the inappropriate behavior and consequences, evaluate the situation, develop a plan, commit to it, and design a follow-up plan. Staff members use this opportunity to teach proper coping skills and to develop plans for future behavior. An inclusion timeout is the next step if the student refuses to participate in the problem-solving step. At this point, the student is removed from the activity and required to stay quiet for three minutes before reengaging the problem-solving sequence. If the student continues the inappropriate behavior, the student is placed in an exclusion timeout in a chair outside the classroom. The student is instructed to sit quietly for 5 minutes before reattempting to reengage the problem-solving step. If the student is unable to sit quietly for 5 consecutive minutes within a maximum duration of 15 minutes, the student is moved to a seclusion timeout.

During this step, the door to the seclusion room is left ajar, and a staff member monitors the student through the open doorway. The student may then begin the problem-solving step and rejoin the class after 5 minutes of quiet. To prevent the excessive use of seclusion

timeout, the student should be asked to rejoin his or her classroom after a period of 60 minutes. This opportunity should be afforded to every student regardless if the student has processed successfully with a staff member. For safety reasons, students are required to remove shoes, belt, jewelry, pocket contents, and other materials prior to entering the timeout room.

If a student attempts to leave the unlocked timeout room, refuses to hand over objects that can be used to deface property or inflict injury, refuses to walk and must be physically escorted/restrained on the way to the timeout room, or is physically aggressive, the door to the timeout room is locked (with an electromagnetic lock). After the student is able to remain calm and quiet for 5 minutes, a staff member will enter and try reengaging the problem-solving step. If the student refuses to leave the area, the door is relocked, and the process begins again. Staff members monitor the student through a window positioned next to the door. If an hour passes without the student successfully completing the problem-solving step, the student should be asked to rejoin the class. Each use of seclusion timeout is documented by the involved staff member(s), reviewed by the director, and filed in the student's folder.

Procedure

All data for the study reported here were collected from incident reports written during two consecutive academic school years for pre- and post-data collection analysis. School policy mandated that following the use of either a seclusion timeout or physical restraint, one of the participating staff members was required to complete an incident report detailing the event and all staff members involved. Variables coded by the school and verified by the first author included (a) age, (b) gender, (c) grade level, (d) date and time, (e) procedure used (seclusionary timeout or restraint), (f) duration of incident, (g) staff involved, and (h) behavior necessitating intervention. Behavior resulting in intervention included (a) rule violation, (b) property misuse/destruction, (c) physical aggression, (d) leaving the area, (e) disrespect, (f) threatening, (g) spitting, (h) noncompliance, (i) interfering with another student's education, (j) harassment, (k) violating another's personal space/privacy, (l) disruption, and (m) contraband.

Teacher Survey

A teacher self-questionnaire was administered using a convenience sample of 32 staff members (i.e., teachers, educational assistants, administrators) assigned to the participating school. Teacher questionnaires were implemented using a five-step process to ensure a high response rate (Dillman, 2007). These elements included (1) a respondent-friendly questionnaire, (2) multiple contacts, (3) the inclusion of stamped return envelopes, (4) personalized correspondence, and (5) a token financial incentive ($2 bill) included with the request. The 44-item questionnaire, administered following all data collection, attempted to determine (a) current school policies regarding restraint and timeout procedures, (b) frequency with which these procedures are currently used, (c) level of training staff received regarding de-escalation strategies and restraint procedures, and (d) level of agreement between administrative policy and actual implementation of restraint and timeout procedures with students.

Results

Frequency of Timeout and Restraint Procedures

During Year 1, prior to staff receiving intensive de-escalation training, 25 students were placed in seclusion timeout a total of 439 times. The number of timeouts per individual ranged from a single event to a maximum of 43. In comparison, during Year 2, seclusion timeouts were administered to only 21 students for a total of 266 times, a 39.4% reduction. The number of timeouts experienced by each student ranged from once to a maximum of 66 during the school year. During Year 1, there were 15 students sent to seclusion timeout more than ten times. The following year, the number of these so-called frequent flyers was effectively reduced to four.

During Year 1, school staff performed 68 physical restraints on nine different students. Only one mechanical restraint was used on a student requiring this type of intervention based on his physical disability and behavioral intervention plan (BIP). The academic year following training, ambulatory restraints were implemented only 56 times with five different students, a reduction of 17.6%. The use of mechanical restraint remained the same, only once during the academic year.

Duration of Seclusion

During Year 1, the duration of seclusion timeout procedures ranged from 2 through 60 minutes, with an average length of 13. Following staff training, the duration of timeouts remained consistent, ranging from 3 to 60 minutes, with an average duration of 15 minutes.

Gender and Ethnicity

In respect to gender, seclusion timeout procedures were used with only one female student during the initial academic school year. No female students were placed in seclusion during the second academic school year. Comparing the use of aversive procedures across ethnic groups, Caucasian students accounted for the majority (93.2%) of all timeouts during Year 1, while Native Americans accounted for the remaining (6.8%) procedures. During Year 2 African American students accounted for 12.4% of all timeouts, while the percentage of Caucasian students isolated decreased (84.2%) as did the Native American percentages (3.4%).

Restraint procedures were performed only on male students during the two-year period. In addition, all students restrained were Caucasian with the exception of one African American student who was restrained during the initial school year.

Age and Grade Level

Students placed in timeout during Year 1 ranged from 7 to 15 years old, with an average age of 12. The following year, the age of the students isolated was similar, ranging from 8 through 16, with an average age of 13. The majority placed in seclusion during both school years were elementary (K-5) and middle school (6-8) students. During both school years the percentage of students placed in seclusion showed minimal variation. Elementary students (grades 1 - 5) represented approximately one third (30.5% and 27.4%) of the students placed in timeouts, while middle school (grades 6 - 8) students represented approximately two thirds of students in seclusion (58.8%, 60.2%) and high school students were rarely placed in timeout during either school year (10.7%, 12.4%).

Restraints were also performed far more frequently among younger students during both years. In Year 1, most of the restraints (80.9%) were performed among elementary students. Students in middle school were much less likely to be restrained (14.7%), while high school students rarely (4.4%) experienced this procedure. During the second year, the elementary grades still represented the majority (67.9%) of all restraints performed, while middle school students accounted for the remaining (32.1%) restraints. No restraints were performed on high school students.

Time and Day of Occurrence

There appeared to be two peak time periods when the majority of interventions took place. During Year 1, there was a morning peak from 10:00 a.m. to 11:00 a.m., while a second more pronounced spike occurred approximately midday, from 11:30 a.m. to 2:30 p.m. Year 2 showed a similar pattern, with a morning peak from 9:00 a.m. to 10:15 a.m., and a second peak occurring between the hours of 11:30 a.m. and 2:30 p.m.

The actual weekdays that timeouts occurred most frequently appeared to be consistent throughout both years. While the daily range varied within several percentage points of each other, both Wednesday (25.7%) during Year 1 and Tuesday (27.2%) during Year 2 experienced the highest occurrence of incidents.

Escalation of Behaviors

When comparing the use of restraint procedures with students, the number of physical restraints was effectively reduced from 68 to 39 from the first to second academic school year. While the actual number of restraints decreased, the percentage of timeout incidents necessitating the use of restraint procedures increased from 15.5% to 25.8%.

Behavior Requiring Intervention

After reviewing the incident reports, the reasons cited by staff members for implementing seclusion timeouts with students remained relatively consistent throughout the two-year time frame. The most common reasons staff members cited for placing a student in seclusion were "leaving an assigned area" (32.6%), and "noncompliance" (31.9%). Less common behaviors that resulted in seclusion included "disrupting the class" (11.2%), "property misuse/destruction" (10.1%), "disrespect" (4.5%), "physical aggression" (2.8%), "harassment" (2.4%) and "making threats" (2.0%).

When analyzing the use of restraint procedures with children, staff reported that "noncompliance" (48.4%) and "leaving the assigned area" (19.4%) were the leading precipitators. Other reasons mentioned by staff members on the incident reports included "property misuse/destruction" (7.3%), "disrespect" (7.3%), "disrupting the class" (6.5%), "threatening" (3.2%), "physical aggression" (3.2%), "horseplay" (3.2%), and "harassment" (0.8%).

Staff Survey

The staff survey was completed by 93.75% (n = 30) of all staff members. Findings are reported concerning (a) prevalence of seclusion and restraint procedures, (b) application of procedures, and (c) professional training.

Use of Timeout and Restraint Procedures. The majority of all staff members (90%) reported using inclusion timeout procedures with students, with three quarters (73.3%) of those surveyed claiming they used it on at least a weekly basis. All staff members reported using exclusion timeout, with the majority (90%) using it on at least a weekly basis. Seclusion, which is the most restrictive form of timeout, was used by almost all staff members surveyed (96.7%), with nearly two thirds using it on at least a weekly basis. Approximately three quarters of the staff surveyed (73.3%) reporting using restraint procedures, with a quarter (26.7%) reporting using them on a weekly basis. Staff who administered restraint procedures incorporated all of the following types of restraints: physical escorts, basket holds, prone restraints, and wall restraints. Only one staff member reported using a mechanical restraint specifically listed on the student's BIP.

Application of Procedures. The most common reasons staff provided for implementing restraint procedures in the order of prevalence included physical aggression towards staff (90%), physical aggression towards peers (86.7%), property destruction (63.3%), leaving assigned area (26.7%), physical threats (23.3%), and refusal to follow staff directions (13.3%). Restraint procedures were never used for refusing to perform an academic task.

Staff members reported various responses regarding when they terminated a restraint procedure. The most common reason cited was when the student was placed in seclusion (93.3%). Staff provided other reasons for ceasing restraint procedures such as a student's verbal willingness to cooperate (30%), specific time elapses (20%), and a student ceasing to struggle (13.3%).

Professional Training. All staff members reported receiving training in de-escalation techniques during the past year, with nearly two thirds (63.3%) receiving between 5 to 12 hours. This extensive training resulted in nearly all staff members (90%) reporting being satisfied with the level of training they had received. Staff reported learning de-escalation strategies from a variety of sources including staff development (100%), professional seminars (100%), teacher training in college (71.4%), and professional journals (50%).

Discussion

Frequency of Timeout and Restraint Procedures

The professional staff training conducted at this special day school appears to have resulted in a large reduction in the use of seclusion timeout procedures for its at-risk students. Overall, there were 288 fewer timeout procedures performed during the academic school year following staff training. This reduction is an impressive two thirds (65.6%) decrease in the use of seclusion timeout procedures performed by staff members. As a result, the school performed an average 1.68 fewer timeouts per day. Considering that the average duration of a timeout was 17 minutes and involved three staff members, the school saved 245 school hours that could be more effectively directed towards educating and/or counseling these students. This reduction also translates into more educational opportunities for the entire student body since students are not being removed from the educational environment, an intervention which frequently disrupts ongoing classroom instruction.

A specific area of concern was the excessive use of seclusion timeout procedures with specific students. The school continued to

use seclusion, the most aversive and highly restrictive timeout procedure, excessively (e.g., 66 times) with some students, despite all clear evidence the procedure was ineffective in reducing their maladaptive behavior. This situation is not uncommon due to the subtle reinforcing qualities timeout procedure can provide to both the student and teacher. A teacher can be unknowingly negatively reinforced when using an ineffective timeout procedure because it is still effective in removing the aversive event (e.g., student maladaptive behavior) from the classroom. Likewise, students are also inadvertently being reinforced and continue to display maladaptive behaviors because the resulting timeout successfully removes them from an environment/task (e.g., math assignment) they are attempting to escape/avoid. This inadvertent reinforcement necessitates that any excessive use of these procedures be analyzed thoroughly to determine the underlying purposes timeout may be serving. Schools need to conduct a functional behavioral assessment when their behavioral interventions are not being successful.

A second area of concern is that all staff members were not complying with the directed schoolwide behavioral intervention in place concerning the use of timeout procedures. This intervention plan, designed as a gated procedure, moves students from one level of timeout (e.g., inclusion) to the next (e.g., exclusion) when the less restrictive timeout proves to be unsuccessful, the only exception being when the use of a restraint procedure is required. In this event, students are placed in seclusion once it is safe to transport them. However, results from the staff survey showed that only 90% of school personnel reported using the least restrictive form of inclusion timeout, while 96.7% had used seclusion. These answers suggest that some staff members skipped the less restrictive forms of timeout. The first author personally witnessed staff skipping the use of exclusion timeout with one student. When asked about the protocol, the staff member stated she knew the student and believed that an exclusion timeout would be ineffective. This inconsistency in administering disciplinary procedures within a school is a serious concern and highlights the importance of administrators monitoring the use of aversive procedures closely. If staff members determine that modifications to standardized procedures are required, they should be specified within the student's individualized behavioral intervention plan.

The school experienced a similarly impressive reduction in the use of restraint procedures with its student body. Findings showed a 16.7% reduction in use of physical restraint following staff training. Given the potential health risks associated for staff and student alike, the school may have, in effect, significantly reduced its risk of both injury and liability.

Duration

The professional staff training on de-escalation did not have an impact on the overall duration of seclusionary timeouts. The average timeout over the two academic school years ranged from 17 to 18 minutes in duration. However, the training provided to the staff focused on de-escalating students during the early phases of agitation, not on calming a student once the student was placed in seclusion timeout. While there were fewer timeouts performed that lasted less than 5 minutes, the overall percentage remained consistent (10%). Future studies may wish to investigate effective methods of reducing the student's cycle of aggression.

Gender and Ethnicity

There were not a sufficient number of female students ($n = 2$) to perform a valid comparison of gender timeout use across academic school years. When comparing timeout use among ethnicities, there appeared to be a large increase (21.9%) in the use of timeout procedures with African American students following staff training. Caution should be used, however, when making generalizations since the analysis was based on small and unequal sample populations.

Age and Grade Level

Analysis found seclusion timeouts were more commonly used among students in middle school during the 2-year period (89% and 56%), while the use of restraint was predominantly performed on younger elementary students (68.7% and 87.2%). The average age of students placed in timeout was 12 years of age. These findings are consistent with earlier research that found a moderately significant relationship between age and the escalation of student behavior, with the most notable increase in inappropriate behavior reported with the onset of adolescence (Persi & Pasquali, 1999). It is posited that the use of restraints and timeouts is more common among younger children, potentially due to (a) their possessing fewer mechanisms for coping with frustration, (b) staff perhaps believing intrusive procedures may be more developmentally appropriate for younger children, and (c) staff perhaps being apprehensive to perform these procedures on larger and stronger individuals (Miller, Walker, & Friedman, 1989; Persi & Pasquali, 1999).

Time and Day of Occurrence

The authors did not have sufficient information to determine if particular academic courses were more likely to precipitate behaviors that necessitated the use of seclusion timeouts or physical restraints. Future studies might investigate the correlation of behavior associated with specific academic instruction throughout the day.

Escalation of Behaviors

The drastic reduction in seclusion timeouts, coupled with a higher percentage of timeouts that escalated to restraint procedures, may signify timeout procedures are being used more judiciously. Since a quarter of all seclusion timeouts currently require restraints, it is likely these procedures are being used only with students who are highly agitated and experiencing tremendous difficulty maintaining self-control. During the first year, there were a substantially larger number of seclusion timeouts performed when a less restrictive timeout procedure (i.e., inclusion, exclusion) may have been better suited for the situation.

Conclusion

While advocacy groups would applaud findings that neither seclusion timeouts nor restraint procedures were used in response to the destruction of physical property, there is concern since both of these procedures were administered even though staff members claimed physical aggression was not being displayed by the students. This is

important since physical aggression is one of the few behaviors that both professional organizations and advocacy groups agree requires the use of these aversive procedures. It is possible that staff members implemented these procedures with the belief that the student was both capable and likely to display physical aggression; therefore, they intervened prior to the actual display of this behavior. To address this issue more accurately, it is recommended that an additional category be added to the school's incident report concerning the posturing of physical aggression.

Limitations

There were several limitations to this study in regard to its sample population. A primary limitation of this study dealt with the use of a convenience sample, making its findings difficult to generalize to the broader population of at-risk students. This study was conducted in one medium-sized Minnesota city and, as such, does not provide adequate representation of students placed in special day schools nationwide. In addition, the sample contained relatively few minority students.

Implications

While advocacy and professional groups frequently disagree concerning the need for seclusionary timeouts and physical restraints, they both acknowledge the potential threat these coercive procedures pose to the safety of both student and staff alike. Hence, providing a skill-based treatment program that can effectively reduce the use of these aversive interventions will help reduce the likelihood of injuries and death. Given the findings of this study, it is imperative that additional research be conducted on a larger scale nationally and across educational placement settings. Doing so will help determine if staff training in de-escalation techniques can minimize the use of aversive behavior management techniques, as well as the injuries and fatalities associated with their use.

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Authors

Joseph B. Ryan, Ph.D., is an assistant professor in the College of Health, Education, and Human Development at Clemson University. His research interests include behavior management, special education law, and psychopharmacology.

Reece L. Peterson is a professor in the Department of Special Education and Communication Disorders at the University of Nebraska-Lincoln. Dr. Reece's research interests include special education law and policy studies.

George Tetreault is the Director of the Minnesota Learning Center.

Emily Van Der Hagen is a psychology intern at Saint Benedict University.