Use and views of physical restraint in select residential treatment programs

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Abstract

The safe and appropriate application of restraint in residential programs is a challenge in countries throughout the world. Efforts to minimize or regulate restraint use are often emphasized. However, little is known about restraint practice or prevention across youth residential programs. This study examined variation in restraint rate and type, stakeholders' views, and restraint reduction efforts in these programs. Using incident report records and qualitative stakeholder interviews from nine agencies, we found substantial variation on every dimension of restraint use. While stakeholders valued restraints for maintaining safety, strategies to minimize this tool were recommended.

Key Words: restraint, residential treatment, stakeholder perspectives

Residential programs that serve child welfare youths with mental health needs are charged with maintaining a safe and therapeutic treatment environment. Managing difficult and often aggressive behaviors of these youths is a challenge. Physical restraint is a tool many programs utilize to promote safety. However, restraint itself is a high risk intervention, with potential danger to the youth and staff involved.

The use and monitoring of restraint and seclusion is an issue for residential programs across the globe. The UN Conventions on the Rights of the Child emphasize the responsibilities of the government in providing for youth in care in a manner that upholds dignity and self-respect (1989). The use of restraint is not specifically mentioned in this covenant, leaving individual countries and programs to apply these abstract principles in practice. Review papers of restraint practice recommendations can be found in England (Hart & Howell, 2004), Scotland (Davidson, McCullough, Steckley, & Warren, 2005), Australia (Joanna Briggs Institute, 2002) and the United States (Huckshorn, 2005).

The use of physical restraint in mental health facilities rose to a national concern in the United States following a 1998 five-part series in the *Hartford Courant* that estimated between 50 and 100 persons died each year as a result of physical restraint (Weiss, Altimari, Blint & Megan, 1998). This finding was especially notable because of the lack of regulation directed at this practice. Despite the potential risks involved in restraint, formal reporting or oversight for this intervention was not well-developed. A 1999 GAO report on restraint described the regulation efforts as "inconsistent" and the data collection and reporting efforts as "fragmentary" (USGAO, 1999, p. 5). This report also raised the concern that children may be at greater risk than adults because some findings suggest that youths are more likely to be restrained and more likely to be injured during restraint. As evidenced by a more recent GAO report on certain residential treatment programs, gaps in regulatory efforts and licensing practices resulted

in a youth death from a prolonged, face-down restraint in a wilderness treatment program (2007).

Literature about restraint rates for facilities serving youth focus primarily on inpatient hospitalization programs. Studies of inpatient psychiatric programs for youths report incidence rates ranging from 46%-60% (Delaney & Fogg, 2005; Donovan, Plant, Peller, Siegel, & Martin, 2003). However, little information is provided about what restraint procedures are used. In an empirical study of restrictive practices in Finland, younger youth were more likely to receive a less restrictive holding technique, while older youth were more likely to experience seclusion and mechanical restraints (Sourander, Ellilä, Välimäki, & Piha, 2002). Restraint can vary from a minimally invasive transport technique (e.g., a youth is escorted to a time-out room) to a face-down floor restraint, a position considered most dangerous due to asphyxiation risk. A growing trend connected with restraint is the use of "as needed" or PRN medication to decrease agitation. Limited studies have found that PRN medication was administered prior to restraint in 38%-69% of restraint incidents (Delaney & Fogg, 2005; Donovan, Plant, Peller, Siegel, & Martin, 2003; Petti, Mohr, Somers & Sims, 2001).

Few studies have incorporated the views of program stakeholders in evaluating restraint. Youth opinions on restraint in residential programs were assessed in a qualitative study in Scotland. Findings suggest that although youths had concerns about how restraints were sometimes conducted, youths recognized that restraint can be the most appropriate intervention to ensure safety (Steckley & Kendrick, 2005). A study from the field of developmental disabilities found that consumers had a more negative reaction to restraint practices than staff members (Cunningham, McDonnell, Easton, & Sturmey, 2003).

Because of the potential dangers of restraint, several initiatives to reduce the use of and tighten the standards for physical restraints have been promoted in the United States. The effort sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA) has garnered the most attention (Huckshorn, 2005). This model suggests six core strategies for reducing the use of physical restraint in residential programs: (1) leadership by agency administrators for organizational change; (2) data collection and monitoring; (3) workforce development; (4) de-escalation; (5) consumer involvement in reduction efforts; and, (6) debriefing to learn from each restraint. Several programs have demonstrated that the utilization of these strategies has successfully minimized restraint (Farragher, 2002; Johnson, 2004; Jonikas, Cook, Rosen, Laris, & Kim, 2004; LeBel et al., 2004; Nunno, Holden, & Leidy, 2003).

With a growing interest in quality assurance and risk management, the state child welfare system in Missouri was interested in building knowledge about restraint in youth residential programs. The purposes of this study were to: 1) identify variation in rates and types of physical restraint use across residential programs; 2) assess stakeholders' perspectives on the use of restraint; and 3) outline effective restraint reduction efforts in these programs.

Methods

This study utilized a mixed-method design. Quantitative data were abstracted from incident reports of restraint episodes maintained by agencies in case records. Qualitative data were collected from open-ended interviews with agency administrators, direct care staff, and youth residents. Data collection took place from July, 2005 to February, 2006. All study methods were approved by the Washington University Institutional Review Board as well as Missouri Children's Division (CD), the state child welfare system.

Study sample

Twelve residential care programs volunteered to either the state child welfare administration or a group care membership organization to participate in this study. Ultimately, nine of these programs chose to participate in one or more components of the project. After participation options were fully explained, each program determined their level of participation, resulting in some programs completing only the open-ended interviews or others providing restraint-related incident reports. All research was conducted with the understanding that the names of the facilities would not be identified.

In this study, we defined restraint as any hands-on, physical intervention. Some programs used the term "therapeutic holds," instead of restraints, for interventions that were shorter in duration. We did not maintain this distinction. Licensing standards restricted these facilities from using mechanical restraints.

Data collection

Eight programs provided restraint-related incident reports from one, two, or three months of time (November, 2004, February, 2005, and/or May 2005). The different time frames of data collection are due to varying levels of information technology and easy access to records within agencies. The facilities are mandated by licensing standards to keep incident reports for all restraint occurrences. In total, 381 restraint incident reports were de-identified and reviewed across eight facilities.

Qualitative open-ended interviews were conducted by project staff trained in qualitative methods. Administrators (ranging from Executive Directors to Quality Improvement Managers to Training Staff), direct care staff, and youths in the custody of the state child welfare system were interviewed. Interviews were digitally recorded and professionally transcribed verbatim. All identifying information was removed from the transcript. Individual participants were nominated by the agency director or designee and then approached by project staff about the study. Consent for youth participants was provided by Children's Division administrators; individual caseworkers were also informed in writing and given an opportunity to withdraw a youth from consideration when contraindicated. Prior to each youth interview, the interviewer met with the youth in the presence of an agency staff member to explain the study and answer any questions. Youths were then given an opportunity to speak privately with agency staff prior to assenting participation. In accordance with IRB mandates, direct care staff were mailed study information and were asked to mail back a signed consent form and contact the interview team for an interview if they were interested in participating. This restrictive recruitment method was unsuccessful.

Table 1 presents the number of interviews completed across programs and respondent type, as well as the interview duration. Interview participants were compensated $10 for their time.

Table 1
Qualitative interview information

	Number of total participants interviewed	Number of programs represented	Average interview length
Administrators	14	9	40 minutes
Direct care staff	2	2	40 minutes
Youth	9	4	31 minutes

To preserve the anonymity of participating programs, limited descriptive information will be provided. Programs were located in different areas of the state, in both urban and rural settings. Size of youth population varied from small to large. Eight of the nine programs were accredited, either by the Council on Accreditation (COA) or the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). Some programs were faith-based and some were secular. While most programs served primarily adolescents, several programs provided residential services to elementary-school aged youths. All programs served children or youth in the custody of the state child welfare system. All of the participating agencies utilized some type of formal restraint training package. Seven of the nine facilities used Strategic Crisis Management from JKM Training Inc.

Data management and analysis

Quantitative data were abstracted from incident reports by project researchers either on-site or using de-identified data off-site. Qualitative interviews were professionally transcribed and identifying information was removed. The transcripts were read multiple times by multiple readers and analyzed using NVivo software (QSR, 2002). Two readers read and coded the data for pre-selected categories. The coded passages were then read by other project staff and discussed collaboratively to identify themes.

Results

Variation in rates and types of restraint use

In this section, the rates and types of restraint used will be compared across programs. Information from incident reports as well as interviews with stakeholders will be presented. Several

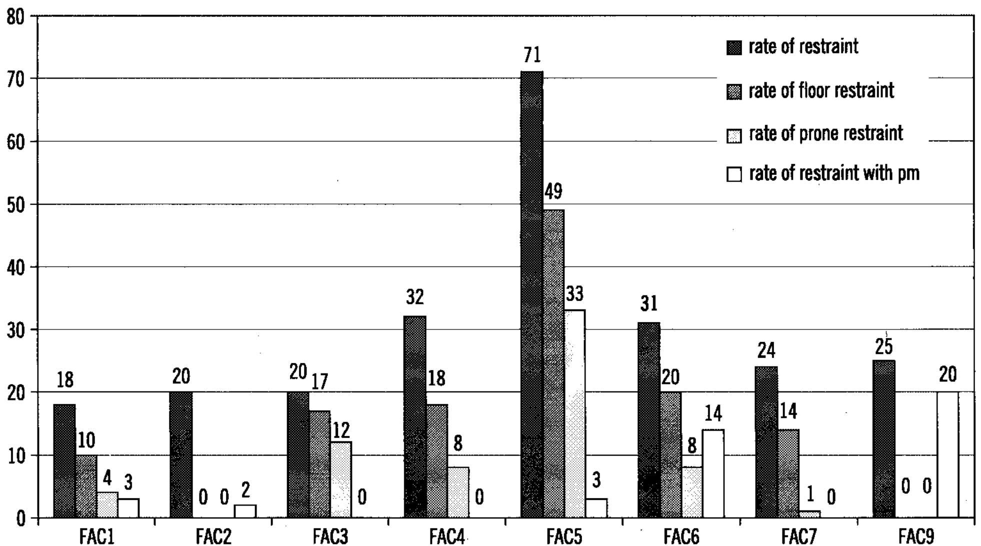

Figure 1
Rate of restraint by type, per 100 youths per month

sections refer to the rate of restraint per 100 youth beds per month. This number was used to allow comparisons across facilities that served varying numbers of youth. For example, if a facility had 10 restraints in a month and 50 youth beds were filled at the facility that month, their rate would be 20 restraints per 100 youth beds per month. Figure 1 displays the variation in restraint rate and type across programs.

Variation in rate of restraint

The rate of physical restraints used was similar in seven of the eight facilities. In these facilities, the number of times youths were restrained in a month per 100 youths was between 18 and 25. With 71 restraints, Facility 5's restraint rate was three times higher than similar programs.

Variation in rates of floor restraint procedures

Restraint procedures can include standing, kneeling, or floor holds. Restraint training packages generally recommend beginning with the least restrictive hold and progressing only as needed. Floor restraints are considered the most restrictive and should be used only when less restrictive holds have been ineffective. Figure 1 shows that floor restraint rates ranged from 0 to 49 in a month.

In interviews with stakeholders, some administrators cited concerns about the use of floor restraints. One administrator expressed concern that floor restraints can sometimes be overused: "For some reason, I think people like the floor, they take the easiest route sometimes."

While some facilities continue to use floor restraint, other facilities have virtually eliminated these procedures. As one administrator explained, "[Our restraint package] teaches a number of [floor] holds, but we don't train them here simply because there's just more chance it will hurt and we don't need that here in our facility." The potential risks involved in these practices were assessed to outweigh the benefits for some agencies.

Variation in rate of prone restraints

Floor restraints include procedures that hold youths in prone (face-down) or supine (face-up) positions. Prone restraints are generally considered more dangerous, as they have been indicted in critical incidents of positional asphyxiation, where youth breathing is constricted, resulting in injury or death. We found a high level of variation in the use of prone restraints across the facilities in this sample. While some programs did not utilize this type of restraint at all, Facility 5 used the most dangerous forms of restraint more frequently than other programs.

Because of safety concerns, some programs decided to stop permitting prone restraints. "About two years ago, we told our employees they can't do face down restraints because sometimes things happen," reported an administrator.

Variation in use of PRN medications in physical crisis intervention

The use of PRN ("as needed") prescription psychotropic medication in restraint-related incidents also varied across residential programs. Three facilities did not have any PRN use related to restraint, and three facilities had infrequent PRN use during restraint. One facility (Facility 6) had PRN involvement in almost half of all restraints in this time period, while 82% of the restraints at Facility 9 included PRN medication.

Qualitative interviews suggested diverse perspectives on the use of PRN medication. Some administrators viewed PRN medication as a technique to prevent restraints as well as shorten their duration. Said one administrator, "We are generous with our use of PRN medication. If we can calm a kid down and they're willing to take one of the prescribed medications that their psychiatrist decided would be appropriate to decrease agitation or whatever and they can do that, that's cool. We'd much rather do that."

Other individuals were abhorred by the idea of using PRN medications. One administrator reported, "Medication is such an easy out. So you teach them today to take two Benadryl and

you'll calm down. Well, later they go out and take a fifth of vodka because that will help them calm down. I think they have to learn how to calm themselves down."

Stakeholders' perspectives on restraint

Another purpose of this study was to assess the opinions of various stakeholders on the use of restraint in their program. While many administrators seemed reluctant to advocate for restraints, they recognized the importance of its judicious application. As one administrator explained, "People think you're arguing to do restraints and that you're pro-restraint. I'm not pro-restraint. I'm pro doing what's in the best interest of the child and sometimes it's in the best interest of the child to have to hold them."

Direct care staff are often the individuals most directly involved in restraint. Their views on the need for restraint were similar. "You always make it the last thing that you do, but it's a tool that needs to be there," said one direct staff member.

Perhaps the biggest advocates of the use of physical restraint were the youths that were interviewed. Several youths indicated that they wanted the staff to restrain youths in order to help them be and feel safe. Here are some of the views expressed by youths in these residential programs:

> "There are a lot of times someone needs to be restrained, especially in places like this where there are behavior kids."
>
> "If there are really huge guys getting into fights and if they didn't have restraint or some kind of control over those kids, some major stuff would be going down."
>
> "[Restraint] kind of keeps the balance going through the facility."

Participants were asked to imagine what the program would be like if restraint was no longer permitted at their facility. Across the board, administrators, staff and youths expressed concern about what would result. These first quotes are from program administrators:

> "Given the nature of the work we do and the level of aggression that our kids bring, I don't see us working without that tool."
>
> "Our goal, I'm sure it's everybody's goal, is to have a restraint-free campus, but you know, that's kind of pie-in-the sky with some of the dangerous behaviors you deal with."
>
> "There would be some of those high-end kids that we just wouldn't accept."

Direct care staff members expressed specific concerns about how their ability to do their job would change if restraint was prohibited. One said, "I would feel unsafe in a facility that had a no-restraint policy." Without restraint, direct care staff would have fewer tools for maintaining youth safely in placement and one staff member feared that more youths would end up in correctional settings.

The youths stressed similar opinions, only in stronger terms. Below are listed some of the youths' reactions to what would happen in their facility if restraints were no longer used.

> "Oh God! This place would be in shambles within an hour. Well, not within an hour, maybe a couple of days."
>
> "It would be wild. There wouldn't be any order; it would be all chaos."
>
> "Ooh! Kids would be fighting. There would be so much fighting. Kids would be running away. It would be chaos. You would come back to this dorm, Bam! You wouldn't see anybody. You'd be like, 'Where are all of the kids at?'"

In addition, youths were asked whether they would prefer to be at a facility that did or did not use restraints. All but one youth stated a preference for being at a facility where restraint was an available tool. The dissenting youth expressed concern about witnessing inappropriate restraints and felt that it would be better to be in a facility where restraint was not used. It should be noted that concerns that youths expressed about restraint were not about whether they should ever be used, but about how and when restraint procedures were applied.

Restraint reduction efforts

Several facilities reported that they had made substantial strides in reducing restraint, including the facility with the highest rate of restraint use. Administrators and staff at these facilities shared their strategies for accomplishing this reduction. Youths also had recommendations on how to reduce restraints.

A few of these efforts map directly onto the SAMHSA recommendations. For example, a focus on de-escalation in formal restraint training was mentioned by several programs. De-briefing with staff following restraint incidents was another common strategy. Workforce development, including selection of staff and utilizing staff to create a culture where restraint was used only as a last resort, were also mentioned. From the initial hiring process, one program had implemented efforts to screen out staff who may be inclined to use inappropriate discipline. Explained one administrator, "We've instituted some things in our application process where we're asking them to consider some scenarios, 'Johnny does this and you've got three choices, you can either spank him, put him in a chair, or you can make him write a hundred sentences.' And we try to identify people that do not believe in any kind of corporal punishment. So we do some of those things to try and weed people out up front."

Many programs discussed how they used data about restraint frequency to inform practice. Programs often had a committee who regularly reviewed incident reports or aggregated information about restrictive behavior management practices. One administrator found that having direct care staff on the committee increased its effectiveness. "Many times [direct care staff] say, 'You guys don't know what it's like, you don't work with the kids, we do.' Well, we're talking about people who do work with the kids who are saying, 'In that situation maybe you should have tried something else before you put your hands on the kid.'"

The interest in using data to monitor restraint may be partly driven by demands of accreditation. However, one administrator described the importance of data beyond just for maintaining credentials.

> "Part of the impetus was accreditation because JCAHO requires that. And what I hope to do is really fine tune that, in a way that it will be more useful in terms of really improving practice and measure outcomes for improvement's sake and not for compliance with outside agencies. It's not data collection for data collection's sake. It's data collection for foresight. You gotta know what's happening... that's the only thing that really allows you to know where things are going awry and how to intervene."

The study participants also identified five other strategies that are not part of SAMHSA's restraint reduction plan. These ideas include individualizing treatment, the use of specialized crisis staff, paying attention to organizational culture, the use of incentives, and program structure. Examples of these tools are discussed below.

Individualized treatment

By customizing care to meet the needs of individual youths, some programs said they have been able to reduce the need for restraint. Administrators describe these efforts in the excerpts below:

> "One of the things that we have done is we put in a safety plan for every kid that comes into our facilities. It's a brief interview with the child upon entering into our facility to say what are your triggers, what types of things just absolutely make you mad so hopefully we won't do that, what types of things do work with you if we get into a situation where we do need to give you a consequence, what kinds of things work for you. So we try to get a little bit of an idea from child for what is needed."

> "We have developed a concept called the toolbox that when the child is admitted, a toolbox is developed of techniques for helping to de-escalate the child, informed by previous placements or issues that childcare staff need to keep in mind."

Crisis staff/Tag-team

Staffing patterns can be used to respond to crises in the residential milieu. Several programs utilized crisis intervention staff to assist front line staff, as needed. Other programs encouraged flexibility in staff assignment to allow staff to trade-off with other staff when working with a challenging situation.
One administrator described this initiative:

> "In the evening time here we have what are called crisis intervention staff. Basically one staff who is a roamer and can move around and can get called in to situations that are escalating within the units. The ability of having seasoned staff play that role to help out what is going on in the unit, sometimes just the physical presence will, particularly for young men, young boys here, will kind of stop them in their tracks."

One administrator held a different position on using crisis staff rather than the youth's primary caregivers.

> "Maybe this is kind of a good idea to develop something like this. But to me the relationships are so important, that when you have the people that work real closely with the kids, train them in a way where they can diffuse these situations instead of having a group of people come in who really don't know the kid that well."

Culture and climate of program environment

Outside of the actual crisis situation, administrators identified aspects of the program culture that can help reduce the need for restrictive behavior management practices. Primarily, this begins with a mindset specific to how youths in the program are treated by staff.

> "There are so many benefits to just treating them like human beings, like they are your own kids."

> "We try to model a home environment and that's, even though there's always a lack of respect that the kids kind of come in with because they feel like they've been treated so poorly by adults in the past that just by trying to give them respect through a family environment and treating them more like kids, that maybe some of that is reduced."

Being able to have a space to express themselves was also important to youths. Said one youth,

> "If I can curse and get my feelings out for about ten minutes, then it's all gone away and I forget about it; call it a day. But to them it's like 'if you curse at me, you are getting restrained and you are getting consequences for having even thought of that stuff'." One youth suggested the creation of a "chill out" room, "like somewhere where you can go in there and just chill out, like, just not have so much anger or whatever.... It would just have maybe a radio and a comfortable little chair."

Youths also discussed the importance of maintaining connections with family and friends outside of the program. One youth suggested that some youth without family connections lack motivation in the behavioral program.

> "My parents come up and see me everyday but theirs don't. So I think with some of the kids that they just don't care... They don't care because they can't go home."

Creating incentives

Using incentives to promote positive behaviors among youths was credited as being effective in reducing restraint in some programs. One administrator explained,

> "We started to have pizza parties if you went all January and you had no restraints on your unit, you could have a pizza party and the kids really liked that option. So we go out, we buy pizza and they get certificates that said you did good and we actually had kids help each other: 'now, keep it together, keep it together. We only got three more days to go.' This is really an effective intervention."

Program structure

Increased activity and structure was viewed by staff and youths as relevant to preventing restraints.

> "I think a lot of the times that I see problems is when the kids have idle time. When they can't figure out how to keep themselves occupied, they'll find a way and they'll find something to do and it usually isn't in line with what we'd like them to do. If you get a good, consistent program going I think you'll reduce your restraints," suggested one administrator.

One youth articulated how a shortage of planned activities can lead to restraint.

> We ain't got that many activities to do. If a kid acts up in a dorm, the whole dorm has to stay back for the weekend. So, we are trapped on campus for the weekend. And kids get frustrated about it because they feel like they are boxed. They are closed in a box, you could say, and they can't escape. So, kids get frustrated with the rules and with the staff that are applying the rules, so that causes more chaos and that leads to restraints."

Conclusion

This study provides some answers in one locale about the frequency of restraint and perceptions of stakeholders in select residential facilities. Substantial variation was found on every dimension of restraint use. From frequency of physical restraints, to type of technique used, to the use of psychotropic medications with restraint, programs differed. Even through rather limited data collection efforts, it was possible to identify outlier programs whose restraint use differed significantly from peer organizations. These findings have implications for state-level quality assurance initiatives.

With comparative information, facilities can assess whether they are using restraints more frequently than others. For example, in this study, the one outlier facility that was restraining youths the most frequently served youths similar to several other programs in the study. To promote continuous quality improvement, facilities could gather and share information across programs through cooperative agreements. Further, licensing authorities could require reporting of these data. The licensing authority would then need to manage and analyze the data and report it back to agencies in a timely way and in a usable format. Licensing authorities should gauge whether they have the capacity to accomplish these tasks.

Despite concerns about the potential dangers of restraint, youths, staff and administrators in this study viewed restraints as an important tool for maintaining safety in the living environment. Youths stated a preference for programs where restraint was allowed and expressed concerns about how chaotic the treatment environment would become without this intervention.

Similar to recommendations made by best practice papers for restraint reduction, the programs in this study were able to identify several strategies for reducing the use of restrictive behavior management practices. However, it was also clear that each program had developed a unique constellation of initiatives that they believed were effective in restraint reduction. These included rewarding non-restraint, charting time since last restraint in view of youth, using line staff to run restraint review meetings, the use of crisis staff, and focusing on organizational culture. Facilities should consider using these strategies in addition to those advocated by national groups.

Limitations

This study provided only a first look at a complex issue. Because of the limited sample size and possible bias in selection for participation, findings may not be generalizable to other programs. Key informants who provided input about each program may not be representative of all stakeholders. Hence, the findings presented here should be interpreted with caution.

From looking through restraint training packages and agency policies, it is easy to imagine that issues related to restrictive behavior management are fairly straightforward. However, in this study, it became clear that restraint practice is a multifaceted issue. These findings suggest that maintaining appropriate restraint use requires consistent vigilance within programs. The tendency for programs to drift towards becoming increasingly punitive and controlling may be linked to the frequency and use of restraint.

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