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The Development and Implementation of Non-Violent Resistance in Child and Adolescent Residential Settings

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ABSTRACT

Non-violent Resistance (NVR) is a method to manage child and adolescent aggressive behavior and to decrease parental helplessness. Although developed for a family setting, this paper describes the adaptation of NVR for child and adolescent residential settings, reports on the possible hampering and facilitating elements of implementing NVR in four different institutions and finally presents seclusion and restraint rates before and after implementation. Retrospective analysis of the different implementation processes suggested the following elements to facilitate implementation: awareness that NVR is not a quick fix, a considerable amount of time and financial investment, a team-wide perspective, support from all levels in an organization and influential team members committed to NVR to decrease the risk of falling back into more familiar patterns. Seclusion and restraint figures pre-post point in the direction that the implementation of an adapted version of NVR in residential settings could result in decreased seclusion and restraint. Furthermore, this decrease was most pronounced in sites with a successful implementation process. This observational study provides a starting point for an empirical basis for the use of NVR within child and adolescent residential settings. Further research on successful implementation processes for multi-level, milieu-based interventions, such as NVR, is required.

KEYWORDS

Aggression; residential; child and adolescent; implementation; seclusion and restraint; inpatient

Introduction

Aggressive outbursts are common on child and adolescent inpatient or residential wards (Connor, Doerfler, Toscano, Volungis, & Steingard, 2004; Garrison et al., 1990; Sukhodolsky, Cardona, & Martin, 2005; Vivona et al., 1995). These aggressive outbursts are often triggered by adult authority (Fisher & Kane, 1998). To prevent further escalation of these aggressive

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outbursts, seclusion and restraint measures are used. In their review, De Hert, Dirix, Demunter and Correll (2011) indicate that one out of four children or adolescents treated in residential psychiatric care is secluded at least one time. In the short term, these measures protect staff, other patients and property from direct further injury or damage. However, in the long term, this reciprocal use of 'violence' is likely to exacerbate aggression in both staff and clients, and may even lead to traumatic stress symptoms (Goren, Singh, & Best, 1993; Mohr, Mahon, & Noone, 1998; Natta, Holmbeck, Kupst, Pines, & Schulman, 1990; Smith et al., 2005). Further, the use of seclusion and restraint is likely to interfere negatively with the therapeutic process (Finke, 2001).

Several interventions have been developed showing promising results in reducing seclusion and restraint measures or improving confidence in staff members dealing with challenging behavior. For example, in Collaborative Problem Solving (CPS) aggressive behavior is seen as an expression of inability. It is stated that aggressive behavior is a result of inadequate cognitive skills to cope with the task the child has to face at that moment. CPS teaches staff to see aggressive behavior in this way and teaches them to be responsive to the cognitive skills of the child and solve the problem in collaboration with the child (Ercole-Fricke, Fritz, Hill, & Snelders, 2016; Greene, Ablon, & Martin, 2006; Martin, Krieg, Esposito, Stubbe, & Cardona, 2008). Alternatively, the Comprehensive Behavioural Management Model (CBM; Dean, Duke, George, and Scott (2007)) focusses on reinforcing appropriate behavior and reducing unacceptable behavior by giving choices, quiet time, time-out in a time-out room and as a last resort seclusion or restraint. In addition, a personal patient management plan is made in collaboration with the child. Although both models include a broad range of interventions, the ultimate aim of such interventions is to change the child's behavior. When attempts to collaborate with the child fail and a child's behavior does not change, these interventions imply that staff members are doing something wrong. As a consequence staff members may experience doubt and feelings of helplessness, sometimes resulting in burnout symptoms (Brouwers & Tomic, 2016; Harder, Knorth, & Zandberg, 2006).

Interventions that help residential staff members cope with aggression, decrease seclusion and restraint use, but also diminish feelings of failure and helplessness in staff when confronted with non-collaborating children are needed. This paper describes the adaptation and implementation of Non-violent Resistance (NVR) a method to manage child and adolescent aggressive behavior in residential settings. Originally, NVR is a concrete and practical method for dealing with severe escalation and impasses in families without using coercion. The main aim is to reduce aggression by decreasing feelings of helplessness in parents of children with behavioral problems, by focusing on strengthening the parent instead of trying to change the (non-cooperative)

child. NVR is based on the idea that classical top-down authority should be replaced by a more horizontal form, supported by several people ('it takes a village to raise a child'; Omer, 2010). NVR has its origins in the arena of socio-political conflicts. In the 1920s, Gandhi, in his struggle against the British presence in India, used applied strategies like protests, all based on the principles of: (a) choosing to abandon violence, (b) resisting violence in a non-violent way, (c) being present, (d) being transparent and (e) respecting the opponent. In the United States, Martin Luther King Jr. challenged racial segregation and discrimination using these principles and strategies (e.g. strikes, sit-ins). Both Gandhi and King realized that it is seldom possible to control an opponent's response. They made the fundamental moral decision to focus only on their own responses in leading a nonviolent struggle (Gene, 1973). The Israeli psychologist Haim Omer (2004) converted these principles and tactics into a method for parents of children with behavioral problems (e.g. verbal and physical violence, vandalism, lying, truancy, substance abuse, and thefts). The uniqueness of this program is that parents, instead of trying to change their child's destructive behavior, focus solely on their own behavior and responses as a way to resist the destructive behavior. The illusion of control is a central tenant and teaches parents that the constant attempts to change the child's behavior are only causing power struggles, not leading to positive change. The NVR method helps parents to systematically use non-violent strategies, combining clear limits, de-escalation, love and respect for their child. These strategies help parents when they feel helpless because a positive parent–child interaction develops. Core components of the intervention for parents are de-escalation, parental presence, support, (re) building a relationship and resistance in a non-violent way. As NVR is not a quick fix, perseverance of the parents is crucial in order to be effective. Parents learn to delay their response ('strike when the iron is cold'), seek support within their personal network, and to be present, emotionally as well as physically, in their child's life. Research findings reveal less parental helplessness, more social support and less escalating aggression in families which received the NVR training compared to the control group consisting of parents on a waiting list (Lavi-Levavi, Shachar, & Omer, 2013; Ollefs, Schlippe, Omer, & Kriz, 2009; Weinblatt & Omer, 2008). Subsequently, NVR has been adopted for use in other settings, such as for foster parents or teachers (Omer & Lebowitz, 2016). In this current paper, we describe the adaptation of this method for use in residential settings.

As described above, residential institutions are looking for ways to improve quality of care and implement new (evidence-based) methods to reduce seclusion and restraint use. Implementation theories teach us that improving quality of healthcare is equally dependent on the quality of novel interventions as on the implementation strategies chosen to implement them (Fixsen, Blase, Naoom, & Wallace, 2009). Although implementation science has produced multiple

theories and models to guide the implementation of evidence-based interventions, these models were developed in outpatient settings and focus mostly on single-level interventions. Research on implementation of interventions in a more complex setting such as a residential setting is sparse (James, 2017; James, Thompson, & Ringle, 2017). Furthermore, residential settings have the tendency to implement single-level interventions or use 'home grown' multi-level interventions in favor of new multi-level, milieu-based interventions, such as NVR. Multi-level interventions require substantial adaptation in the whole organizational infrastructure and sometimes a different outlook on mechanisms of change. These organizational changes take time in contrast to the implementation of single-level or 'home grown' interventions that can be implemented in a relatively small part of the organization, by a small subset of therapists or are used already and have validity in their own specific context. For this reason, specific implementation models for the implementation of multi-level interventions are lacking. Residential settings that feel the pressure to improve quality of care therefore usually forge ahead and implement new methods without the guidance of specific theory, systematic monitoring of the process, or scientific data on implementation efforts (James et al., 2017). As a result, a solid base for the intervention is lacking in the long term. Training for staff members can be arranged quickly, organizational and infrastructural change is challenging, therefore residential care settings often opt for training staff members straight away or choose a 'simpler' client-centred single level intervention that requires less organizational and infrastructural change (Barbee, Christensen, Antle, Wandersman, & Cahn, 2011; James et al., 2017).

More research is needed to find out if residential settings can benefit from multi-level, milieu-based interventions, such as NVR, to improve quality of care and reduce seclusion and restraint. A first step to increase understanding is describing the interventions and the implementation process needed to properly implement an intervention in an organization. The national Implementation Research Network (https://nirn.fpg.unc.edu/learn implementation/implementation stages) distinguished four stages in the implementation process. During stage 1 *Exploration*, the match between community needs, planned innovation and the evidence-based practice is assessed. During stage 2 *Installation*, tasks that need to be accomplished before actually doing things differently are defined and taken care of. Stage 3 *Initial Implementation* is defined by the compelling forces of fear of and resistance to change and the inherently difficult and complex work of introducing something new. Stage 4 is the *Full Implementation* stage, in which the 'newly learned' is integrated into daily practice and processes become routine. The program is evaluated and with this evaluation new opportunities to learn more about the program itself and the conditions under which it can be used and strategies to maintain the established practice are undertaken.

We had the unique opportunity to describe the adaptation and the implementation process of NVR by providing NVR training in four child and adolescent residential settings. The purpose of this paper is to (a) describe the adaptation of NVR for use within child and adolescent residential settings, (b) report on implementation processes in four different settings describing the possible hampering and facilitating elements of implementing a complex intervention such as NVR and finally to (c) report rates of seclusion and restraint before and after implementation of the NVR adaptation.

Methods

The current study uses a qualitatively driven mixed method design (Hesse-Biber, 2010). The quantitative data as reported in section c say something about the outcome of the implementation in the four institutions in terms of seclusion and restraint and therewith adds to the qualitative data.

Sample

From 2007 to 2016, four child and adolescent residential institutions in the Netherlands implemented NVR. Three of the institutions provided inpatient psychiatric care for children between 4 and 18. The fourth institution provided both childand adolescent psychiatric care as well as secured residential youth care, see Table 1 for a detailed description of these institutions.

Measures

To report on the different implementation processes, multiple methods of data collection were employed. The research team read minutes of project group meetings (this meeting was every month for two years). The project group discussed implementation efforts and consisted of managers, psychiatrists, a team coordinator and residential staff members. Parents were also invited to think of ways to work with the ward during and after NVR implementation. Minutes from NVR supervision meetings (once every 2.5 months for all team members who received NVR training) were also reviewed.

Quantitative seclusion and restraint data were extracted from the registration systems. The following forms of seclusion and restraint were measured: (a) mechanical restraint: the application of devices on the patient's body to restrict movement, (b) seclusion: a patient is placed in a seclusion room with a locked door, (c) manual restraint: physically holding the patient to prevent or restrict movement and (d) restriction of liberty: the patient has to stay in a special designated room, but with the door unlocked.

We chose to present the seclusion and restraint data of children's wards (wards treating children 12 years old and younger) and adolescent wards

Table 1. The four institutions that implemented NVR.

Institution number	Implementation timeframe	Type of care	Capacity	Population served
1	2007–2012	Child and adolescent psychiatric care	Three treatment units and two acute units with eight patients each.	Children aged 4–12 and adolescents aged 12–18 with a variety of psychiatric problems. Only at the acute adolescent ward admission could be compulsory
2	2011–2012	Child and adolescent psychiatric care	Three treatment units and one acute unit with eight patients each.	Children aged 4–12 and adolescents aged 12–18 with a variety of psychiatric problems. Only at the acute adolescent ward admission could be compulsory
3	2014–2015	child and adolescent psychiatric care	One acute ward serving eight patients	Adolescents aged 12–18 with a variety of psychiatric problems. Admission could be compulsory
4	2015–2016	Youth care	Nine psychiatric wards and two secure residential wards with a maximum bed capacity of eight	Children aged 4–12 and adolescents aged 12–18 with a variety of psychiatric problems and adolescent girls aged 12–18 at the two secure residential wards.

(wards treating adolescents 12 years and older) separately. Although findings from Weinblatt and Omer (2008) point out that the age of a child has no effect on results, we chose to make this distinction because in most child and adolescent residential settings, wards for children and adolescents differ substantially (e.g. group dynamics, problem behavior).

Procedure

From the gathered data on implementation, the author developed a first description of the different implementation stages making use of the stage-based implementation approach specified by the National Implementation Research Network (https://nirn.fpg.unc.edu/learn-implementation/implementation-stages). Thereafter, the author, NVR trainers, managers of trained residential youth care institutions and former residential staff members (all part of the research team) interpreted these descriptions to find facilitating or hampering factors.

Seclusion and restraint measures one year pre- and one year post-implementation were collected.

Data Analysis

We used directed qualitative content analysis (Elo & Kyngäs, 2008) to examine the main themes discussed in the steering group minutes, supervision minutes and implementation reports. We used the theory that implementation is a process that occurs in stages, distinguished by the National Implementation Research Network (exploration, installation, initial implementation and full implementation) to form initial coding categories. One researcher analyzed the data and discussed this with an NVR trainer who was part of the research team. After this first analysis, we realized that the textual data on NVR implementation could not only be categorized in different implementation stages, but also in different levels (organizational and team level). The research group therefore decided to rate the data on different levels (organizational and team level) as well. This is consistent with findings presented by Ferlie and Shortell (2001) that problems with implementation may arise at different levels: the individual level, the team or group level, the organizational level and the environment level.

Concerning seclusion and restraint, frequency data for every organization 1 year before NVR implementation and 1 year after NVR was described.

Results

Adapting NVR for Use in Residential Settings

Adaptation for Residential Use

Staff on a (psychiatric) ward for children and adolescents, just as parents at home, may get into a spiral of negative behavior with a child. This negative spiral may subsequently lead to aggressive escalation while similarly creating feelings of helplessness in staff members (Natta et al., 1990; Patterson & Forgatch, 1985). In 2007 a child and adolescent psychiatric institution in the Netherlands explored the idea that NVR principles and actions that have been found to help parents to escape this negative spiral and diminish their feelings of helplessness may be helpful for residential staff as well. After visiting Haim Omer in Israel the idea to adapt and implement NVR on a psychiatric ward was further developed. The five core components of NVR in the family setting remained central: (a) de-escalation, (b) 'parental' presence (from staff and parents), (c) seeking support and (d) (re)building a relationship and (e) resistance in a non-violent way.

Possible differences between the family and residential settings were discussed with staff members from the residential setting and professionals working with NVR in the home setting. Table 2 presents the adaptation of NVR for a family setting to NVR for use in a residential setting.

Table 2. Adaptation of NVR for use in residential settings.

Area of adaptation	NVR for use in family setting	Adaptation for use in residential settings
Number of caregivers who have to work together	Parents/caregivers can discuss and plan NVR interventions at any time	To facilitate intra-team communication, NVR plans are made on a whiteboard, NVR 'to do' list in the team agenda or in the patient file.
Presence (parental presence or shared presence by parents and staff)	Increasing parental presence by being physically present in a place and at a time of their own choosing and use this presence to guide the child to show appropriate and safe behavior, provide emotional comfort and mediate and reduce tension and conflict.	Increasing 'presence' (of both staff members and parents) by being more present at the ward and less in the office, inviting parents to have lunch dinner or stay overnight on the ward and abolish limited visiting hours.
Creating openness and transparency	Parents are encouraged to let other people outside the family know about the situation at home and ask for their support.	Next to being transparent to others outside the ward, transparency inside the ward was also needed. An NVR group moment was created, in which unacceptable behavior and solutions are mentioned openly in front of all children/adolescents.
Changing attitude towards cooperation and responsibility	In families with children showing persistent unacceptable behavior, parents have already tried many strategies. Over time they change from being strict and firm, to giving in or interchange these strategies. Parents are thought to find a way that is in the middle.	Staff members are often accustomed/learned to handle unacceptable behavior with coercion and repression. To help shift their attitude towards cooperation and leaving responsibility with the child, two extra interventions are created: The *Reparation act* is an invitation to repair the damage that has been done, instead of a demand for an apology from the child. Every form of reparation is accepted, even when it is not in proportion to the damage that has been done. e.g. by saying sorry, writing something, baking a cake etcetera. The *Request for a solution* when reparation alone does not lead to change. The responsibility to find a solution is placed with the child, offering support when needed. Staff members need to react positively to each idea as a first step in bringing about change.

Description of the Possible Hampering and Facilitating Elements of NVR Implementation

A description of the most important issues in the four stages of implementation for all four institutions is given below, differentiating between issues on an organizational level and team level. In order to learn per implementation stage, results are

presented per stage for all four institutions. For use in daily practice and policy making, a synthesis of possible hampering and facilitating elements is provided at the end of every implementation stage.

Institution 1

Organizational Level

Given national campaigns to reduce seclusion and restraint, the organization in which the use of these measures was high, needed a way to accomplish this goal. In addition, the organization looked for an intervention that would help focus on a shared vision and improve cooperation and cohesion between staff working on the ward and the psychiatrist, parent counselor and team coordinator.

Team Level

Based on written documentation of the start of the NVR implantation process, a majority of the team members felt initially justified in using seclusion and restraint. When introduced to the idea of implementing NVR, team members were concerned NVR would be too soft in dealing with the sometimes severe aggressive behavior they were confronted with. However, the team needed a way to improve cooperation within the team itself and with the children and their parents. As team members became more involved in the adaptation process, a sense of ownership was stimulated.

Institution 2

Organizational Level

This organization had already taken initiatives to decrease seclusion and restraint. As results were not fully satisfactory, new initiatives were considered. NVR was chosen, based on the described positive experiences from institution 1 with this method (Goddard, Van Gink, Van der Stegen, & Van Driel, 2009), their own experience with using NVR in their outpatient department and the organization's emphasis on family-based interventions. Little time was taken to explore the differences in culture and organizational structure between institutions and the possible influence on the implementation trajectory.

Team Level

Besides the wish to decrease seclusion and restraint, there was a strong wish to increase parental presence. Initial steps had already been taken but more

was wanted. Hearing positive experiences from team members of institution 1 seem to have decreased resistance to implementing NVR.

Institution 3

Organizational Level

A method was needed to support the culture change they had already started. Much thought was given to how NVR would fit within the organizational culture and to find ways to facilitate NVR implementation (such as sources of support, diffusion to other wards) given the organizational structure they had. NVR was adopted after examining NVR theory and experiences with NVR on other wards.

Team Level

Based on the supervision minutes and information from management, most team members were enthusiastic, because they were involved in the above-described process.

Institution 4

Organizational Level

A method to decrease aggression and seclusion and restraint was needed, and the decision for NVR was made at general management level. The effect of differences between locations in culture and target group (child and adolescent psychiatry versus secure youth care) seem to have been underestimated. Furthermore, the organizational structure differed from the other institutions. Teams were self-managing, with less connection between management and teams plus less possibility for support from management and between teams. An implementation plan was made, but because of uncertainty about the organizational future, the feasibility was uncertain.

Team Level

It is the research team's assessment that not enough thought and bottom-up assessment of needs was done to clarify the motivation and needs of the different locations. This could have been a possible reason for resistance to the implementation of NVR. During the introduction of the implementation plan, staff members expressed mixed feelings; on the one hand, people wanted to learn something new and on the other hand, there were questions about the feasibility.

Facilitating and hampering factors in stage 1:

Stage 1
Possible facilitating factors Organizational level • Take time to explore organizational structure and culture and how this effects NVR implementation • Realize that NVR requires a change in culture and outlook on mechanisms of change and is not just a new technique to be learned • Make a plan to provide sufficient organizational support for this change in culture Team level • Asses needs and goals of all different teams (Using NVR is not a goal, but simply a means to achieve a goal)
Possible hampering factors Organizational level • Decide on implementing NVR solely based on results in other settings. • Decide on implementing NVR when organizational instability is foreseen in the near future Team level • Impose NVR without involving teams.

Stage 2 Program Installation

In this stage tasks that need to be accomplished before implementation are defined.

Institution 1

Organizational Level

Funding was requested from the Dutch Association of Mental Health and Addiction Care to develop and implement a method to reduce seclusion and restraint and to create a culture in which preventing escalation is essential. Funding was used to pay for the team to be trained, for training internal trainers, to provide time to develop the training and manual, and to support the team in attending training.

The project was overseen by a project group, this project group was a mixture of management, psychiatrist, team coordinator and residential staff members. Parents were invited to think of ways to work with the ward during and after NVR implementation.

Team Level

The planning was arranged to facilitate attendance at the training, e.g. no on-call duties during training. Two members of the team (psychiatrist and a senior residential worker) were trained as NVR trainers to promote top-down and bottom-up commitment and input.

Institution 2

Organizational Level

The organization applied for funding from the Dutch Association of Mental Health and Addiction Care as well, but only part of the application was granted, forcing them to make cuts in the implementation plan. To cut back in costs the decision was made to have no project group and follow the implementation plan made by Institution 1. Staff was trained as soon as possible, leaving little time to create support within the organization.

Team Level

There was enough support from neighboring wards and the institute's flex pool to facilitate training attendance. Program champions were appointed in the team but with no senior team member in this role. This might have resulted in less involvement from staff members other than the residential workers on the ward. Because of the enthusiastic start, the difficulty of planning supervision was underestimated.

Institution 3

Organizational Level

The choice was made to train just one ward and to use their annual training budget to hire an external trainer. Substitutes were arranged when the team had NVR training or supervision. NVR implementation was monitored by management and a member of the department of education and research.

Team Level

Planning of all training moments was done beforehand, every team member was enabled to attend all training and supervision moments.

Institution 4

Organizational Level

Teams were trained using their own training budget, which was not enough to train all teams separately, resulting in large groups (sometimes over 30 staff members in one training session). Managers were told about the importance of attending training and supervision, but due to a simultaneous reorganization they were not able to prioritize the training and were consequently insufficiently acquainted with the method. This insufficient knowledge might have made it more difficult to provide support for the teams.

Team Level

Teams were not facilitated to attend training, team members reported a clash of priorities, e.g. attend training whilst no replacement on the ward was arranged.

Facilitating and hampering factors in stage 2:

Stage 2
Possible facilitating factors Organizational level • Arrange enough funding and time to finance the whole implementation process (training for everyone, training for individual teams, ensuring continuity of care on the ward) • Instill the importance of training everyone involved in the primary care process • Form a project group to guide the adoption and implementation process Team level • Plan training and supervision beforehand and make sure this is blocked in agendas • Appoint program champions to ensure enough top-down and bottom-up commitment and input.
Possible hampering factors Team level • Overburden staff members by making staff members do double shifts before or after training or have them on standby while attending training

Stage 3 *Initial Implementation*

During these stages, staffs are attempting to learn and use something new. These stages balance between going forward or giving up – doing something new or relying upon more familiar practices.

Institution 1

Organizational Level

The NVR training consisted of a two-day training followed by supervision on a regular basis for everyone involved with the ward (e.g. residential workers, psychiatrist, parent counselor, team coordinator and the teachers). Frequency and duration of supervision varied between teams and changed from being a place where the team could talk about NVR into a place where they could practice NVR.

Team Level

When teams started the training, there was some initial hesitation and resistance, staff members had doubts about the feasibility when faced with severe aggressive behavior. External supervision from a non-member of

the team was stopped, because most staff members reported that they needed someone who had experience of their daily work. Two team members therefore became NVR trainers/supervisors and provided supervision to address questions, lead discussions, adapt interventions to fit the team (more attention to an NVR mindset was needed). Attendance records show high attendance at training days as well as at supervision meetings. Staff turnover was low, new team members would sometimes join the two-day training given to other teams or follow a shortened version of the NVR training. Teams were taught that NVR should be seen as an extra tool to add to their toolkit and not as something to replace other methods they used before.

Institution 2

Organizational Level

A trainer from institution 1 was hired to provide NVR training to four wards and to train three staff members to become internal trainers in their own organizations.

Team Level

The hesitation and resistance that accompanied the introduction of the NVR in the first institution was experienced as less intense, because staff members expressed the importance of decreasing seclusion and restraint. Staff members also expressed the need to increase their competences in dealing with aggression. Attendance at the first two training days was good. The attendance at the subsequent supervisions (1.5 hour on a monthly base) and the booster session (after 6 months) was poor, especially for staff not working on the ward directly. Possible explanations for this could be the fact that those subsequent moments were not planned beforehand and little time was reserved beforehand to instill the importance of attendance for staff, not working on the ward directly (NVR is a team effort, not a method for residential workers only). The ward psychiatrist left her post and the replacement received no training in NVR. Additionally, the children's wards had to merge at the end of the implementation period and finally, the external trainer did not have the same amount of time to monitor and help the implementation process as an internal trainer would have had.

Institution 3

Organizational Level

An external trainer was hired, no fixed plans about training other wards were made at that time.

Team Level

Training and supervision was planned beforehand. Compared to the training at institution 1 and 2, the period between the first two training days and the booster session was prolonged (from 6 to 9 months). In the previous two implementation processes, staff members reported that they need more than 6 months to apply NVR into daily practice. Planning supervision moments for 1.5 hours was difficult. Staff members indicated finding it hard to attend those short supervision moments on their day off. Supervision was therefore changed into 3-hour sessions every two and a half month. The attendance rate at training and supervision sessions was high.

Institution 4

Organizational Level

Training groups were large, sometimes up to 35 participants with origins in different teams, due to a minimal budget for the external trainer. Because of these large and diverse groups, there was not enough time to practice NVR during the training sessions. These large training groups, instability and constant changes in team composition due to reorganization and cutbacks, probably caused staff members to have difficulty incorporating the 'WE' feeling and thinking, thereby hampering the process of team cohesion. To inform parents, a letter containing information about NVR and its implementation was given.

Team Level

Attendance at the first training days was high, while attendance at supervision and booster session was low. Management agreed this was due to a major reorganization. Only 3% of the staff members followed the complete training program. Staff members indicated that doubts about the 'new' way of working sometimes expressed by parents, made it difficult for teams to keep on trying and not to go back to more familiar ways of working.

Facilitating and hampering factors in stage 3:

Stage 3

Possible facilitating factors:
Organizational level

- Train teams individually to prevent training groups being too large, and to stimulate team cohesion.
- Make sure all team members attend the two-day training, all supervision moments and a booster session after nine months/one year (for a more detailed description of the training see supplementary material)
- Organize the training, supervision and booster sessions on time slots that are convenient for staff members
- Recognize that this stage of NVR implementation requires persistence, presence and leadership from management, to help teams stay on track, despite the awkwardness of trying new ways, possible negative opinions from parents and other people outside the ward.
- Create the opportunity for team members to ask questions, ask for coaching or support by making arrangements with the external trainer or train internal trainers who can do this.
- Inform parents about NVR and the consequences this will have for the treatment of their child and for cooperation with them.

Team level

- Make sure supervision is for practicing NVR and not just for talking about NVR

Possible hampering factors:
Organizational level

- Hire a trainer without extensive knowledge of or experience with working in a residential setting

Team level

- Make teams believe that NVR is the answer to every problem they face.

Stage 4: *Full Implementation*

In this stage the intervention is now the standard way of work; effort has to be undertaken to maintain and improve the intervention over time and through transitions of staff, management and contextual factors.

Institution 1

Organizational Level

NVR training has become obligatory for all residential staff members. An NVR training for new staff members is still provided twice a year. Internal trainers provide this training, do refresher training with teams, give supervision, provide coaching on the job and consultation when needed.

Team Level

NVR was made a fixed point in (daily) meetings.

Institution 2

Organizational Level

Three staff members were trained to become internal NVR trainers. In the beginning, these trainers were not facilitated by the organization, as there was no budget to compensate time needed to provide training, consultation and supervision. This changed when interest and support for NVR from other (not yet trained wards) in the institution increased. Internal trainers were awarded fixed hours to sustain NVR and to start implementation on other wards.

Team Level

Because of cutbacks, time for meetings became sparse. Staff members often chose to use this time to talk about the children instead of NVR.

Institution 3

Organizational Level

Despite the enthusiasm and successful preceding of the first implementation stages, there was no fixed plan or idea to maintain and consolidate NVR other than just good intentions. Staff members reported this to be insufficient to support the ward in maintaining their NVR way of thinking and working.

Team Level

Because of a merging of teams, it could not be guaranteed that every team member was NVR trained.

Institution 4

Organizational Level

Location-based NVR trainers were trained, thereby trying to provide presence, approachability and ascertaining that trainers know what is going on locally.

Team Level

During the reorganization, staff members were not able to maintain working with NVR. There was little time to talk to each other about things other than basic care. Work practices resorted back to old styles of working with a focus on the children instead of focusing on themselves. Because not every location had an NVR trainer, embedding NVR in daily work and meetings was not facilitated.

Facilitating and hampering factors in stage 4:

Stage 4
Probable facilitating factors Organizational level • Include consolidation into the implementation plan • Provide NVR training for new team members • Organize booster sessions every year • Train internal trainers to provide training, consultation and coaching • Accommodate these internal trainers by giving them fixed training hours • In line with NVR thinking persevere and do not give up Team level • Make NVR a fixed agenda point in every meeting
Possible hampering factors: Organizational level • Expect that good intentions and enthusiasm is enough to maintain NVR working • Appoint just one NVR trainer in institutions with different locations and target groups. Team level • Be aware of the risk to fall back to more familiar patterns of thinking and acting (focus on the child instead of focus on the team)

C) Rates of Seclusion and Restraint before and after implementation of the NVR Adaptation

Institution 1

To evaluate NVR, seclusion and restraint use was examined. They reported an average decrease of 55% on seclusion and restraint use on their children's wards (see Figure 1) and a 42% reduction on their adolescent wards (see Figures 1 and 2).

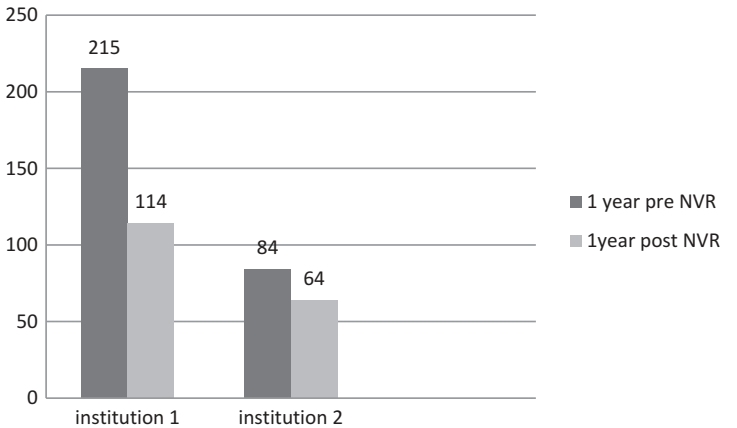

Figure 1. Uses of seclusion and restraint pre- and post-NVR – means per children's wards.

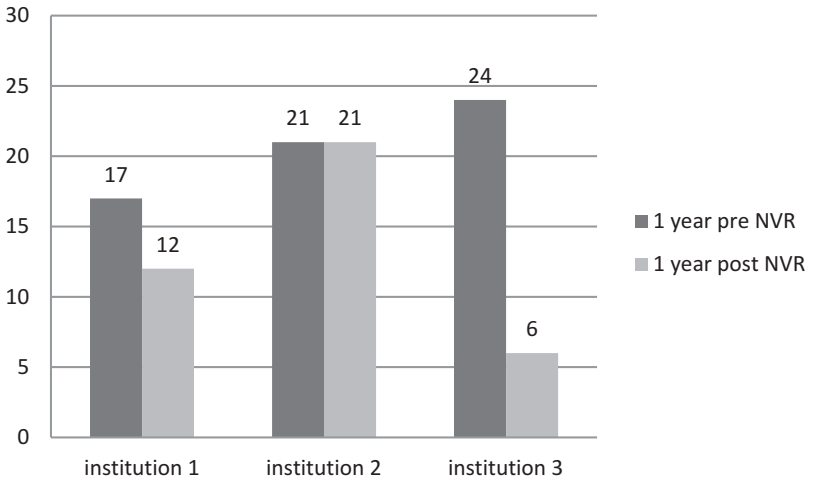

Figure 2. Uses of seclusion and restraint pre- and post-NVR – means per adolescent wards.

Institution 2

Evaluation of seclusion and restraint data showed a reduction in their children's wards of on average 24%. The number of incidences on their adolescent wards remained the same (see Figures 1 and 2).

Institution 3

Only one adolescent ward implemented NVR, which experienced a decrease of 75% of seclusion and restraint use (see Figure 2.).

Institution 4

It was unfortunately not possible to deliver reliable data about the number of seclusion and restraint incidences. The two secure youth care wards registered incidents differently before versus after NVR implementation, which made a reliable comparison not possible. Because of cutbacks during the implementation period the child and adolescent psychiatric wards had to close five out of nine wards, resulting in changed teams, patients and target groups. Moreover, this makes the comparison of incidences unreliable.

Discussion

This paper describes the adaptation and subsequent implementation of NVR in four different child and adolescent residential settings as a first step to find out if residential settings can benefit from multi-level, milieu-based interventions, such as NVR, to improve quality of care and reduce seclusion and

restraint. We took advantage of the naturally occurring opportunity to analyze and thereby increase the understanding of facilitators and barriers in the implementation of the adapted version of NVR across four residential settings. These descriptions should be studied more rigorously in future prospective research on implementation processes for multi-level, milieu-based interventions in residential settings.

Assessment of needs on all levels, deciding on a common goal, installing a collaborative implementation team, designated and dedicated project champions and stability on team and organizational level, seem more general facilitating factors for implementation of interventions in residential settings, because these factors are mentioned in studies on the implementation of single-level interventions in the residential setting as well (Bright, Raghavan, Kliethermes, Juedemann, & Dunn, 2010; Little, Butler, & Fowler, 2010; Stewart & Bramson, 2000). For implementing NVR in specific the following facilitating factors for implementation could be distinguished. Awareness that NVR is not a quick fix and a considerable amount of time and financial investment is required to support the implementation might help organizations in making a decision when looking for a way to decrease seclusion and restraint (exploration stage). NVR is not just a new technique to be learned. A change in culture and outlook on mechanisms of change is required, and a plan has to be made to provide sufficient organizational support for this change in culture (program installation stage). NVR requires an organization-wide perspective instead of focusing on one professional group, e.g. residential workers ('it takes a village to raise a child'). Support from all levels in an organization seems essential, especially in the initial period when change is underway. Influential team members committed to NVR are likely to help in decreasing the considerable risk of falling back into more familiar patterns of thinking and acting, e.g. focus on the child instead of focus on the team (initial implementation stage). Finally, installing internal trainers who have experience working on a ward is recommended to provide annual refresher courses, train new staff members, coaching and consultation (full implementation stage).

Seclusion and restraint figures pre-post showed a decrease after the implementation of the adapted version of NVR in most institutions and point in the direction that NVR could be effective in decreasing seclusion and restraint. Furthermore, this decrease was most pronounced in sites with a successful implementation process. Future research with a larger sample size and a control condition could allow for stronger evidence about the meaning of the change in seclusion and restraint. Insights presented in this paper should be considered exploratory and intended to be a first step and a basis for future research since the data were not originally collected to support implementation and effectivity research. Furthermore, the description and the assessments of facilitation or hampering factors were made by the research team, of whom the majority was involved in the implementation trajectories. However, given the lack of prior research on implementation processes for multi-level, milieu-based

interventions such as NVR in residential settings, this observational study may be a valuable starting point for further research on this topic.

Conclusion

The adaptation and implementation of a multi-level milieu-based intervention such as NVR for use in residential settings is feasible and likely relates to a meaningful decrease in seclusion and restraint use. Further research on implementation efforts guided by the suggestions made (being aware that NVR is not a quick fix, that NVR requires a team-wide perspective taking into account that there is a risk of falling back into focusing on the child instead of focusing on the team and the importance of installing internal trainers who have experience working on a ward) in this paper would be a next step before efficacy studies can take place and funded statements about effectivity can be made.

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Conflict of interest

K. van Gink, R. Ottenbros, N. Goddard and B. van der Stegen are all authors of the manual for NVR in (semi) residential settings. Gink, K. van, Stegen, B. van der, Goddard, N. & Ottenbros, R. (2012). *Non-violent Resistance in de (semi)residentiële setting. Een nieuwe aanpak van agressief en destructief gedrag voor teams*. Amsterdam: De Bascule

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