Seclusion Room vs. Physical Restraint in an Adolescent Inpatient Setting: Patients’ Attitudes

Sergey Vishnivetsky, RN,1 Gal Shoval, MD,1,2 Vadim Leibovich, RN, MPA,1 Lucas Giner, MD, PhD,3 Marsel Mitrany, RN, BA,1 Dorit Cohen, RN, MPH,1 Aliza Barzilay, RN, MPH, MA,1 Louisa Volovick, MD,1 Abraham Weizman, MD,1,2,4 and Gil Zalsman, MD1,2,5

1 Geha Mental Health Center, Petach Tikva, Israel
2 Psychiatry Department, Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel
3 Department of Psychiatry, University of Seville, Seville, Spain
4 Felsenstein Medical Research Center, Tel Aviv University, Petah Tikva, Israel
5 Division of Molecular Imaging and Neuropathology, Psychiatry Department, Columbia University, New York, N.Y., U.S.A.

ABSTRACT

Background: The use of physical restraints or a seclusion room for the treatment of adolescents in a psychiatric inpatient setting raises ethical dilemmas. We investigated the attitudes of adolescents towards these two means of confinement.

Method: We used a structured questionnaire to collect data on the attitudes of 50 adolescent patients, hospitalized in a closed psychiatric ward, towards the use of physical restraint vs. a seclusion room.

Results: Seventy per cent of the participants in the study preferred seclusion in the seclusion room over bed restraint, whereas 22% preferred physical restraint. Eighty-two percent described seclusion in the seclusion room as less frightening than restraint. Seventy-four per cent reported that seclusion in the seclusion room improved their mental state to a larger extent than restraint. The inpatient adolescents reported feeling the time they needed to reach a state of calm was shorter when they were confined to the seclusion room than when they were physically restrained (p<0.001).

Conclusions: The use of a seclusion room may be preferable compared to physical restraint for inpatient adolescents.
case, it was recommended that, in order to obtain better cooperation and response (6), the adolescent inpatients be given explanation about why restraint or seclusion is necessary. A recent randomized study of these two confinement methods in an adult psychiatric inpatient ward (n=105) did not demonstrate statistical differences in satisfaction with the received psychiatric care between those who had been confined to the seclusion room and those who were physically restrained (7). In another study from New Zealand, duration of seclusion of the inpatients was found to be inversely related to their level of pharmacological treatment (8).

None of the published studies examined the adolescent patients’ attitudes to these methods of confinement. The current study aimed to investigate adolescents’ attitudes towards confinement by restraint to the bed versus seclusion in a seclusion room. We have used the definitions of seclusion and physical restraint proposed by the Committee on Pediatric Emergency Medicine, in which seclusion is defined as “the involuntary confinement of a patient alone in a room, from which the patient is physically prevented from leaving, for any period of time.” Physical restraint implies the “use of physical or mechanical devices to restrain movement” (6).

The nursing staff of closed wards is often required to cope with patients behaving in a manner that may endanger themselves or the safety of others. Physical confinement means are often used despite patients’ opposition. Such treatments, which aim to decrease the level of a patient’s aggressive or disorganized behavior and to prevent damage to both the patient and his/her surroundings, adheres to the Israeli Mental Health Act (1991) (9) and the recommendations of the Committee on Pediatric Emergency Medicine (6), both in accordance with bio-ethical principles.

The vast majority of countries have special laws for the safe and healthy management of those suffering a mental disorder who may not be responsible to take decisions concerning their own health (10). Modern societies undertake, when necessary, the responsibility for the care of these patients. Still, serious dilemmas often arise from the stigmatized perception that psychiatric patients are on one hand violent and dangerous, and on the other hand helpless and in need of protection. Consequently, laws are intended to protect society from hazardous behavior by patients and at the same time prevent the denial of these patients’ rights by the society and medical system (8).

The 1991 Israeli Mental Health Act allows medical staff in mental health institutions to deny a psychiatric patient his physical freedom when he endangers himself or others around him. The law, however, describes in detail the circumstances required to allow use of such means (9). Of note, neither the law nor the relevant ministerial regulations distinguish between adult and adolescent patients with regard to confinement. No special consideration is required for confining children and adolescents by a physical restraint or by seclusion in a seclusion room.

Four bio-ethical principles have been suggested as guidelines for the treatment of psychiatric patients: preserving the individual’s autonomy, acting in the best interest of the individual, avoiding damage, and ensuring justice (11).

A paternalistic approach towards psychiatric patients has been recommended in certain cases, namely when the patient poses clear and immediate danger to himself or to his close environment (12). However, when the caretaking staff and an inpatient in a psychiatric ward disagree on the best treatment method, the patient is not necessarily mistaken or irrational. In such situations critical thinking and reliance on these bio-ethical principles is vital (13, 14).

The aim of this study was to investigate the attitudes of psychiatric adolescent patients in closed adolescent wards of the use of physical confinement. Since we could find no previous study that evaluated patients’ attitudes toward the different confining methods, our hypotheses were based on our clinical experience rather than the literature. We hypothesized that:

 Patients would prefer seclusion in a seclusion room than physical restraint.

 Restraint would be experienced by the patient as more threatening than seclusion in the seclusion room.

 Patients would consider seclusion in a seclusion room to be more efficacious than physical restraint in calming down the patients.

METHODS

The sample consisted of 50 consecutive admissions of patients to the adolescent inpatient ward of a university affiliated mental health center. The participants were required to have had at least one episode of confinement by both seclusion in a seclusion room and by physical restraint during their hospital stay. The unit’s indication for confinement was the patient constituting a hazard to himself or to his surroundings, as evaluated by one of the unit’s child and adolescent psychiatrists.

The mean age of the subjects was 16.8±2.1 years, with a range from 13 to 24 years. Twenty-six (52%) were female. The mean length of the episodes of physical restraint was
5.2±5.6 hours, while seclusion episode mean time was 5±4.4 hours. Almost half of the sample (23 subjects; 46%) had four or more episodes of restraint and/or seclusion. Sixteen (32%) of the subjects were hospitalized due to psychotic symptoms, 20 (40%) due to an exacerbation in mood disorders and 14 (28%) due to other psychiatric disorders.

Data were collected via a structured questionnaire that included social and demographic information as well as quests regarding the level of fear experienced during each episode, preferred procedure (seclusion or restraint) and the efficacy of the procedure as perceived by the patient. Data of the number of physical restraint/seclusion episodes were collected from the medical record. A self-rating, subjective questionnaire was used to obtain data on feelings of shame/humiliation, discomfort and anger. The participants completed the questionnaire towards the end of their hospitalization period, after their mental state had stabilized.

All subjects participated with informed, voluntary, written consent signed by themselves and their parents. Capability to decide on research participation was determined clinically by a certified child and adolescent psychiatrist (GZ). All patients who were approached enrolled in the study. The study was approved by the Geha Mental Health Center’s Human Subjects Review Committee.

DATA ANALYSIS
Statistical analyses were conducted using an SPSS-17 complex sample analysis module (IBM-SPSS Inc, Chicago, IL). Student’s paired t-test was employed to compare means of patient ratings between the two patients groups (independent variable), where the grouping was done by means of experienced confinement. Chi square analyses were used for categorical variables. Level of significance was set to 0.05. All tests were two tailed.

RESULTS
Thirty-five (70%) of the participants preferred the use of a seclusion room over restraint to their beds as a physical means of confinement, eleven (22%) preferred restraint, two (4%) expressed no preference of either method, and two (4%) did not answer. No significant association was found between the patients’ attitudes and any of the following factors: age, sex, the number of times the patient had been confined during the current hospital stay, and his psychiatric diagnosis.

Thirteen (26%) of the adolescent inpatients described the stay in the seclusion room as “not at all threatening,” twenty-two (44%) described it as “much less threatening than being restrained,” six (12%) said it was “a bit less threatening than being restrained,” two (4%) said it was “equally threatening,” five (10%) claimed it was “a bit more threatening than being restrained,” and two (4%) described it as “a lot more threatening than being restrained.” Altogether 82% of respondents described the stay in the seclusion room as less threatening than being restrained, while 14% claimed the opposite. No significant correlation was found between these findings and age, gender, number of times the individual was restrained during the hospital stay, number of times the individual was secluded in a seclusion room and the psychiatric diagnosis.

Forty-four per cent of the participants stated that seclusion in the seclusion room resulted in “a major improvement” in their mental state, as compared to being restrained; 30% described their mental state after seclusion in the seclusion room as “somewhat improved”; 20% reported no impact of the seclusion in the seclusion room on their mental state; and 6% reported a deterioration in their mental state resulting from seclusion in the seclusion room. In all, 74% of subjects described seclusion in the seclusion room as a treatment that resulted in an improvement to their mental state.

We also investigated factors that may have influenced the adolescent inpatients’ attitudes toward the confinement methods. One of the factors that was associated with the choice of restraint vs. seclusion was the level of comfort pointed out by the subject (3+1 vs. 1.3+1.3, t=7.72, p<0.001). In addition, higher level of anger (3+1 vs. 1.45+0.65, t=5.96, p<0.001), and of shame and humiliation (2.72+1.1 vs. 1.6+0.69, t=4.04, p=0.007) during the procedure were associated with the choice of the other confinement method (Table 1).

<table>
<thead>
<tr>
<th>Preferred procedure of confinement (scale 1-4) mean (s.d.)</th>
<th>Seclusion n=35</th>
<th>Restraint n=11</th>
<th>t-test df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shame</td>
<td>1.6 (0.69)</td>
<td>2.72 (1.10)</td>
<td>4.04 44</td>
<td>0.007*</td>
</tr>
<tr>
<td>Discomfort</td>
<td>1.31 (1.31)</td>
<td>3.00 (1.00)</td>
<td>7.72 44</td>
<td>&lt;0.001***</td>
</tr>
<tr>
<td>Anger</td>
<td>1.45 (0.65)</td>
<td>3.00 (1.00)</td>
<td>5.96 44</td>
<td>&lt;0.001***</td>
</tr>
</tbody>
</table>

*p<0.05, ***p<0.001
When analyzing the efficacy of both procedures of confinement, adolescents reported the feeling of shorter time needed to reach a calm state when they were secluded in the seclusion room compared to being physically restrained ($\chi^2=30.81$, df=1, p<0.001). This perception was correlated with the number of times an individual had to be confined during the hospitalization ($r=0.363$, p=0.01).

**DISCUSSION**

This study found that inpatient adolescents preferred the use of a seclusion room over bed restraint as confinement means in situations in which they may have endangered themselves or their surroundings. They considered confinement by physical restraints to be more threatening than seclusion in a seclusion room. This preference and perception were not related to age, gender, psychiatric diagnosis or the number of episodes of confinement during the current hospitalization. Adolescent patients perceived the seclusion to be more effective than physical restraint in order to achieve a calm state and to control the situation for which the confinement episode was indicated. This perception was also not associated with age, gender, psychiatric diagnosis or the number of seclusions in a seclusion room during current hospitalization, but was correlated with the number of restraint episodes during hospitalization.

The attitudes the participant adolescents expressed towards the type of physical confinement may have been formed based on their subjective feelings of comfort, on the length of time it took to reach a calm state, and individual's feelings of anger, humiliation and shame when confined.

Previous studies reported rates and associated factors regarding the use of confinement, including being restrained and being secluded in a seclusion room. To the best of our knowledge, no previous study investigated the patients' attitudes towards physical restraint compared to seclusion in a seclusion room.

According to Fisher (15) and Gair (16), seclusion of an adolescent in a seclusion room is a reasonable and efficient method for preventing self-harm or harm to the surroundings. A study by Plutchik et al. (17) investigated patients' feelings toward seclusion in a seclusion room. Time in the seclusion room was reported to help patients relax and regain the feeling of self-control. In that study, patients complained about the vague and confusing criteria used to seclude them in the seclusion room and to determine the length of time. However, as mentioned before, it is recommended to explain to the patient and his family the particular reason for confinement and its desired goals (6).

We agree with the authors claiming that a seclusion room is an efficient treatment method of coping with adolescents hospitalized in psychiatric wards who pose immediate danger to themselves or to their surroundings (18). It is noteworthy that preference toward the seclusion room over bed restraint was associated with the number of times a patient was confined during his hospital stay. The more times the patient was restrained the less he or she perceived the seclusion room to be effective in improving his mental state, compared to bed restraint. Since this group of patients was hospitalized due to particularly complex psychiatric states, it seems that the seclusion room may not help as much as physical restraint in these severe cases. The latter may partially explain why seclusion rooms are not prevalent in adult psychiatric wards in Israel.

In another study, patients reported seclusion time in a seclusion room as too lengthy (19). They suggested it be an effective treatment option should seclusion be limited to no more than 15 minutes. In line with this finding, prolonged stay in a seclusion room seemed to be associated with anger and frustration (20) and to complicate the caretaker-patient relationship (21). We did not study specifically this perception of the length of stay in the seclusion room, but we did compare their feelings about the length of time to calm down in the seclusion room and bed restraint. Participants in the present study perceived the seclusion room as a method that calmed them faster than bed restraint.

Patients previously reported they felt anger, helplessness, sadness and shame from being physically restrained (22). Perceiving restraint as a punishment rather than a treatment, they developed behaviors of non-cooperation and doubting the staff’s intentions (23). It was reported that patients may adjust their behavior in order to meet the expectations of the caretaking staff and obtain their freedom (19). This study concluded that the staff viewed their efforts as a sign that the patient had reached a calmer state, without understanding the underlying conditions and the patient's true emotional state.

In another study patients described feelings of anger, primarily towards the staff, as well as feelings of frustration and humiliation resulting from dealing with a system that denies their freedom. We have found that these negative feelings are less intense when secluded than when restrained.

The use of physical confinement means in children and adolescents may result in mental stress and evoke
fear. Thus, physical confinement should be an exceptional option for adolescent inpatients. Our results show that physical restraint was perceived as more threatening than seclusion in a seclusion room. This finding is consistent with their preference of the seclusion room over the physical restraint.

Limitations: This study had a retrospective nature and therefore there could have been a recall bias. It is based on cross-sectional design, which limits conclusions concerning the directionality between either restraint or seclusion room and the attitude of the patient. Moreover, the sample represents only one inpatient ward. The sample size may have been too small to detect minor differences. Finally, the psychometric properties of this questionnaire are unknown since it was developed specifically for this study and thus used for the first time. Larger multi-center studies are needed to substantiate our findings.

CONCLUSIONS
Based on the findings of the present study, we recommend consideration of a seclusion room as an effective method of treatment for situations in which the patient may endanger himself or his surroundings. Seclusion room should be considered as a preferable treatment compared to physical restraint option for adolescents in situations in which confinement is necessary. An essential part of this confinement procedure is to reduce fear and anxiety. It is necessary to explain to the patient the reason and the goals of the confinement, to maintain constant contact with him, to try to reduce to the minimum the length of confinement, and to give a feedback of the episode when the patient’s status and behavior improve. Seclusion may be also based on a positive reinforcement, such as “time out,” which is used in token economy behavioral schemes.

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Authors’ Contributions
Sergey Vishnivetsky, Vadim Leibovich, Marsel Mitrany, Dorit Cohen, Aliza Barzilay, Louisa Volovick, Abraham Weizman and Gil Zalsman were responsible for conceptualization of this study and its design.
Sergey Vishnivetsky, Vadim Leibovich and Marsel Mitrany conducted the study.
Gal Shoval, Lucas Giner, Abraham Weizman and Gil Zalsman managed the statistical analyses.
All authors participated in the interpretation of the results.
Sergey Vishnivetsky, Gal Shoval, Vadim Leibovich and Lucas Giner wrote the first draft of the paper and all authors reviewed and approved the final manuscript.

References