Aggressive Behaviour on an Acute Psychiatric Admissions Ward

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ABSTRACT - The purpose of this study was twofold. Firstly, to evaluate the reliability and usefulness of the Staff Observation Aggression Scale (SOAS), an instrument for measuring aggressive behaviour in the clinical situation. Secondly, to examine the incidence of aggressive incidents and the circumstances under which they occur on an acute psychiatric admissions ward.

During a period of 24 weeks 164 aggressive incidents were recorded. The SOAS proved to be a suitable instrument for measuring aggressive behaviour with fair-to-good inter-reported reliability. Aggressive behaviour was especially likely to occur in the afternoon from noon to 3:00 p.m. It frequently took place in the day-rooms of the ward, in or near the staff office, and in front of the locked exit door of the ward. Patients involved in the incidents were younger and more often involuntarily admitted – than non-aggressive control patients. Gender and diagnosis were not found to be related to aggressive behaviour.
Introduction

Aggressive behaviour in psychiatric patients, both verbal and physical, is a widespread phenomenon in psychiatric hospitals. Psychiatric nurses, in particular, are at risk of being confronted with aggressive behaviour by patients (Shah, Fineberg & James 1991; Tam, Engelsmann & Fugere 1996). Shah, Fineberg & James (1991) note that the frequency of violence among psychiatric patients seems to be increasing. In spite of the seriousness of this problem, only rough statistics on aggressive incidents are available for Dutch psychiatric wards. This is demonstrated by a study of the Dutch Inspectorate for Mental Health (1992). This study reported estimated six-monthly rates of aggressive incidents in 39 general psychiatric hospitals ranging from 1 to 1120.

In other countries, there have been a number of studies concerning the incidence of aggression in psychiatric hospitals. In their review, Shah, Fineberg & James (1991) conclude that comparisons between these studies are complicated by a number of problems such as differences in reporting methods. These studies do show, however, that aggressive patients are younger, are more often admitted involuntarily, and are more often diagnosed as schizophrenic than non-aggressive patients. It should nevertheless be noted that some studies have failed to find a relationship between diagnosis and aggression (e.g., Kay, Wolkenfield & Murril 1988; Lee, Villar & Juthani 1989). Palmstierna, Lassenius & Wistedt (1989) found no relationship between aggressive behaviour and diagnostic category in a sample of acute involuntarily admitted patients (also see Palmstierna & Wistedt 1989). The stage of the illness may be a more important predictor of violence. The acute phase seems to be the most likely period for aggression (Davis 1991).

Shah, Fineberg & James (1991) also reviewed what is known about the temporospatial characteristics (i.e. location and time) of aggressive incidents. Aggression appeared to be common in the day-rooms and dining-rooms of the ward. In addition, aggressive incidents seem to occur more often in the morning and on Mondays and less often during the night and at the weekend.

Little is known about the frequency and the temporospatial patterns of aggressive incidents on psychiatric wards in the Netherlands. Accordingly, the present study had two goals. Firstly, the study evaluated the reliability and usefulness of the Staff Observation Aggression Scale (SOAS) developed by Palmstierna and Wistedt as an instrument for measuring aggressive behaviour in the clinical situation. For a detailed description of the SOAS, see Palmstierna & Wistedt (1987). These researchers have carried out various studies in which aggressive behaviour was recorded using the SOAS (Palmstierna & Wistedt 1987; Nillson, Palmstierna & Wistedt 1988; Palmstierna, Lassenius & Wistedt 1989; Palmstierna & Wistedt 1989; Palmstierna, Huitfeld & Wistedt 1991; Palmstierna & Wistedt 1995). The second goal of the present study was to examine the frequency of aggressive incidents and the circumstances under which they occur.

Methods

Subjects

The study was carried out on a closed acute admissions ward at the Welterhof
Psychiatric Centre in the Netherlands. This ward contains 20 beds. A substantial number of patients are hospitalized involuntarily on this ward (about one third in 1993). Over the total period during which this study was conducted, 123 different patients had been on the ward.

Procedure

During the period from 14-6-93 to 28-11-93 (24 weeks), the number and nature of aggressive incidents occurring on the ward were recorded using the SOAS. In order to make the data complete, auto-aggressive behaviour was also recorded. The SOAS consists of 5 columns filled in by a staff member who witnesses an aggressive incident. The five columns are: the provocation which led to the aggressive event, the means used by the patient during the aggressive event, the target of the aggression, the consequences for victims and the measures taken to stop the aggression. Points can be allocated to the three central or "core" columns which are "the means used", "the target of the aggression" and "the consequence(s) for the victim(s) of the aggression". The sum of the scores of these 3 core columns reflects the overall severity of the incident, with the maximum score being 12 (Palmstierna & Wistedt 1987). A plan of the ward attached to each SOAS, on which staff members indicated the location of the aggressive incident. Each member of the team who witnessed an incident was asked to complete a SOAS. If more than one staff member saw an incident, members completed the SOAS independently. Multiple SOAS data of one incident were used to evaluate the inter-reporter reliability of the SOAS. To this end, the (Pearson) correlation between the scores of these forms and the kappa were computed.

In addition, the following data were analyzed:

- Number of aggressive incidents occurring on the ward and the circumstances surrounding them (e.g., place and time).
- Measures taken to prevent further escalation.
- Variables that distinguish aggressive patients from non-aggressive control patients.

More specifically, age, gender, diagnosis, and legal status at the time of admission and the number of admissions were studied.

Results

Frequency and severity of aggressive incidents

Over the 24 weeks during which the study was conducted, 164 different aggressive incidents were reported. This is an average of 6.8 incidents per week, or approximately one incident a day. Following the scoring system of Palmstierna & Wistedt (1987), the great majority of these incidents (122 or 74.4%) met the criteria for "mild" aggression, 39 (23.8%) met the criteria for "moderate" aggressive incidents and 3 (1.8%) met the criteria for "severe" incidents. Four (2.4%) of the 164 incidents were autoaggressive incidents. The 164 incidents were initiated by 31 different patients out of a total of 123 patients (25.2%) who has been on the ward during the period that the study was conducted.

SOAS: Inter-reporter reliability

There were 46 incidents for which at least two SOAS forms were completed by inde-
The provocation of the aggression

The likely cause or provocation of the aggression is recorded in the first column of the SOAS. In 71 out of the 164 incidents (43.3%), the provocation was not understood. In 54 cases (32.9%), the violence was provoked as a result of the patient being denied something (e.g., leaving the ward). In 22 cases (14.4%), the patient was provoked by other patients. Fifteen incidentes (9.1%) were due to other factors (i.e., staff asking patient to take medication and help with activities of daily life). For the remaining two incidents, antecedentes were not specified.

Means used by the patient

The means used by the patient during the aggressive incident are recorded in the second column of the SOAS. Of the 164 incidents, 43 (26.2%) were exclusively verbal aggressive events. In more than half of the incidents, namely 57.9%, the patient used hands or feet to hit or kick. In 26 cases (15.9%) objects such as chairs or glassware were used.

The target of the aggression

In the majority of the cases (102 or 62.2%), the aggression was directed at people (i.e., staff members, patients or people from outside the ward). Staff members were involved in 63 out of these 102 cases (61.8%). A minority of cases (35.4%) were directed exclusively against objects. In the remaining 4 cases (2.4%), it was not clear what the target of the aggression was.

Consequence(s) for the victim(s)

In the majority of the 164 incidents (69.5%), there were no physical consequences for victims or objects. In 32 cases (19.5%), objects were damaged or destroyed. In 18 cases (11.0%), the violence had physical consequences for the victims. In one case, a staff member needed somatic treatment.

Measures to stop aggression

Staff members seclud the patient (with or without restraint) in about half of the incidents (48.8%). This usually happened in the form of brief “time-outs”. In 36 cases (22.0%), the ward team was able to prevent further escalation by talking to the patient and in 25 aggressive incidents (15.2%) no measures had to be taken. In 12 cases (7.3%) the patient was calmly taken away from the place where the aggression had occurred. Finally, in 11 cases (6.7%) other measures were taken.

Place

Figure 1 shows the locations of the aggressive incidents. 21.3% of the aggressive incidents occurred in the day-rooms. Patients spend a great deal of their time in the day-rooms and considerable interaction between the patients takes place here. Indeed, around half of the aggressive incidents occurring in these rooms (48.6%) were
directed against other patients. 19.5% of the incidents took place in or near the staff office. Accordingly, aggression was often directed against staff members (53.1%). 24 incidents (14.6%) occurred near the locked outside door of the ward. Here, the aggression was usually directed against objects (75.0%), commonly the locked door. These incidents are therefore less severe: the mean total SOAS score of these incidents was 3.83 (s.d. = 0.87), compared with 4.73 (s.d. = 1.52) for the other incidents [t(162) = 4.09, p < 0.01, two-tailed]. 7.3% of the aggressive incidents took place in patients’ bed-rooms. The mean total SOAS score for these incidents was higher than that for the other incidents [mean being 5.42, s.d. = 2.43 and 4.53, s.d. = 1.37 respectively; t(162) = 2.01, p < 0.05, two-tailed]. In 10 cases (6.1%) the aggression took place outside the ward and in 7 cases the location was not specified.

**Temporal distribution**

Figure 2 depicts the time distribution of the incidents. Forty-two out of the 164 incidents (25.6%) took place between noon and 3.00 p.m. [Chi² (7) = 76.4, p < 0.01]. The highest frequency of incidents (10.4%) was found between 2.00 p.m. and 3.00 p.m. [Chi² (23) = 101.5, p < 0.01]. There were also significant differences between the days of the week in terms of the frequency of aggressive incidents. Most incidents, namely 37 (22.6%) took place on Mondays and the fewest incidents took place on Fridays, namely 13 (7.9%) [Chi² (6) = 16.0, p < 0.05].

**Characteristics of aggressive patients**

The subsample of 31 patients who were responsible for aggressive incidents was
compared with a control sample of 31 patients selected at random. Control subjects had been on the ward for at least two weeks during the period under study and had not been involved in aggressive incidents. The aggressive subsample was significantly younger than the non-aggressive sample, mean ages being 31.6 years (s.d.= 9.6) and 38.2 years (s.d.= 10.2) respectively [t(60)= 2.65, p < 0.05, two-tailed]. In spite of the fact that aggressive patients were younger, they had a higher rate of re-admission [t(60)= 2.62, p 0.05, two-tailed]. Aggressive patients were admitted on average 5.5 times, compared with 3.1 times for non-aggressive patients. In addition, aggressive patients were more often involuntarily admitted than non-aggressive control patients [Chi-square (1) = 4.17, p < 0.05].

The gender distribution of the two groups was identical; in both groups there were 21 men and 10 women [Chi-square (1)= 0.0, p= 1.0].

For statistical analysis, the main discharge diagnoses of the patients were divided into a limited number of categories. These categories were: schizophrenia, other psychotic disorders (including psychosis NOS, brief reactive psychosis, delusional disorder, and schizoaffective disorder), bipolar disorders, depressive disorders (including major depressions as well as depressions NOS and dysthymia), personality disorders and other diagnoses. The aggressive group did not differ significantly from the non-aggressive group with regard to the fre-
quency of the various diagnoses [Chi-square (5) = 5.75, p = 0.33].

Discussion

The main results of the present study can be summarized as follows.

1. The interreporter reliability (in terms of Pearson correlation and kappa) of the Dutch version of the SOAS appeared to be fair-to-good. Keeping in mind that the SOAS takes little time to complete, it thus seems to provide valuable information.

2. While the overall frequency of aggressive incidents was found to be high, only a small number met the criteria for “severe” incidents. The distribution of incidents in terms of “mild”, “moderate” and “severe” cases is in fact consistent with the initial findings of Palmstierna & Wistedt (1987). These authors reported frequencies of 82.7% (mild), 17.3% (moderate) and 0% (severe). In a later study by Palmstierna, Huitfeldt & Wistedt (1991) conducted at an acute psychiatric intensive care unit, 119 incidents were reported during a 25-week period. 45.4% of these incidents were rated as moderate or severe. The 119 incidents in this study were attributed to 47 of 163 patients (28.8%) who had been on the ward during the 25 weeks, compared with 31 out of 123 pacientes (25.2%) during the 24 weeks of the present study. These results show that aggression on acute psychiatric wards is a prevalent problem, but is also limited to a minority of patients.

3. In accordance with the moderate severity of the incidents monitored in this study, most incidents, 146 (89%), did not result in physical harm or injuries to people. Eleven percent of the incidents did, however, have physical consequences for the victims. It is clear that aggression in psychiatric patients on a closed ward poses a serious threat to the safety of both staff members and patients. Moreover, verbal aggression and the constant threat of physical violence will also constitute a serious psychological strain for the staff. Serious verbal threats were made during the present study. For example, one patient threatened to kill a staff member on a number of occasions. Since these verbal threats can also be recorded with the SOAS, the data gathered with this instrument also provide insight into the pressure under which the nursing team has to work.

4. As to the location of the incidents, aggression frequently took place in the dayrooms, in or near the staff office, and in front of the locked exit door of the ward. Patients spend a great deal of their time in the day-rooms, and considerable interaction between the patients take place here. Interaction between patient and staff members is common in or near staff office. It is possible that communication problems between patients and between patients and staff members are an important cause of agitation and aggression. A recent study by Whittington & Wykes (1986) shows that 86% of aggressive incidents are preceded by interaction between staff members and patients. The concentration of aggressive incidents near the locked exit door raises the question of whether providing the patient with more information on the locked door and its function in treatment might result in a reduction in aggression.

5. The time of the aggressive incidents was not evenly distributed over the hours of the day. There was an increase in frequency between noon and 3.00 p.m. with a peak between 2.00 p.m. and 3.00 p.m., This pattern might be related to the working schedu-
le: between 2.00 p.m. and 3.00 p.m., the staff is typically working in the staff office, making notes and completing patient files before a new shift starts at 3.00 pm. Supervision on the ward is minimal at this time. The staff members are visible to the patients through the staff-office window, but generally do not have time to speak to the patients. The collective withdrawal of the staff (accompanied by writing about and discussion of patients) may perhaps lead to aggression by inducing suspicion or anxiety in the patients. For patients who are easily agitated, the relative inaccessibility of the nursing staff is perhaps an incentive to aggression. The question arises whether a different procedure of shift changes (e.g., where at least one member of the staff remains on the ward) might lead to a reduction in aggression.

In agreement with earlier studies (see Shah, Fineberg & James), aggressive incidents commonly took place on Mondays (22.6%). It is possible that the start of demanding therapies after the weekend leads to aggressive behaviour.

6. While aggressive patients were younger, were more often admitted involuntarily and more often had a history of readmissions than their non-aggressive counterparts, the aggressive patients in this study were not characterized by a certain psychopathological profile. That is to say, there were no significant differences between aggressive and non-aggressive subjects with regard to diagnosis. Because of the sample size a more fine-grained analysis into specific types of psychiatric disorders such as the paranoid type of schizophrenia and schizoaffective disorder (see Grossman, Haywood, Cavanaugh et al. 1995) and borderline and antisocial personality disorder (see Tardif 1992) was not conducted in the present study. Clearly, the relationship between diagnosis and SOAS data warrants further study.

To summarize, the present study described the temporospatial patterns as well as the characteristics of aggressive incidents on a closed admissions ward. Statistics such as those presented in the present study are not only important in their own right, but also provide a background against which effects of interventions aimed at reducing aggressive behaviour can be evaluated.

References


PALMSTIERNA, T., LASSENIUS, R., WISTEDT, B. Evaluation of the brief psychopathological rating scale in relation to aggressive behavior by acute involuntarily


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