

onstrate that aggression poses a serious threat to the safety and well-being of psychiatric patients and their caregivers. In particular, psychiatric nurses are at risk of being confronted with aggression [Nijman et al., 1997a; Shah et al., 1991; Tamm et al., 1996]. Not only does patient violence have physical and psychological consequences, it also has considerable financial implications [Cuffel, 1997; Hunter and Carmel, 1992; Hyde and Harrower-Wilson, 1995]. For these reasons, the measurement and prevention of aggression should have a high priority in psychiatric hospitals.

The Staff Observation Aggression Scale (SOAS) is an instrument for monitoring aggressive incidents in psychiatric wards. It was first presented by Palmstierna and Wistedt [1987]. The interobserver reliability of the scale was found to be satisfactory [Palmstierna and Wistedt, 1987]. In a later study [Nijman et al., 1997a], staff members were asked to record aggression on the SOAS independently. The correlation of the SOAS total scores between observers was 0.87 and the kappa was 0.61, indicating fair to good agreement [Lambert and Hill, 1994]. Furthermore, the scale is quick to complete and there is no need for staff to be trained to use it. In their review on violence among psychiatric patients, Shah et al [1991] describe the SOAS as an instrument "of particular interest . . . with evidence of good reliability and validity" (p 307).

Since its introduction, the SOAS has been used as a measurement tool in a number of descriptive studies [Chuang et al., 1996; Nijman et al., 1997a; Nilsson et al., 1988; Palmstierna and Wistedt, 1989; Palmstierna et al., 1989] and in studies on the effects of preventive strategies on psychiatric wards [Nijman et al., 1997b; Omérov et al., 1995; Palmstierna and Wistedt, 1995; Palmstierna et al., 1991].

The SOAS can be used to rate both the nature and the severity of aggressive incidents. However, no research on the validity of the severity scoring system of the SOAS has been carried out. The clinical significance of a good severity index of aggression seems evident. Although several studies have collected information about the prevalence of aggressive behavior among psychiatric inpatients [e.g., Tamm et al., 1996], few attempts have been made to evaluate these prevalence rates in terms of severity. A severe aggressive incident resulting in injury to staff members has greater impact than an incident in which only verbal threats are used or material is damaged. Therefore, a valid severity scoring system for incidents is needed to assess the level of aggressiveness on a psychiatric ward. Furthermore, such a severity scoring system may be helpful in evaluating interventions. The effects of certain interventions may be expressed not only in a decrease in the aggression frequency but also in a decline in the average severity of the incidents.

In the present study, two questions were addressed. First, are the SOAS severity scores that Palmstierna and Wistedt proposed in 1987 valid? And second, can the SOAS severity scoring system be improved?

METHOD

Description of Sample

The study was conducted on six wards of three psychiatric hospitals. The patients admitted to these wards were adults with severe psychiatric disorders (e.g., schizophrenia or severe mood disorders). The wards were closed to protect the patients from harming themselves or their environment. Four of the wards were admissions wards, in which crisis intervention took place and a clinical diagnosis was reached. The other two wards were wards to which patients were referred who needed additional treatment. Table I lists the observation periods and the number of beds in the six wards that participated in the present study.

TABLE I. Institution, Observation Period, and Number of Incidents (Per Bed Per Year) on the Wards Participating in the Study

Psychiatric hospital	Ward	Period	Number of beds	<i>n</i> (incidents)	Incidents per bed per year
Psychiatric Centre Welterhof, Heerleen, The Netherlands	Closed acute admissions ward	Three months (1/7/96–1/10/96)	20 beds	112	22.4
	Closed ward for further treatment	12 months (1/1/96–1/1/97)	20 beds	135	6.75
Psychiatric Hospital Valerius, Amsterdam, The Netherlands	Closed acute admissions ward	24 weeks (8/7/96–23/12/96)	15 beds	138	19.9
	(Semi) closed ward for further treatment	24 weeks (8/7/96–23/12/96)	22 beds (12 in the open and 10 in the locked part of the ward)	66	6.5
Psychiatric Hospital Broeders Alexlianen, Tienen, Belgium	Closed observation admissions ward	10.5 months (1/2/96–16/12/96)	14 beds	171	13.9
	Closed observation admissions ward	10.5 months (1/2/96–16/12/96)	13 beds	55	4.8
<i>N</i> (total number of incidents)				677	

The Original SOAS

The SOAS was completed each time a staff member witnessed aggressive behavior by a patient. The SOAS consisted of five columns. In column 1, the provocation that led to the aggressive incident was recorded. For example, if aggression occurred after a patient's request had been turned down, the provocation "patient being denied something" was marked in column 1. In column 2, the means used by the patient during the incident were registered. These means could vary from verbal aggression to use of dangerous objects such as knives. In column 3, the target of the aggression was scored. The aggression could be aimed at "nothing or nobody," "objects," "patients," "staff members," or "other persons." In column 4, the consequences for victims were recorded, ranging from no consequences to physical consequences that needed treatment by a physician. In column 5, the measures taken to stop or control aggressive behavior were described, e.g., talking to the patient or holding the patient with force.

Palmstierna and Wistedt [1987] developed a scoring system for rating the overall severity of an aggressive incident. Severity points ranging from 0 (no aggression) to 4 (extremely severe aggression) were given to the columns "means used by the patient" (column 2), "target of aggression" (column 3), and "consequence(s) for victim(s)" (column 4). The overall severity of aggressive incidents was derived by summing the scores of these columns. The maximum severity score of the original SOAS was 12.

Adjustments to the SOAS

On the basis of previous work with the Dutch version of the SOAS [Nijman et al., 1997a, 1997b; van Rixtel et al., 1997], a number of adjustments were made to the format of the SOAS. The most important change was the addition of an option to record auto-aggressive behavior. The SOAS is an easy-to-use instrument that monitors a wide range of dangerous behaviors of patients, and auto-aggressive acts such as self-mutilation and suicide attempts are certainly relevant in that context. In the original version of the SOAS, this type of aggressive behavior was not considered because it might have complicated the initial psychometric testing of the instrument [Palmstierna, 1992]. Auto-aggression was introduced in the SOAS by dividing "patient" in column 3 into "patient self" and "other patients" (see Appendix 1) as possible targets of the aggression. In this way, auto-aggression was defined as all aggressive acts aimed at the patient him/herself.

Apart from the addition of an auto-aggression category, a definition of aggression was given in the instruction printed on each SOAS form (see Appendix 1). The definition used was given by Morrison [1990], describing aggression as "any verbal, nonverbal or physical behavior that was threatening [to self, others, or property], or physical behavior that actually did harm (to self, others, or property)" (p 67). Note that this definition is in accordance with the original purpose of the SOAS but that it also includes auto-aggressive behavior. Finally, "seclusion" and "physical restraints" were added to column 5 as possible measures for stopping aggression.

Procedure

After each aggressive incident, a staff member witnessing the aggression completed the SOAS. Following this, the severity of the incident was also judged on a 100-mm Visual Analogue Scale (VAS). On this VAS, the staff member marked the severity of the aggression on a continuous 100-mm scale ranging from "not severe at all" (at the 0-

end of the VAS) to “extremely severe” (at the 100-end of the VAS). The VAS is particularly suitable for the assessment of subjective phenomena [Gift, 1989]. An example of the VAS is shown in Appendix 2.

As the staff members were unaware of how the (original) SOAS severity scores were calculated (the investigators derived the score), no carryover effects from SOAS severity to VAS severity were expected. Staff members only assessed the severity of aggression on the VAS. Sex and experience (i.e., number of years working in mental health services) were included as covariates. This was done because it seemed plausible that men or highly experienced staff members might have a different perception of aggression severity than women or less experienced staff members.

Statistical Analyses

To examine whether the scoring system of the original SOAS was valid, a Pearson product-moment correlation was calculated between the original SOAS severity scores and the VAS severity ratings. Auto-aggressive incidents were omitted from the analysis as they were not recorded in the original SOAS.

To investigate whether the severity scoring system could be improved, the VAS severity ratings of each SOAS column were studied. In other words, it was investigated which answering options were associated with higher VAS severity scores. The SOAS severity options that were linked to higher VAS scores were given additional severity points, starting from zero in each column. Following this procedure, the five newly obtained SOAS column scores were entered in a multiple regression analysis (after controlling for the observer’s sex and years of working experience) to determine how the VAS severity scores could best be approximated with the new SOAS column scores. In this regression analysis, VAS severity score was the dependent variable, and the five new SOAS column scores were entered together as predictor variables. The relative impact each of the five SOAS column scores should have in predicting VAS severity was derived from the (partial) correlations between the five SOAS column scores and the VAS severity scores.

RESULTS

Incidence of Aggressive Episodes

Table I lists the observation periods, number of beds, and aggression-frequencies for the six wards. In total, 677 SOAS forms were completed. Note that the reported frequencies for the wards were quite similar. On the two closed admissions wards, 22.4 and 19.9 incidents per bed per year were recorded (for Heerlen and Amsterdam, respectively). On the two closed wards for further treatment, 6.8 and 6.5 incidents per bed per year were found. For the two closed observation admissions wards in Belgium, the numbers were 13.9 and 4.8 incidents per bed per year. The difference between these two observation wards has to do with differences in admission criteria; patients with a history of aggression are preferably admitted to the ward with the higher aggression frequency.

Validity of the Original SOAS Severity Scores

The SOAS or VAS severity scores were missing for 30 incidents. These incidents were excluded from the statistical analysis. In 91 (14.1%) of the remaining 647 inci-

dents, auto-aggressive acts were indicated. The 556 outwardly directed aggressive incidents had a mean SOAS severity score of 4.5 (SD = 1.3) and a mean VAS severity score of 40.2 (SD = 27.0). About two-thirds (65.2%) of the forms were completed by male and one-third (34.8%) by female staff members. No difference was found between the VAS severity estimates given by male staff members and female staff members ($t[627] < 1.0$). On average, staff members had 11.1 years of working experience (SD = 9.0). The number of years working in the field of mental health was found to be negatively correlated to the VAS severity scores ($r = -0.20, P < .01$). In other words, the more experienced a staff member was, the less severe (or threatening) a violent incident was perceived by him or her.

The Pearson product-moment correlation (while controlling for sex and years of working experience) between the original SOAS severity scores and the VAS severity scores was 0.38 ($P < .01$). Inspection of the scatterplot indicated that the relationship between SOAS and VAS severity scores was linear.

New Severity Scoring System

All five SOAS columns were taken into account in the construction of a revised SOAS scoring system. Below, the proposed changes in severity ratings are described for each of the SOAS columns. For each column, the corresponding mean VAS severity scores (controlled for sex and experience of the rater) and the newly assigned SOAS severity scores are summarized in Table II.

Column 1: Provocation of the aggressive incident. In column 1 of the SOAS, the circumstances that provoked the aggressive behavior were recorded. As can be seen in Table II, the severity scores were high in those cases in which the provocation of the incident was unclear or not understood by the staff and even higher in cases in which the aggression had been triggered by staff requiring the patient to take medication. Following the given VAS severity scores, an additional severity point was allocated to “no understandable provocation” and 2 severity points were allocated to “staff requiring patient to take medication.” No severity points were given to other provocations recorded in column 1.

Column 2: Means used by the patient in the aggressive incident. The means used to act out the aggressive behavior were evaluated in column 2 of the SOAS. The VAS data showed that verbal aggression was rated as the least severe form of aggression, and thus no severity points were assigned. The mean VAS severity score of incidents in which (ordinary) objects were used to act out the aggression was found only slightly raised compared with the verbal aggressive acts. Aggressive incidents in which ordinary objects were thrown or smashed were judged to be significantly less severe than incidents in which parts of the body were used in the assault (e.g., feet to kick, hands to punch, or teeth to bite). The VAS severity scores were found to be especially high in cases in which patients used weapons (e.g., knives) or other dangerous objects or made attempts to strangle someone. Column 2 was graded as follows: aggression in which ordinary objects were used were given 1 point, incidents in which parts of the body were used were rated with 2 severity points, and incidents in which weapons were used or strangulation attempts were made were given 3 points in the SOAS-R (see Table II).

Column 3: Target of aggression. In column 3, the target of the aggression was scored. In accordance with the original scoring system, no points were given when the

TABLE II. Mean VAS Scores, Standard Deviations (After Controlling for the Observer’s Sex and Years of Working Experience), and SOAS Severity Points Assigned

SOAS column	Categories	<i>n</i>	VAS* severity score	SD*	SOAS* points assigned
1. Provocation	Other provocations	361	37.0	25.8	0
	No understandable provocation	166	44.7	28.4	1
	Staff requiring patient to take medication	29	53.5	27.5	2
2. Means used by patient	Verbal aggression	197	33.3	26.3	0
	Ordinary objects	76	35.0	23.5	1
	Parts of the body	264	45.6	26.4	2
	Dangerous objects or methods	19	56.4	33.7	3
3. Target of aggression	Nothing / nobody	18	19.2	16.2	0
	Objects	106	34.3	24.1	1
	Other patient(s)	90	35.5	25.6	2
	Staff member(s)	325	43.8	27.6	3
	Patient self	91	45.5	24.3	3
	Other persons (people from outside the ward)	17	54.2	27.9	4
4. Consequence(s) for victim(s)	No	241	24.7	18.5	0
	Objects damaged	41	35.0	24.1	1
	Felt threatened	186	49.6	25.2	2
	Physical consequences (pain, injury, need for treatment)	88	65.0	24.6	3
5. Measure(s) to stop aggression	None / talk with patient / calmly brought away	279	31.1	23.3	0
	Peroral or parenteral medication / other measures	54	42.3	29.8	1
	Held with force / seclusion / physical restraints	223	51.0	26.6	2

*VAS = visual analogue scale; SOAS = Staff Observation Aggression Scale; SD = standard deviation.

aggression was not targeted at anything or anybody. In cases in which the aggression was aimed at objects, the mean VAS severity score was higher than the score for aggression targeted at nothing or nobody. Accordingly, aggression targeted at objects was assigned 1 additional severity point. Aggression directed at fellow patients was given slightly higher VAS severity scores than aggression directed at objects. In cases in which staff members were the object of aggression, the VAS severity scores were elevated even more than when the aggression was directed against fellow patients. Aggression aimed at people other than staff members and fellow patients (i.e., people from outside the ward) was judged as the most severe form of aggression (see Table II). The SOAS severity points were given as follows: aggression targeted at fellow patients was graded with 2 points, aggression against staff with 3 points, and aggression aimed at people from outside the ward with 4 severity points.

Column 4: Consequences of the aggression. In column 4, the effects of the aggressive behavior on the environment were recorded. Incidents that had neither physical nor psychological consequences were given no severity points. In cases in which objects were damaged, 1 severity point was given. Incidents that had psychological consequences, evaluated with the category “felt threatened” in the fourth column, were assigned 2 severity points. Three severity points were given to all incidents that had physical consequences for the victim.

Column 5: Measure(s) to stop aggression. In column 5, measures taken to prevent further escalation of aggression were registered. As can be seen in Table II, the lowest severity scores (rated with no points) were given when the aggression could be controlled without taking any special measure or simply by talking to the patient (nonrestrictive measures). The administration of psychotropics [e.g., neuroleptics and benzodiazepines; see Tardiff, 1997] was related to higher VAS scores and was assigned an additional severity point. In cases in which the patient had to be restrained or had to be secluded to protect the patients and staff, the VAS severity was raised even more; 2 severity points were assigned to the use of these restrictive measures.

Auto-Aggressive Incidents

The mean VAS severity score for the 91 auto-aggressive incidents was found to be similar to that for the incidents directed at staff (see Table II). Therefore, in the third column, 3 severity points were given to cases of auto-aggression. Although the limited sample size did not allow for the construction of a separate scoring system for auto-aggressive acts, the inclusion of this type of behavior in the SOAS-R did shed light on the circumstances surrounding such acts. For instance, compared with the aggression directed outwardly, the auto-aggressive incidents were more likely to occur when ward activity was low. More than half of the auto-aggressive incidents (57.8%) occurred in the evening from 6 pm to 12 pm compared with 27.1% of the other incidents ($\chi^2 [3] = 33.4, P < .01$), and although not significant, there was a trend for them to occur more frequently at the weekend ($\chi^2 [1] = 3.6, P = .06$; percentages being 31.9% vs. 22.9%, respectively). The provocation of the auto-aggressive incidents was more often unclear. This was the case in 56.0% of the auto-aggressive incidents vs. 29.9% of the other aggressive incidents ($\chi^2 [1] = 24.1, P < .01$). Furthermore, the use of dangerous methods was more common in auto-aggression (44.0%) compared with 3.4% in other incidents ($\chi^2 [1] = 155.1, P < .01$). In line with this, the consequences of auto-aggression were severe. In 59.3%, the consequences of auto-aggressive incidents were physical in nature, and a physician was needed to treat the patient in almost a quarter of the incidents (23.1%). For the outwardly directed aggression, the percentages were 15.8% ($\chi^2 [1] = 86.4, P < .01$) and 0.5% ($\chi^2 [1] = 111.2, P < .01$), respectively.

Results of the New Scoring System

After the assignment of the new severity scores to each of the five SOAS columns, the column severity scores were entered in a multiple regression analysis (after controlling for the observer's sex and years of working experience). The partial correlations resulting from this analysis reflected the relative weights that the five-column scores should have in the calculation of the overall SOAS severity. Table III shows the partial correlations and significances for the five SOAS columns.

As can be seen in Table III, column 4 ("consequence[s] for victim[s]") and column 5 ("measure[s] taken to stop aggression") were most strongly connected to the VAS severity scores, their partial correlations being 0.47 and 0.24, respectively. To reflect their relatively greater contribution, it was decided to multiply the scores of these two columns by factors of 3 and 2, respectively. The revised SOAS and the resulting new severity scores appear in Appendix 1.

TABLE III. Results of the Regression Analysis Concerning the 556 Outwardly Directed Incidents (After Controlling for the Observer's Sex and Years of Working Experience)

SOAS column	Partial <i>r</i>	Partial <i>r</i> ² change	<i>P</i>
4. The consequences for victims	0.47	0.221	< .01
5. Measures to stop aggression	0.24	0.058	< .01
3. Target of aggression	0.15	0.023	< .01
1. Provocation	0.13	0.017	< .01
2. Means used by the patient	0.08	0.006	.07

The total severity score of the revised SOAS, termed SOAS-R, is calculated by summing the severity scores of the five SOAS columns. The total severity score of the SOAS-R can vary from 0 (least severe form of aggression) to 22 (most severe form of aggression). In the present study, the mean revised severity score for the 556 outwardly directed aggressive incidents was 9.4 (SD = 5.1). The correlation between the revised SOAS severity scores and the severity estimates of the staff given on the VAS was 0.60. Residual analysis revealed two outliers with a standardized residual greater than three. After removal of these two cases, the correlation between the new SOAS severity scores and the VAS severity scores rose to 0.62.

DISCUSSION

A correlation of 0.38 between the severity ratings of the staff and the original SOAS total scores was found. This suggests that there is a moderate relationship between the judgments made by the staff members about the severity of aggression and the original SOAS total scores proposed by Palmstierna and Wistedt [1987]. One could argue that the significant correlation between SOAS severity and VAS severity is a spurious by-product of the fact that the same observers completed both scales. Although such a carryover effect can not be ruled out, this interpretation seems unlikely because the SOAS draws on factual information about aggressive incidents (e.g., means used in the aggression, aim of the aggression) and does not require the observer to assess the severity of the incident. As a matter of fact, the researchers derived the severity post hoc from the factual SOAS categories.

The severity scoring system of the instrument was refined by comparing the VAS severity estimates with the SOAS scores. These refined severity scores, combined with the changes made in the contents of the SOAS (e.g., inclusion of auto-aggression), led to the proposal of a revised version of the SOAS. In this revised version, called the SOAS-R, severity scores were assigned to all five columns. The total severity score of the SOAS-R ranged from 0 to 22 points. A correlation of 0.60 for outwardly directed aggression was found between the VAS and the SOAS-R severity scores. After the removal of two outliers, a correlation of 0.62 was found.

When evaluating the strength of the association between the SOAS-R and the VAS severity scores, one should keep in mind that the SOASs and the VASs were completed by a considerable number of staff members from six closed wards in three different psychiatric hospitals. Since aggression severity is a subjective measure, interobserver variation will have played a role. However, as there is no objective index of aggression severity, the judgment of professionals who work with aggressive patients on a daily

basis was used as a starting point for validating and refining the severity scoring system of the SOAS. To our knowledge, no cross validation of severity ratings of the available descriptive aggression scales (e.g., the Overt Aggression Scale [OAS; Yudofsky et al., 1986], the modified version of this instrument [MOAS; Kay et al., 1988], the Violence Scale [Morrison, 1993], and the SOAS) with the clinical judgment of severity of aggressive incidents given by psychiatric professionals has been reported.

Clearly, the validity of the proposed revised severity scoring system should be examined further in an independent sample. To further improve the validity of the SOAS severity scores, future studies should investigate the nature of verbal violence in more detail. A threat to stab someone would probably be perceived as more severe than a threat to push or kick someone. As is the case with physical aggression, the (announced) means used in the verbal aggression may play a role in the severity. Other instruments used for measuring aggression, such as the OAS [Yudofsky et al., 1986] and the Violence scale [Morrison, 1993], divide verbal aggression into severity categories. The perceived likelihood that the patient will carry out a threat will also modulate these severity ratings. The Violence Scale discriminates between threats for which the patient has a plan of action and threats for which no plan of action exists. Research on the validity of this sort of differentiation in terms of the severity of aggression perceived by the staff is also warranted.

Due to the low sample size, no separate scoring system for auto-aggressive incidents was developed. The new SOAS method for calculating severity should therefore be preferably applied to aggression that is directed outwardly. However, considering the severe somatic consequences of auto-aggressive incidents, we hope that the inclusion of auto-aggression in the SOAS-R will facilitate research into the origins of the different types of aggression. In this context, Hillbrand [1995] points out that "the relationship between self-destructiveness and interpersonal violence has received little scientific scrutiny. . . , there has been limited interest in elucidating whether aggression against self and aggression against others overlap in prevalence, etiology, or both" (p 668). The fact that the provocation of auto-aggression was often not understood by the staff further illustrates the need for research into the etiology of self-destructive behavior. The lack of clarity about the antecedents of auto-aggression makes it hard to predict and thus to prevent these incidents. The present study did reveal, however, that auto-aggressive incidents frequently took place when ward activity was low (i.e., in the evening and weekends), a situation that possibly gave anxiety and tension more opportunity to build up. It is to be hoped that with a larger sample size a specific scoring system for self-destructive acts can be developed.

In conclusion, the SOAS-R provides researchers with a instrument that not only reliably assesses the nature of aggressive incidents [Nijman et al., 1997a; Palmstierna and Wistedt, 1987] but can also be used to give a valid approximation of the severity. Further development of the severity scoring system would allow more detailed epidemiological information to be obtained about the severity of incidents on psychiatric wards. The importance of this endeavour lies in the fact that a number of preventive strategies in psychiatric wards can be initiated only at the moment when aggressive escalations are already taking place [see Nijman et al., 1997b]. These kinds of interventions may not reduce the aggression frequency but the effects may lead to a decline in the average severity of incidents.

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APPENDIX 1
The Staff Observation Aggression Scale–Revised (SOAS-R)

Initials of the patient: _____		Registration no: _____		Ward: _____					
Incident no.: _____		Date: _____		Time (hours and minutes): _____					
<p>This form is to be completed by staff members witnessing aggressive behavior of a patient whereby aggression is defined as: any verbal, nonverbal, or physical behavior that was threatening (to self, others or property), or physical behavior that actually did harm (to self, others, or property) (in: Morrison, 1990). In the case of an aggressive incident please note the initials and registration no. of the patient, date and the time on which the incident started, and put at least one mark in each column.</p>									
1. Provocation		2. Means used by the patient		3. Target of aggression		4. Consequence(s) for victim(s)		5. Measure(s) to stop aggression	
No understandable provocation	1	verbal aggression	0	nothing / nobody	0	no	0	none	0
Provoked by:		Ordinary objects:		object(s)	1	Objects:		talk to patient	0
other patient(s)	0	chair(s)	1	other patient(s)	2	damaged, not replaced	4	calmly brought away	0
help with ADL	0	glass(ware)	1	patient self	3	damaged, replaced	4	peroral medication	2
patient being denied something	0	other, namely:	1	staff member(s)	3	persons:		parenteral medication	2
staff requiring patient to take medication	2	parts of the body:		other person(s)	4	felt threatened	6	held with force	4
other provocations:	0	hand (hitting, punching etc)	2			pain < 10 min	9	seclusion/isolation (locked door)	4
.....		foot (kicking)	2			pain > 10 min	9	physical restraints	4
.....		teeth (biting)	2			visible injury	9	other measures:	2
		other, namely:	2			need for treatment	9	
		Dangerous objects or methods:				need for treatment by a physician	9	
		knife	3						
		strangulation	3						
		other, namely:	3						

APPENDIX 2
The Visual Analogue Scale (VAS)

This aggressive incident was:

not severe at all extremely severe