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Psychiatric nurses' experiences with inpatient aggression

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quantify frequency and severity of aggressive incidents are needed [Bech, 1994; Bowers, 1999].

Instruments for measuring aggressive behavior of psychiatric patients can be roughly divided into self-rating aggression scales and observer aggression scales [Bech, 1994]. The Aggression Questionnaire of Buss and Perry [1992] is an example of a self-rating instrument. Referring to self-rating aggression scales in general, Bjørkly [1995] noted that “(..) major problems in obtaining self-report measures from psychotic patients complicates this approach to prediction research” (p. 493). On a related note, Yudofsky et al. [1986] suggested “many patients are not angry between aggressive episodes, and do not reliably recall or admit to past violent events” (p. 35).

For these and other similar reasons, many studies on the prevalence and prevention of inpatient aggression have relied on information provided by others, usually (nursing) staff members [Nijman, 1999]. Examples of staff observation aggression scales are the Overt Aggression Scale [OAS; see Silver and Yudofsky, 1991; Yudofsky et al., 1986] and the Modified version of this instrument [MOAS; Kay et al., 1988], the Staff Observation Aggression Scale [SOAS; Palmstierna and Wistedt, 1987] and its revised version [SOAS-R; Nijman et al., 1999], the Report Form for Aggressive Episodes [REFA; Bjørkly, 1996], and the recently developed Attempted and Actual Assault Scale [Attacks; Bowers et al., 2002].

Depending on the instrument(s) used, and the type and location of wards investigated, the reported annual aggression frequencies per psychiatric patient vary considerably across studies [for a review see Nijman, 1999, p. 16–32]. Using the SOAS, for instance, Palmstierna and colleagues found about 13 incidents per patient per year on a Swedish acute admission ward [see Palmstierna and Wistedt, 1995; Palmstierna et al., 1991], whereas in the Netherlands about 20 incidents per admission bed per year were found on highly similar wards [e.g., Nijman et al., 1997, 1999]. About 10 percent of SOAS-reports concern incidents that have physical consequences (e.g., pain, bruises) for victims. In particular, involuntarily admitted psychiatric patients appear to have a high likelihood of behaving aggressively during psychiatric hospitalization [e.g., Nijman et al., 1997]. Since most of the aforementioned staff observation scales concern ‘incident-based’ measurements (i.e., they are used to record discrete episodes of aggressive behavior), they need to be used for prolonged periods of time to obtain a reliable picture of the prevalence of aggressive behavior on a psychiatric ward. To be able to gain insight into staff members’ day-to-day experiences with aggression more quickly, Oud proposed a 15-item questionnaire [2001], on which staff members can rate which forms of aggression they have experienced themselves (in cases of interpersonal conflict behavior), or witnessed (in cases of self-harming or property-destroying behavior) during the last year. Since this rapid and rather easy method is likely to produce estimates – rather than exact aggression frequencies – it was decided to name the instrument “*Perceptions Of Prevalence of Aggression Scale*” (POPAS), and it is to completely anonymous. A sixteenth item was added to the POPAS, in which respondents were asked to disclose the number of days they missed from work in relation to workplace violence. In this way, POPAS assessments may be helpful in gathering this rather delicate, but essential, management information, in a short period of time.

In the present study, the internal consistency of this newly developed scale was investigated, and psychiatric nurses’ experiences with aggression explored. Apart from that, the associations between a number of characteristics of the respondents (i.e., gender, age, education, and type of ward), and experiences with aggression were also investigated in an exploratory manner. Some expectations, however, existed about potential associations

beforehand. More specifically, it was assumed that: 1) female and young staff members might experience more sexual harassment during their work; 2) qualified nurses, and nurses who had followed Control and Restraint (C&R) trainings might have a lower chance of experiencing (severe) aggression, as they are supposed to be more skilled at preventing or dealing with aggression [e.g., Carmel and Hunter, 1990; Infantino and Musingo, 1985; Spokes et al., 2002; but also see Rixtel et al., 1997]; and 3) staff members working exclusively with involuntarily admitted patients might experience more aggression, since aggression seems to be more prevalent in involuntarily hospitalized samples [e.g., Nijman et al., 1997].

METHOD

Sample Characteristics

The POPAS was sent to all nurses working at one of the various psychiatric wards in four hospitals in the East End of London. These included 12 acute wards, two psychiatric intensive care units, two long-term rehabilitation wards, three wards for the elderly mentally ill, and five forensic wards at a medium security level. The area served by these four hospitals covered a population of approximately 500,000 people. A total of 395 forms were sent out, and 154 were returned (39 percent).

The majority of the 154 respondents were full time psychiatric nurses (94 percent). Most worked at general acute psychiatric admissions wards (62 percent). Such wards conduct crisis intervention and diagnostic evaluation for acutely disordered psychiatric patients. Patients who have to be admitted to such wards generally suffer from major psychiatric disorders, such as schizophrenia or severe mood disorders.

More than half of the respondents were women (58 percent) and the sample was rather young; 70 percent of the responding nurses were under 40, and 36 percent were younger than 30. The vast majority were qualified nurses (71 percent), and most respondents (73 percent), had already participated in (C&R) trainings in the past.

The POPAS

The POPAS rates experiences with 15 types of aggressive behavior, namely: 1) verbal aggression, 2) threatening verbal aggression, 3) humiliating aggressive behavior, 4) provocative aggressive behavior, 5) passive aggressive behavior, 6) threatening physical aggression, 7) destructive aggressive behavior, 8) mild physical violence, 9) severe physical violence, 10) mild violence against self, 11) severe violence against self, 12) suicide attempts, 13) completed suicides, 14) sexual intimidation/harassment, and 15) sexual assault/rape.

For each of these 15 forms of aggressive behavior surveyed, a definition and examples were provided on the POPAS. The descriptions were assembled by Oud [2001] on the basis of several recognised sources, OAS [Silver and Yudofsky, 1991; Yudofsky, 1986] and MOAS [Kay et al., 1988] in particular, and other information on definitions of aggression [e.g., Broers and de Lange, 1996; Nijman et al., 1999; Palmstierna and Wistedt, 1987; Pasmans, 1995; van de Werf and Staverman, 1999; Wistedt et al., 1990].

Staff members were asked to estimate how often they had experienced the various forms of aggression during their last year of work. These estimates had to be provided both on 5-point scales (ranging from “never” to “frequently”), and expressed in terms of the absolute number

of experiences with the behavior during the last year. In Table I, examples of POPAS-items are presented, along with an illustration of the answering options provided.

Apart from the 15 items about the prevalence of the various types of aggression, psychiatric nurses were asked to disclose the number of days they missed from work due to inpatient violence. A number of general characteristics of the responding staff members were also obtained on the POPAS forms. More specifically, the respondents were asked to provide age, gender, level of nursing education, and whether they had already participated in Control and Restraint (C&R) training courses. Also, the type of ward and the legal status of their patients (voluntarily or involuntarily admitted) were specified on the POPAS forms.

Statistical Analyses

To begin with, internal consistency of the POPAS was calculated in terms of Cronbach's α . Secondly, mean reported aggression frequencies on the POPAS items were studied, as well as the mean number of days missed from work due to inpatient aggression. Thirdly, the associations between staff characteristics and aggression frequencies were explored with a high number of Mann Whitney *U* tests. More specifically, differences in POPAS scores were calculated between men and women (87 women versus 64 male staff members; 3 missing values), young versus older staff members (106 staff members younger than 40 versus 45 staff members of 40 years and older; 3 missing values), qualified and unqualified nurses (106 qualified versus 46 unqualified staff members; 2 missing values), and between staff members who already had participated in C&R training courses and those who had not (110 trained versus 40 untrained staff members; 4 missing values). The study also investigated whether staff members caring exclusively for involuntarily admitted patients ($n = 34$), experienced more aggression during their work than staff also working with voluntarily admitted patients ($n = 114$; 6 missing values). Although for some of the investigated characteristics, ideas about the expected directions of the associations existed beforehand (see Introduction), associations were uniformly tested in a two-tailed manner, with alpha set on 0.05. Clearly, the relatively large number of tests used in the current study requires cautious interpretation of the results, regarding them as exploratory. Finally, with Spearman's ρ correlation coefficients it was investigated which form(s) of aggression experiences were most strongly connected to days missed from work due to workplace violence.

RESULTS

Internal Consistency

Cronbach's α , as calculated on the basis of the 5-point Likert scale responses on the 15 POPAS aggression items was 0.86. In other words, although newly developed, the internal consistency of the POPAS instrument appeared to be good.

Prevalence of Aggression

In Table II, aggression prevalence rates are summarized for each POPAS item, in terms of the Likert scores, as well as in terms of absolute numbers of incidents reported. The main findings can be summarized as follows. As can be seen, experiences with verbal aggression and threats (items 1 and 2 of the POPAS) appear to be highly common on psychiatric wards, with 80 to 90 percent of nurses reporting experiencing such behaviors on an annual basis.

TABLE I. Examples of POPAS Items, Along With an Illustration of Answering Categories Provided¹

item no.	Description
1.	<p>Verbal aggression <i>For example: patients making loud noises, shouting, cursing, yelling personal insults, however not being perceived as a clear threat by you.</i></p> <p>To what extent have you been confronted with verbal aggression during the last year in the course of your work ?</p> <p style="text-align: right;">() never () occasionally () sometimes () often () frequently</p>
2.	<p>What will be the estimated number of times in the past year ? times</p> <p>Threatening verbal aggression <i>For example: patients cursing viciously, using foul language in anger, making clear verbal threats of violence towards you, having angry outbursts, threatening hearth and home in the future (I will visit you later at home, I will get to your children-family, etc.), and which is perceived by you as frightening and threatening with emotional distress as a result.</i></p> <p>To what extent have you been confronted with threatening verbal aggression during the last year in the course of your work ?</p>
8.	<p>Mild physical violence <i>For example: patients kicking, hitting, pushing, punching, scratching, pulling hair, biting, attacking you, etc..., however all with no real harm or injury as a result or only minor injuries as a result (bruises, sprains, welts).</i></p> <p>To what extent have you been confronted with mild physical violence during the last year in the course of your work ?</p>
9.	<p>Severe physical violence <i>For example: patients attacking you with severe injuries as a result (broken bones, deep lacerations, internal injuries, loss of teeth, loss of consciousness) and therefore in need of medical treatment or hospitalisation.</i></p> <p>To what extent have you been confronted with severe physical violence (with major injury as result) during the last year in the course of your work ?</p>
10.	<p>Mild violence against self <i>For example: patients picking or scratching their own skin, hitting themselves, pulling their own hair, banging their head, hitting fist into objects, throwing themselves on the floor or into objects, hurting themselves (with minor injury, small cuts or bruises, or minor burns as a result).</i></p> <p>To what extent have you been confronted with mild violence against self (no suicide attempt and with minor injury as a result) during the last year in the course of your work ?</p>
11.	<p>Severe violence against self <i>For example: patients mutilating themselves, causing deep cuts, bites that bleed, cigarette burns, with serious injury as a result (cuts or major burns, internal injury, fractures, loss of consciousness, loss of teeth and therefore in need of medical treatment or hospitalisation).</i></p> <p>To what extent have you been confronted with severe violence against self (no suicide attempt and with major injury as a result) during the last year in the course of your work ?</p>
13.	<p>Completed suicides To what extent have you been confronted with a completed suicide during the last year in the course of your work?</p>
14.	<p>Sexual intimidation/harassment <i>For example: patients making obscene gestures, showing intrusive or exhibitionistic behaviour, asking for sexual contact, requesting to go out together, making sexual remarks, chasing, calling, writing, also privately, threatening with assault or rape, showing sexist behaviour, confronting you with pornographic material, drawing sexual representations on the wall.</i></p> <p>To what extent have you been confronted with sexual intimidation/harassment during the last year in the course of your work ?</p>

TABLE I. Continued

item no.	Description
15.	<p>Sexual assault/rape <i>For example: patients assaulting you physically with the aim of having sex with you without consent or sexual raping you by penetrating a body hole.</i> To what extent have you been confronted with sexual assault/rape during the last year in the course of your work ?</p>

¹Several POPAS items were developed by Oud [2001] on the basis of a number of recognized sources, among which the OAS [see Yudofsky et al., 1986; Silver and Yudofsky, 1991] and MOAS categories [see Kay et al., 1988].

Mild physical violence against staff, with minor or no physical consequences (item 8 of the POPAS), also seems to be rather prevalent on psychiatric wards; 76 percent of the respondents reported having been victims of this behavior at least once. Furthermore, a significant minority of staff reported experiencing severe physical violence during their work (item 9 of the POPAS).

More than half of the respondents (57 percent) said they had been confronted with severe self-injurious behavior of a patient- as measured with item 11 of the POPAS (see Table I), and about a quarter of the respondents (28 percent) reported losing a patient due to suicide (item 13). The mean reported number of 0.4 suicides per year per staff member would mean that psychiatric nurses in London are confronted with a completed suicide every two and a half years. Finally, staff members also often reported having been the victim of sexual harassment or intimidation (68 percent), as measured with item 14 of the POPAS. Actual sexual assaults (item 15) were clearly reported less frequently (3 percent).

Sick Leave

A little more than one out of every five nurses (33 of 148 respondents; 6 missing values) said that they had not been able to go to work due to workplace violence at least once during the year reported on. These 33 nurses had stayed at home for a total of 172 days, with an average of 5.2 days per sick nurse (range 1–23 days). For the entire sample, the 172 days lost from work due to inpatient aggression equals an annual loss of productivity of 1.2 days per employee.

Staff Characteristics and Aggression

The associations between characteristics of the respondents, on the one hand, and the reported aggression frequencies, on the other, were explored by means of non-parametric tests (Mann Whitney *U* tests). The Mann Whitney *U* test was used since most distributions of the reported absolute numbers of incidents were skewed. Only group differences with a two-tailed *p*-value below 0.05 are reported on.

Gender. Exploration of differences yielded three significant differences between female and male staff members. Female staff less often reported having been the victim of severe physical violence [item 9 of the POPAS; Mann Whitney $U = 2234.0$, $p < 0.05$, two-tailed], and reported a lower number of completed suicides among their patients [item 13 of the POPAS; Mann Whitney $U = 2183.0$, $p < 0.05$, two-tailed]. Sexual harassment (item 14 of the POPAS), on the other hand, was more often reported by female staff members [Mann Whitney $U = 1837.0$, $p < 0.05$, two-tailed]. In fact, the reported absolute number of sexual

intimidations reported by female staff was more than twofold that reported by male nurses (means = 18.2 sexual harassments versus 7.7 on a yearly basis, respectively). On all other POPAS items, reports of female staff did not differ significantly from those made by their male colleagues.

Age. Young staff members (age below 40) also reported more sexual harassment, compared to older colleagues [Mann Whitney $U = 1140.5$, $p < 0.05$, two-tailed]. Young, female staff members, in particular, were the target of sexual harassment and intimidation (mean reported frequency = 22.3 incidents per year; $n = 67$).

Older staff members (age 40 or older) reported fewer threatening physical acts [item 6 of the POPAS; Mann Whitney $U = 1388.5$, $p < 0.05$, two-tailed] and significantly lower sick leave rates in connection to violence, compared to younger staff [Mann Whitney $U = 1796.5$, $p < 0.05$, two-tailed].

Nursing education and training. Unqualified staff members ($n = 45$) reported significantly higher levels of passive aggressive behavior [Mann Whitney $U = 1807.0$, $p < 0.05$, two-tailed], but a lower number of completed suicides among their patients [Mann Whitney $U = 1742.5$, $p < 0.05$, two-tailed]. None of the other items revealed significant differences between unqualified and qualified staff. Remarkably, none of the POPAS items showed significant differences between staff members who had participated in C&R trainings and those who had not.

Legal Status of Patients. Staff members working continuously with involuntarily admitted patients ($n = 34$), did report high aggression frequencies on the POPAS items. For items 3, 4, 6, and 9, the differences were significant beyond the 0.05-level. In other words, nurses caring for involuntarily admitted patients reported more humiliation during their work [item 3 of the POPAS; Mann Whitney $U = 1384.0$, $p < 0.05$, two-tailed], more provocative aggressive behavior [item 4; Mann Whitney $U = 1283.5$, $p < 0.05$, two-tailed], and more threatening physical aggression [item 6; Mann Whitney $U = 1349.0$, $p < 0.05$, two-tailed]. Apart from that, they also experienced severe physical violence more often during their work [item 9; Mann Whitney $U = 1339.5$, $p < 0.05$, two-tailed]. In fact, the reported number of episodes of severe physical violence was about four times higher in this group, compared to staff members working with voluntarily admitted patients (means being 1.1 incidents versus 0.3, respectively). Yet, no significant increase in sick leave was found in staff members working with involuntarily admitted patients all the time.

The Association Between Forms of Aggression Experienced and Sick Leave

Spearman's ρ correlations were calculated between number of days lost from work, and the types of aggression experienced. Although not very prevalent, severe physical violence (item 9) turned out to be the strongest predictor of calling in sick (Spearman's $\rho = 0.50$; see Table II). Put another way, staff members who experienced severe physical violence during the study year ($n = 24$), missed 3.7 days from work on average, compared to 0.7 days for the other respondents. Frequent sexual harassment and intimidation also appeared to increase the likelihood of calling in sick considerably (Spearman's $\rho = 0.38$).

DISCUSSION

Approximately one in six staff members (16 percent) reported being the victim of severe physical violence at work during the last year. This severe form of aggression

TABLE II. Perceptions of Prevalence of Aggressive Behavior as Reported on the POPAS Items

POPAS- items	Average Likert response	Mean absolute number of reported incidents	Proportion of respondents experiencing the behavior at least once during the last year
	(range and sample size)	(range and sample size)	% (n)
	1 = never, 2 = occasionally, 3 = sometimes, 4 = often, 5 = frequently		
1. verbal aggression	4.2 (2–5; n = 151)	84.5 (0–1000; n = 148)	89 (131)
2. threatening verbal aggression	3.0 (1–5; n = 149)	38.1 (0–1000; n = 148)	82 (121)
3. humiliations	2.6 (1–5; n = 150)	23.0 (0–400; n = 148)	78 (116)
4. provocative aggressive behavior	2.5 (1–5; n = 150)	17.3 (0–400; n = 148)	79 (117)
5. passive aggression	3.0 (1–5; n = 148)	28.7 (0–365; n = 148)	84 (124)
6. threatening physical behavior	2.8 (1–5; n = 150)	25.0 (0–300; n = 148)	82 (122)
7. destructive aggressive behavior	2.5 (0–5; n = 152)	15.4 (0–400; n = 148)	86 (128)
8. mild physical violence	2.3 (1–5; n = 151)	14.2 (0–200; n = 148)	76 (112)
9. severe physical violence	1.2 (1–3; n = 150)	0.5 (0–12; n = 148)	16 (24)
10. mild violence against self	2.6 (1–5; n = 150)	12.0 (0–100; n = 148)	84 (124)
11. severe violence against self	1.9 (1–5; n = 153)	4.2 (0–75; n = 148)	57 (85)
12. suicide attempts	2.0 (1–5; n = 154)	4.4 (0–50; n = 148)	68 (101)
13. completed suicides	1.3 (1–3; n = 150)	0.4 (0–4; n = 148)	28 (41)
14. sexual harassment	2.2 (1–5; n = 151)	13.5 (0–200; n = 148)	68 (100)
15. sexual assaults/rape	1.0 (1–4; n = 148)	0.2 (0–15; n = 148)	3 (4)
16. sick leave	1.2 (1–3; n = 148)	1.2 (0–23; n = 148)	22 (33)
Total (sum of items 1 to 15)	34.8 (17–55; n = 131)	281.2 (4–3651; n = 148)	–

also turned out to be the strongest predictor of calling in sick (Spearman's $\rho = 0.50$). Personnel experiencing severe physical violence stayed at home an average of 3.7 days per year, whereas the mean number of days lost from work per nurse was 1.2. Although these results are hard to compare to findings from prospective incident-based aggression studies, 16 percent of staff being victimized in such a severe way seems to be rather high. In a 24-week prospective SOAS study on a 20-bed ward (Nijman et al., 1997), for instance, about 10 percent of the total of 164 reported aggressive incidents had physical consequences (e.g., pain, bruises), and one of these assaults required somatic treatment of a staff member. Since the team of this ward comprised the equivalent of about 20 full-time nurses, at most, about 11 percent of nurses could have experienced such a severe incident in a year's time. These numbers, however, were obtained on a ward in a Dutch city of about 100,000 inhabitants, and are hard to compare to a ward in London. Nevertheless, self-report methods of aggression may lead to over-reporting. Alternatively, prospective incident-based aggression registration for research purposes still suffers from under-reporting. Selection bias may also have raised the aggression frequencies reported in the current study, since staff members who had experienced more frequent or severe aggression may have been more inclined to participate. Nevertheless, both the current

TABLE III. Spearman's ρ Correlations Between Days Lost From Work and the Forms of Aggression Experienced

	Days lost from work (Spearman's ρ)	Two-tailed p -value
1. verbal aggression	0.17	0.034
2. threatening verbal aggression	0.33	0.000
3. humiliations	0.16	0.057
4. provocative aggressive behavior	0.20	0.016
5. passive aggression	0.20	0.017
6. threatening physical behavior	0.17	0.036
7. destructive aggressive behavior	0.21	0.010
8. mild physical violence	0.18	0.030
9. severe physical violence	0.50	0.000
10. mild violence against self	0.33	0.000
11. severe violence against self	0.26	0.001
12. suicide attempts	0.27	0.001
13. completed suicides	0.22	0.007
14. sexual intimidation/harassment	0.38	0.000
15. sexual assaults/rape	0.20	0.014

and earlier results [e.g., Bowers et al., 2002; Carmel and Hunter, 1989; Hunter and Carmel, 1992; Nijman et al., 1997] stress that the chance psychiatric nurses will be severely injured at a certain point during their careers is real. Nurses working solely with involuntarily admitted patients, in particular, seem to have a high likelihood of becoming injured.

Non-physical forms of aggression (e.g. verbal threats) were experienced by most staff members, and on a regular basis. A majority of respondents (68 percent) also felt they had been sexually harassed or intimidated at least once during a year's time. Female and young staff members, especially, appear to be at risk in this respect. Furthermore, the chance of being confronted with patients' severe self-mutilating behavior (68 percent), or with the loss of a patient due to suicide (28 percent) seems to be substantial when working as a psychiatric nurse. If POPAS reports are to be generalized, the mean reported number of 0.4 suicides per staff member would mean that psychiatric nurses in London are confronted with a completed suicide of one of their patients every two and a half years.

As to variables associated with aggression, the current results did not support the finding that staff members who participated in trainings on how to prevent or manage aggression experience less inpatient violence. However, it may well be that nurses already working with difficult patients (i.e., patients who display much aggression) were more likely to have followed such trainings, which would have made this comparison unfair.

Female and young staff members clearly reported more experiences of sexual harassment during their work, and sexual harassment was found to be significantly associated with calling in sick (Spearman's $\rho = 0.38$). Perhaps aggression management training should take such differences between staff groups into account, for instance, by teaching specific skills for dealing with sexually intimidating behavior. Further, female nurses appeared to be less often confronted with severe violence (i.e., severe physical violence acts and completed suicides), which raises the question whether female nurses might be better at preventing such extreme aggression. Alternatively, however, they may be less often called upon when severe physical violent situations (are expected to) occur.

As to the psychometric properties of the POPAS, this initial test suggested rather good internal consistency. The fact that various outwardly directed aggressive acts (e.g., verbal abuse, verbal threats, destruction of property, interpersonal violence), and also self-harming behavior, appear to occur in combination in the same patients [see Nijman and à Campo, 2002] may play a role in this high internal consistency. High but meaningless correlations between items as a result of answering tendencies cannot, however, be ruled out. For instance, it is possible that staff members with strong traits of neuroticism may have had better recall for, or overestimated various types of, incidents that stimulate anxiety, as neuroticism indicates a susceptibility to fear, anxiety, and hyper-vigilance [McCrae and Costa, 1987]. Alternatively, it could be argued that the high internal consistency occurs because some staff members, for whatever reason, are more frequently victims of aggression. The idea that some staff are more prone to being assaulted has been much discussed in the psychiatric literature on violence, and has received some empirical support [Haller and Deluty, 1988; Hodgkinson et al., 1985]. Intriguingly, Ray and Subich's study [1998] brings both these potential explanations of POPAS internal consistency together, showing that staff with high trait anxiety were more likely to be assaulted. Bowers [2002] has also highlighted the importance of anxiety, demonstrating that although most staff victims report anxiety at the time of the incident or shortly afterwards, some become more cautious and fearful in the longer term.

The validity of the POPAS assessments still needs to be established, although some of the current findings seem to contain face-validity (e.g., encountering more severe physical violence when working with involuntarily admitted patients, more sexual harassment of female staff members). The results of the current study, however, need to be regarded with caution until further validation of POPAS assessments has been conducted. Results from a POPAS survey probably cannot be regarded as assessments of the actual prevalence of discrete aggressive occurrences on psychiatric wards; multiple reports of the same incidents, particularly in cases with high emotional and/or physical impact (i.e., completed suicides) are likely to occur. Therefore, in studying the prevalence, nature, and also severity of aggression, prolonged registration periods with staff observation scales are to be preferred. Detailed assessment of severe assaults, for instance, can be conducted with the Attacks [Bowers et al., 2002], whereas more global registrations of aggressive incidents ranging from mild to severe may be performed with the SOAS-R [Nijman et al., 1999, 2002]. One advantage of these scales, compared to a general survey instrument like the POPAS, is that they aim to record exact information on the kind of behavior, and combination of behaviors, displayed by the patient. In practice, combinations of aggressive conducts (e.g., screaming, breaking objects, and attacking persons) during an assault are rather common, whereas, the POPAS records isolated expressions of aggression.

To gain more insight into the accuracy of POPAS assessments, a cross-validation study of the POPAS with an aggression observation instrument might be useful. In such a study, staff members could be asked to provide their estimates of aggression frequencies on the POPAS, directly after a one-year period of aggression registration with an incident based aggression observation scale has been completed. By including brief self-reports measures of staff members' levels of neuroticism and anxiety, the influence of such traits on the way aggressiveness of psychiatric patients is perceived could also be obtained. In this way, more knowledge of the accuracy of retrospective staff surveys on levels of aggression on psychiatric wards may be gathered.

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