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The attitude of nurses towards inpatient aggression in psychiatric care

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The Attitude of Nurses towards Inpatient Aggression in Psychiatric Care

The Development of an Instrument

Gerard Jansen

The attitude of nurses towards inpatient aggression in psychiatric care, the development of an instrument.

Dissertation for the University of Groningen, the Netherlands, with references and summary in Dutch.
The study presented in this thesis was carried out at the Northern Centre for Health care Research (NCG) of the University of Groningen, Department of Health Sciences, within the programme of Public Health.

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The Development of an Instrument

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Beoordelingscommissie	Prof. dr. H.L.I. Nijman Prof. dr. J.L. Peschar Prof. dr. D. Wiersma

Walk with me on my journey

I need to know you're there

To listen, guide and comfort me

My wounded self-repair

Walk with me on my journey

Be it to health or death

Work with me at my chosen pace

Show me that caring is love and grace

Walk with me on my journey

A difference you can make

A smile, your presence, a gentle touch

Can mean so very much

Walk with me on my journey

A companion for me be

Be a therapeutic carer

Make this bearable for me

Walk with me

Brendan McCormack

(what nursing is about)

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Chapter 1
General Introduction and Outline

Human aggression has become an every day issue, not only in daily social life but also in health care. Acts of public violence are reported in the newspapers on a daily basis and health professionals estimate that there is a growing incidence of violent acts in their practices. Even in non-war zones public aggression has an impact on daily life and public safety is an issue that dominates the agenda of public administration. This phenomenon is not exclusive to public life. Within the domain of health care, patients may become aggressive towards other patients, staff towards patients, and patients towards staff. Aggression occurs in every health care setting, among all categories of patient populations.
This dissertation addresses the topic of aggression by patients in psychiatric hospitals. Of the multidisciplinary team members who are confronted with the aggressive behaviour of patients, nurses are more likely to become involved in such aggressive situations than other health professionals, since they have multiple interactions with patients, 24 hours a day. An important aspect of aggressive behaviour in psychiatric care settings is the prevention and the management of patient behaviour by professionals, that is, by nurses. From social psychology theories we know that 'attitude' is the core concept that contributes to the intention preceding the performance of behaviour. For this reason the focus in this dissertation will be on the attitude that psychiatric nurses have towards the aggressive behaviour of patients in institutional psychiatric settings. The problem however, is that little is yet known about the attitude of professionals to aggression. To this end the thesis will also address the development of an attitude scale towards aggression.

This introductory chapter begins with a general description of the concept of aggression in health care and is followed by information about the factors that are associated with aggressive behaviour in psychiatric patients. In the next section the implications of these aggression-related factors for patient care are described. After introducing the conceptual framework for the dissertation, the aims, the research questions and the research model of the thesis are outlined. The chapter ends with a summary of the contents of the thesis.

1.1 Aggressive behaviour

In this section a general introduction to the concept of aggression is provided. After close consideration of the definition of aggression, an overview of the most cited theories about the origins of aggression is given, followed by a description of the types of aggression.

Definition and origins of aggression

The Oxford Dictionary (1989) defines aggression (from the Latin *aggressio* attack, from *aggredi* to attack, from *ad-* + *gradi* to step, go more at) as a 'forceful action or procedure especially when intended to dominate or master and as hostile, injurious, or destructive behaviour or outlook'. Some authors differentiate between aggression and violence. The Oxford English Dictionary (1989) defines violence (from the Latin *violentia* vehemence, impetuosity) as 'the exercise of physical force so as to inflict injury on, or cause damage to, persons or property; action or conduct characterized by this; treatment or usage tending to cause bodily injury or forcibly interfering with personal freedom'. Rippon (2000) concluded that by definition violence is synonymous with aggression, however violence is reserved for those acts of aggression that are particularly intense and more heinous, infamous or reprehensible.

Geen (2001) introduced two characteristics that he considered should belong to a definition of aggression: firstly, there must be an intention to harm, and secondly the person towards whom the behaviour is directed must be motivated to avoid such interaction. Thus, he proposed the following working definition of aggression: 'the delivery of an adversive stimulus from one person to another, with intent to harm and with an expectation of causing such harm, when the other person is motivated to escape or avoid the stimulus' (Geen, 2001, p. 3).

According to Palmstierna (2002) aggression is a multidimensional construct. He proposed a three dimensional approach to define aggression:

- inner experience versus outward behaviour
- aggressor's view versus observer's view and
- persistent versus episodical occurrence (trait or state)

In the last decade of the last century, several theoretical frameworks were developed to explain the origins of aggression. These include psychological theories, genetic and biological models, and sociological, or cultural, theories.

One of the early theories about the origin of aggression stems from the psychodynamic theory. From this point of view there is a permanent opposition between the death instinct (thanatos) and the life instinct (eros). The death instinct may be neutralized by libidinal energy or redirected through sublimation or displacement, but aggressive energy may also be directed towards others or result in

self-destruction if the instinct is unrestrained or if neutralization is incomplete (Freud, 1930).

Aggression can also be considered as a learned social behaviour. The social learning theory emerged in the 1960s, largely as a result of the theoriszng of Albert Bandura and his associates. Social learning consists of the acquisition of responses through observation and the maintenance of particular behaviours through reinforcement. The theory includes a recognition of biological factors in aggression without regarding such factors as direct causes of aggressive behaviour (Bandura, 1983).

Explanations of human aggression based on the science of behavioural biology or ethology, can be traced back to Konrad Lorenz's 1966 book *On Aggression*. Lorenz explained aggression as behaviour triggered by specific external stimuli following a progressive accumulation of aggression-specific energy within the person. Aggression is followed by a cathartic decrease in such energy and the beginning of a new build-up. For the ethologist, aggressive behaviour is an innate instinct that must be regularly discharged in the appropriate context. In this view aggression is inevitable and functions as a self-assertive force in the presence of aggression-releasing stimuli.

The evidence from studies on the role of inherited biological factors in human aggression in twins is mixed and inconclusive. However, the idea that at least some part of human aggressiveness is inherited has been gaining increasing acceptance. The most convincing studies have been those in which comparisons have been made between monozygotic and dizygotic pairs of twins on the basis of self-reports of aggressiveness on personality inventories. Evidence of higher correlations between monozygotic twins is taken as evidence of some heritability associated with the trait. In a study by Rushton (1986) correlations between personality traits such as altruism, empathy and nurturance on the one side and aggressiveness on the other were higher than with the dizygotic twins. However, in a review of 24 studies covering a wide range of methods, Miles and Carey (1997) found that evidence for the heritability of aggression depends on several variables, such as the age of the sample and whether aggression is quantified in terms of parent- and self-reporting, or the clinical observation of behaviour. Outcomes also seem to depend on how aggression is defined.

On the basis of the above it must be suggested that there is still not sufficient evidence from any type of study to draw strong conclusions on the role of heredity in aggression.

Types of aggression

Buss (1961) proposed eight different modes of aggression in a three-dimensional model: physical-verbal, active-passive and direct-indirect. He later refined the categories into physical-verbal and direct-indirect

(Buss, 1995). Geen (2001) offers another classification which divides human aggression into affective and instrumental aggression. Affective behaviour is aimed primarily at injuring the provoking person. Instrumental aggression is simply a means to some end, such as self-defence, establishing coercive power over others, or obedience to commands from a person with authority. The two kinds of aggression are not mutually exclusive. Other studies (Crick and Dodge 1996) draw a distinction between reactive and proactive aggression. Reactive aggression refers to aggressive behaviour enacted in response to provocation, while proactive aggression is initiated without apparent provocation, for example bullying behaviour.

1.2 Aggression in Psychiatric Care

This section considers patient aggression in the health care setting, specifically psychiatric care. The section starts with a description of the results from studies on the prevalence of aggression in psychiatric care, followed by information on the measurement and prediction of aggression.

Prevalence of aggression in psychiatric care

Aggression is a serious problem in society as well as in health care. The increase in aggressive incidents in health care settings is reflected in the attention that is being paid to the phenomenon of aggressive behaviour by patients in the scientific journals.
A search with the key words 'violence', 'aggression' and 'patient' in the electronic database Pub Med showed that 183 papers addressing this topic were published between 1995 and 1999. However, in the period 2000 to 2004 a total of 317 papers addressing aggression in health care were published.
On the basis of a systematic review of the literature, (Bjorkly, 1996) estimated that 15% to 30% of hospitalized psychiatric patients have been involved in physical assaults. The prevalence of aggression among hospitalized psychiatric patients has to be estimated by comparing results from several descriptive studies, since no national databases are available to provide such data. The latest study in the Netherlands was performed in 1996. In this study the investigators found prevalence rates ranging from 22.8 incidents per bed per year on locked admission wards to 17.6 incidents per bed per year on the long-stay wards (Broers and De Lange, 1996). Nijman (1999) reviewed a substantial number of descriptive studies on the epidemiology of aggressive incidents and found a considerable range in the number of incidents, from 0.15 assaults per bed per year (Fottrell, 1980) to 88.8 incidents per bed per year (Brizer *et al.,* 1987). Several explanations have been suggested for this wide range. Davis (1991) put forward the

explanation that studies on inpatient violence are difficult to compare because of differing definitions of violence and the various settings in which studies were performed. These settings ranged from general hospitals to psychiatric and forensic hospitals.

Instruments for measuring aggression in psychiatric care

In the research literature, aggression is operationalized in various ways. Some research papers include 'verbal abuse' and 'threatening behaviour' (Bouras *et al.,* 1982), others refer to 'damage to property' (Armond, 1982) and 'self harm' (Fottrell *et al.,* 1978). Some studies focus on 'physical attacks on persons' only (Shader *et al.,* 1977; Dietz and Rada, 1982; Tardiff, 1984) while others limit their scope of interest to 'physical attacks on hospital staff' (Ruben *et al.,* 1980; Hodgkinson *et al.,* 1985). Until the introduction of the Staff Observation Aggression Scale, (Palmstierna and Wistedt, 1987) aggression or assaultive behaviour was defined vaguely in research or not defined at all. In the SOAS-R (Nijman *et al.,* 1999), the definition of aggression by the APA (American Psychiatric Association, 1974) was adopted, conceptualizing aggression as 'any verbal, non-verbal, or physical behaviour that is threatening (to self, others or property), or physical behaviour that actually does harm'. Some studies make the distinction between 'physical and verbal assaultiveness', while others do not distinguish between these modes of aggression in their statistical analysis or do not address the issue at all (Haller and Deluty, 1988).

A wide spectrum of measurement scales is available for research purposes. According to Bech (1994) instruments for measuring the aggressive behaviour of psychiatric patients can be divided into self-rating aggression scales and observer aggression scales. Examples of the two types are presented in TABLE 1.

Self-report scales are designed to measure angry feelings, violent thoughts or reactions to anger provoking situations. A well-known self- rating questionnaire for measuring hostility and anger is the Buss-Durkee Hostility Inventory (Buss and Durkee, 1957).

There are a wide range of observer-based or objective rating scales. Observer-based scales are scales completed by someone other than the patient and record aggressive incidents. Some scales, such as the Nurses' Observation Scale for Inpatient Evaluation (Honigfeld *et al.,* 1965) contain some items that rate aggressiveness but do not differentiate between mildly aggressive behaviour from more severe forms, nor do they provide the capacity to document the number, or describe the types of aggressive behaviour. In addition to the general scales, specific scales have been designed to measure aggression.

TABLE 1 AGGREGATION SCALES

self-rating scales	**author(s)**
Buss-Durkee Hostility Inventory (BDHI)	Buss and Durkee, 1957
Novaco Anger Scale	Novaco, 1994
observer based scales	**author(s)**
general	
Nurses' Observation Scale for Inpatient Evaluation (NOSIE)	Honigfeld *et al.*, 1965
Brief Psychiatric Rating Scale (BPRS)	Overall and Gorham, 1962
specific	
Overt Aggression Scale (OAS)	Yudofski *et al.*, 1986
Retrospective Overt Aggression Scale (ROAS)	Sorgi *et al.*, 1991
Staff Observation Aggression Scale (SOAS)	Palmstierna and Wistedt, 1987
Scale for the assessment of Agitated and Aggressive Behaviour (SAAB)	Brizer *et al.*, 1987
Aggressive Incident Record Form (AIRF)	Paxton *et al.*, 1997
Modified version of the Overt Aggression Scale (MOAS),	Kay *et al.*, 1988
Social Dysfunction and Aggression Scale (SDAS-9)	Wistedt *et al.*, 1990
Violence Scale (VS)	Morrison, 1993
Report Form for Aggressive Episodes (REFA)	Bjørkly, 1996; Bjørkly, 1998
Staff Observation Aggression Scale-Revised (SOAS-R)	Nijman *et al.*, 1999

The existing self-report scales as well as the observer based scales do have some limitations. According to Bjørkly (1995), self-report scales such as the BDHI have so far failed to be accurate instruments for predicting violence (p. 493). Yudofsky (1986) pointed out that patients whose cognitive abilities are impaired by psychosis or organic mental disease cannot reliably complete questionnaires. Furthermore, many patients are not angry between aggressive episodes, and do not reliably recall or admit to past violent events (p. 35). A review by Bowers (1999) concluded that all observer scales have some drawbacks for research. With the exception of the SOAS-R, which was not included in the study, he considers that aggression is defined too broadly and that the instruments conceptualize the severity of a violent incident poorly. He suggests a new scale – the 'Attacks Scale' (Attempted and Actual Assault Scale – to overcome these limitations (Bowers *et al.*, 2002). The innovative value of the scale is that it tries to capture the potential injury of the incident regardless of intent. To this end four indicators were constructed: 'warning' (clear verbal threat or no threat), 'attempted or actual assault' (body parts that were attacked), 'commitment' (speed, power and recklessness of the attack) and 'estimated potential for injury'.

Although existing instruments have deficiencies as they cover only a limited number of aspects of the behaviour or lack validity testing, they have played an important role in the past in making the problem manifest to health care managers and administrators. At present, the problem is more recognized by the health care sector. Therefore, the next generation of aggression related instruments should focus more precisely on the details of the behaviour in order to facilitate the deci-

sion-making processes of clinicians in relation to the prevention and management of aggression. For research purposes these types of instruments should provide more information about aggression in specific populations, in specific circumstances and under specific treatment conditions.

1.3 Associated Factors of Patient Aggression in Psychiatric Care

Researchers have attempted to understand the factors associated with the occurrence of aggression at the following three different levels: the patient level, the staff level and the environmental level. These levels are described below.

Patient factors

Patient factors include biological factors, gender, age, social and economic status and psychopathology. Studies on the biological bases of aggression are concerned with heredity factors, hormonal effects (testosterone) and the role of brain mechanisms (limbic system and the cerebral cortex).

With regard to gender, the results of studies undertaken on this topic are inconclusive. Some researchers have found males to be more assaultive (Bornstein, 1985) but others have reported no relationship between gender and violence (Lam *et al.,* 2000; Craig, 1982; Durivage, 1989; Nijman *et al.,* 1997; Kay *et al.,* 1988). In fact some studies have reported higher rates of violence among female patients (Convey, 1986; Palmstierna and Wistedt, 1989; Way and Banks, 1990).

A number of researchers have found that assaults are more often committed by younger inpatients (Bornstein, 1985; Pearson *et al.,* 1986; Karson and Bigelow, 1987; James *et al,.* 1990; Whittington *et al.,* 1996). While the findings generally remain inconclusive; adolescent patients in particular may be implicated (Garrison, 1984; Reid *et al.,* 1989).

There have been a number of studies that have attempted to dissect the factors of culture and economics in the production of violence in society. Associations between demographic characteristics and physical assaultiveness remain uncertain, but there seems to be a relationship between absolute poverty, disruption of marriages and physical overcrowding (Tardiff, 1989).

No conclusive findings about the relation between psychopathology and the likelihood of becoming aggressive can be found in the literature. Mania, personality disorders, substance abuse and organic brain disease are thought to be associated with a heightened level of aggressive behaviour (Tardiff, 1992). Those studies focusing on the relationship between clinical characteristics and inpatient aggression, have generally found the diagnosis of schizophrenia to be more often related to aggression than are other disorders or symptoms (Depp, 1976).

Recent studies have produced a body of evidence indicating an association between certain symptoms of mental illness and aggression in some categories of patients. Delusions, particularly those of a persecutory nature, may have a significant and direct influence on aggression. Disorder of thought, increased physiological arousal, disorganized behaviour and substance abuse may all contribute to a lesser extent to the production of aggressive behaviour: the phase of illness is crucial. The likelihood of psychotic patients behaving aggressively is greatest during the acute phase of the illness (Mulvey, 1994; Daffern and Howells, 2002). A review study by Walsh (2002) confirms a significant association between violence and schizophrenia, but finds that lessless than 10% of societal violence is attributable to schizophrenia. However, a study among psychiatric patients with a first episode of schizophrenia or schizoaffective disorders showed that 75% of the men and 53% of the women exhibited some type of aggressive behaviour during the first or subsequent admissions (Steinert *et al.,* 1999).

A social factor which is known to be predictive for violent behaviour at an adult age is child maltreatment. Studies on familial and non-familial violence show that violent people report higher rates of physical abuse (Malinosky-Rummell and Hansen, 1993). Child maltreatment has a cultural component. Death as a result of child maltreatment is more common in countries such as Portugal, Mexico and the USA than in Norway, The Netherlands, Switzerland or the UK (UNICEF Innocenti Research Centre, 2003). The relation between child maltreatment and culture was confirmed in a study of Dutch immigrants. The study found that the risks of detrimental actions was highest for parents from non-industrialized countries (Reijneveld *et al.,* 2004).

Staff factors

These factors pertain to inexperience or lack of training, low staff-to-patient ratios, lack of a clear role, and the involuntary admission of the patient. Most of the studies on the effects of staff education and training found that training staff in how to react to threatening situations can lead to a decline in the frequency or severity of aggressive incidents (Infantino and Musingo, 1985; Paterson *et al.,* 1992; Rixtel, 1997; Phillips and Rudestam, 1995; Whittington and Wykes, 1996). In a study by Way, no association was found between low staff-to-patient ratios and an increase in violent behaviour (Way *et al.,* 1992). In some studies an inverse relationship between assault frequency and the number of staff members relative to patients was found. The conclusions from studies of the association between staff levels and aggression have to be examined with caution, because high staff levels and high levels of aggression may be a consequence of the inclusion of patients who are prone to violence. No randomized clinical trials are available to provide evidence for such conclusions.

Crowding rather than the total number of patients per ward was suggested as a factor related to assault (Lanza *et al.,* 1994; Kuei-Ru Chou *et al.,* 2002). In a study by Owen (1998), the relative risk of aggression increased with more nursing staff (of either sex), with more non-nursing staff on planned leave and with more unplanned absenteeism by nursing staff. In two studies it was found that violence was more frequent and more extreme in wards in which staff roles were unclear, and in which events such as activities, meetings or staff-patient encounters were unpredictable. Violence was less frequent and less extreme in wards characterized by strong psychiatric leadership, clearly structured staff roles, and events that were standardized and predictable (Hodgkinson *et al.,* 1985; Katz and Kirkland, 1990).

Environmental factors

The environmental stimuli of aggression can be divided into two categories: physical stimuli and stimuli in the social environment. Two examples of physical environmental stimuli as antecedents of aggression are high ambient temperature (Anderson *et al.,* 2000) and noise (Geen, 1978).

The following provides an overview of the social environmental factors influencing the rate of aggressive incidents in patient care. Studies on the association between the time of day and an increase of aggression showed that most incidents took place during the day, with fewer occurring in the evening, and the lowest rate found during the night. Some studies reported on the finding that most assaults occurred during meal times and early in the afternoon (Carmel and Hunter, 1989; Lanza *et al.,* 1994; Bradley *et al.,* 2001; Vanderslott, 1998; Nijman *et al.,* 1995), while others found an increased rate of aggressive acts in the morning (Fottrell, 1980; Hodgkinson *et al.,* 1985; Cooper and Mendonca, 1991). Several studies found a relationship between length of stay (duration of admission) and aggression. These studies indicated that most assaults took place just before or in the first days after admission to the hospital (Tardiff, 1984; Nijman *et al.,* 1995; Barlow *et al.,* 2000; Kuei-Ru Chou *et al.,* 2002). Some research has been done into the association between the day of the week and aggressive behaviour. Nijman found that most incidents on an acute admission ward took place on Monday and the fewest on Friday (Nijman, 1999). In another study (Carmel and Hunter, 1989) the days on which the majority of incidents were registered were found to be Monday, Tuesday and Friday.

The locations in which aggressive incidents occur most frequently are the ward corridors and dayrooms (Hodgkinson *et al.,* 1985; Lanza *et al.,* 1994). Other locations mentioned in studies are the nursing station and the locked door, places where interaction between staff and patients takes place (Nijman *et al.,* 1995).

As stated above crowding was suggested as a factor related to assault. The degree of patient acuity seemed to be inversely related to assault frequency. Trends between assault frequency and a low score on autonomy and a high score on staff control were also suggested. A number of other studies have found a positive correlation between the occupancy level and the occurrence of violent incidents (Palmstierna *et al.,* 1991; Nijman and Rector, 1999; Bradley *et al.,* 2001). Kumar (2001) suggested a number of explanations for this relation: the density and lack of privacy and control over the environment, architectural shortcomings, the social organization of a ward and a limited body buffer zone.
Another important social element in the environment causing aggression are factors related to patient-staff dynamics. These include: lack of control by staff (Lanza, 1983), few or poorly organized activities, uncertainty, confusion or fear about the staff -patient relationship (Katz and Kirkland, 1990) and poor staff-patient interaction (Sheridan *et al.,* 1990; Cheung *et al.,* 1997; Lancee *et al.,* 1995).

1.4 Implications of the Associated Factors for Patient Care

Knowledge about the factors associated with the occurrence of aggression is a prerequisite for the prediction of the behaviour in the clinical setting. Predicting the risk of violence, which is of high importance especially within forensic psychiatry given its consequences for public safety, has a long and problematic history. In predicting violence a distinction can be made between **1** unaided clinical risk assessment, **2** actuarial or statistical methods, and **3** structured clinical judgement. In unaided clinical judgement, information about the probability and risk of violence is processed from the personal perspective of the decision maker, whereas in actuarial methods, decisions about the risk of violence are estimated on the basis of factors that are known to be associated with the occurrence of aggression across settings and individuals. These risk factors are applied in so-called 'decision trees' by which the clinician can estimate the risk of violence. The third method, structured clinical judgement, represents a composite of empirical knowledge and clinical/professional expertise. Several instruments have been developed to support risk assessment in clinical contexts. In their review of risk prediction, Dolan and Doyle (2000) concluded that prediction is an inexact science and as such will continue to provoke debate. For this reason, according to Dolan and Doyle, clinicians clearly need to be able to demonstrate the rationale behind their decisions on the risk of violence. Harris and Rice (1997) found that the factors most highly and consistently related to risk are: age, gender, past antisocial and violent conduct, psycho-

pathy, aggressive childhood behaviour and substance abuse. Major mental disorder and psychiatric disturbance are poor predictors. A history of violent behaviour has often been found to predict future violent behaviour (Bornstein, 1985; Convit *et al.,* 1988; Kuei-Ru Chou *et al.,* 2002). Some authors have found it to be the best single predictor of subsequent violent behaviour (Kroll and Mackenzie, 1983; Davis and Boster, 1988). In a study by Nijman a history of violence was also found to be a significant predictor of aggression (Nijman *et al.,* 2002). Steinert adds to this conclusion that moderately good predictors in the psychiatric field are the psychopathological state and the ward environment. More precise determinants fail due to the inevitable problems of sample selection. Detailed statements are only valid for specific samples and specific forms of violence under specific treatment conditions (Steinert, 2002). Furthermore, several studies indicated that the risk of violence is significantly associated with patients detained involuntarily or compulsorily admitted (Edwards, 1988; Noble, 1989; Owen, 1998; Soliman, 2001).

The ward environment or milieu is another factor associated with aggression that is described in the literature. In an early study on the ward environment in psychiatry, Bouras found a difference in the extent of disturbed behaviour between a psychiatric unit run on traditional medical lines and a therapeutic community. The patients of the therapeutic community were significantly more disturbed and violent than those on the medical unit (Bouras *et al.,* 1982). Friis found that psychotic and non-psychotic patients need different types of atmospheres. Psychotic patients seem to benefit primarily from a milieu with a high level of support, practical orientation, order and organization, and a low level of anger and aggression. Non-psychotic patients, on the other hand, seem to benefit mostly from a milieu in which the level of staff control is low and the level of anger and aggression is intermediate (Friis, 1986). According to Friis, interventions to prevent violence can aim at individual patients and/or the milieu. The individual interventions ought to establish a working alliance and teach patients appropriate behavioural responses to anger and frustration. The milieu interventions should train staff in how to solve conflicts and handle their relationship with potentially violent patients (Friis and Helldin, 1994).

1.5 Staff Behaviour towards Aggression in Inpatient Psychiatric Care

As mentioned at the beginning of this chapter, aggression and also the management of it have become important issues in healthcare. Most studies on institutional patient aggression concentrate either on

the measurement of the prevalence of aggressive behaviour or on the nature and effectiveness of strategies to control the behaviour. However, a limited number of studies focus on the attitude to aggression by health care workers. The basic assumption in this thesis is that the way nurses handle aggression by patients is dependent on their attitude to the behaviour. The theoretical relation between the attitude and the behaviour of nurses will be delineated in this section.

Theory of Planned Behavior

The conceptual model of this thesis comprises two elements: firstly, the relation between the attitude and the 'management behaviour' of patient aggression; and secondly, the predictors of the attitude towards this aggression.

To start with the first element, attitude and management, as stated in the previous section the way in which staff members manage patient aggression is assumed to be guided by the way they evaluate patient behaviour. In the context of this dissertation, the management of patient aggression by staff is conceived of as another kind of behaviour. Several theories underscore the relation between attitude and behaviour, such as the social cognitive theory (Bandura, 1999), and the Theory of Planned Behavior (Ajzen, 1991). The Theory of Planned Behavior is an extension of the Theory of Reasoned Action. The Theory of Reasoned Action (Fishbein and Ajzen, 1975) addresses the issue of 'causal antecedents of volitional behaviour'. The Theory of Planned Behavior was designed to predict behaviours not entirely under volitional control by including measures of perceived behavioural control.

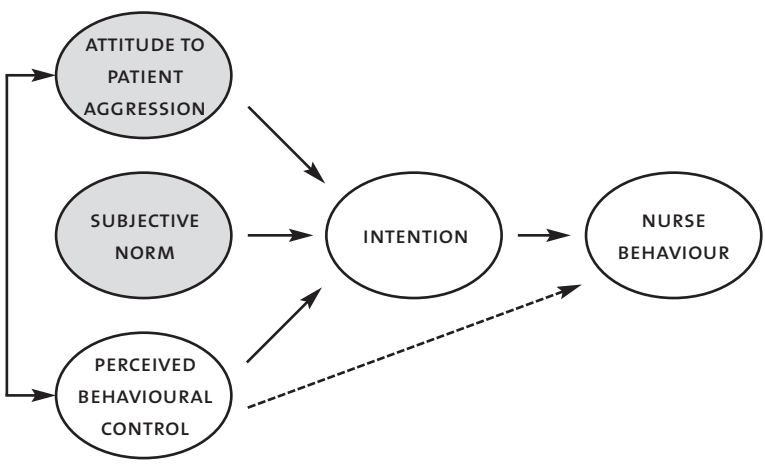

FIGURE 1 CONCEPTUAL FRAMEWORK OF STAFF BEHAVIOUR (ADAPTED FROM AJZEN, 1991)

Central to the Theory of Reasoned Action and Theory of Planned Behavior is the concept of 'intention'. As the principal predictor of behaviour, intention is regarded as the motivation necessary to engage in a particular behaviour – the more one intends to engage in a particular form of behaviour, the more likely is its performance. Underlying these intentions are attitudes towards the behaviour, subjective norms and perceived behavioural control.
In the Theory of Planned Behavior, attitude is a function of the beliefs held about the specific behaviour, as well as a function of the evaluation of likely outcomes. *Attitude*, therefore, may be conceptualized as 'the amount of affect – feelings – for or against some object or a person's favourable or unfavourable evaluation of an object'. Attitudes are derived from salient behavioural beliefs. The second determinant of intention – the subjective norm – is defined as the perception of general social pressure from important others to perform or not to perform a given behaviour. the third element – perceived control – is defined as 'the perceived ease or difficulty of performing the behaviour' and is assumed 'to reflect past experience as well as anticipated impediments and obstacles' (Ajzen, 1988). Ajzen argued that perceived behavioural control will accurately predict behaviour only when perceived control closely approximates actual control (hence the broken line in FIGURE 1).

Within the domain of health care, the Theory of Planned Behavior is used as a conceptual framework for preventive interventions and to clarify the anticipated effects of a disease management intervention or programme on patient behaviour. In the context of health care, interventions are aimed at changing the behaviour by influencing either the patient's attitude or their perceived control over healthy behaviour, or both. Attitude change can take place as a result of patient education and information programmes, such as smoking cessation programmes or programmes to promote compliance with pharmaceutical treatment and treatment conditions.
Perceived control can be enhanced in many ways, for instance by learning new cognitive or behavioural skills. Subjective norms may be influenced by national or community-based public health programmes such as non-smoking campaigns or information about healthy food intake.
Treatment conditions can also entail behaviour such as adherence to exercise programmes. Regardless of the focus of the programme or intervention, it is always aimed at changing one or more of the elements of the Theory of Planned Behavior and ultimately at changing the patient's behaviour.

The relationships between the concepts of 'behavioural control', 'intention' and 'behaviour' are not tested in this thesis, which concentrates on the 'attitude' and 'subjective norm' component of Ajzen's theory regarding nurses The concepts that are addressed in this thesis are shaded in FIGURE 1. This thesis is concerned with the attitude of nurses to patient behaviour, specifically the aggressive behaviour of patients in institutional psychiatry. As the Theory of Planned Behavior is not exclusively concerned with patients but with human behaviour in general,should be regarded as the basic idea underlying the studies described in this thesis.

The second element of the conceptual framework addressed in the thesis pertains to the concept of 'subjective norm'. Environmental factors related to the occurrence of aggression, as described in SECTION 1.3, are considered to represent the subjective norm. Although there is a direct relation between subjective norm and intention, the subjective norm also relates to attitude, according to Ajzen's theory. This thesis considers that the environmental factors all contribute to the social dimension of the work environment and the occupational culture of nurses, and thereby contribute to the perception of the social pressure which nurses experience in performing particular management behaviour. For this reason these factors will be denoted as the subjective norm indicators in the final chapter of this thesis.

1.6 Aims, Research Model and Research Questions

In this section the aims and the research questions are formulated along with their relation to the the conceptual framework outlined in the previous section.

Aims

The Theory of Planned Behavior postulates that 'attitude' together with 'subjective norm' and 'perceived control' are the building blocks for the prediction of human behaviour. Since there is no structured research and there are no clinical tools available to measure attitude to aggression, the aims of this thesis are:

1 to develop a valid and reliable instrument to measure the attitude of staff to aggression displayed by patients who are admitted due to psychiatric problems. The measurement instrument can be a useful tool in clinical practice, particularly at a group level, for the assessment of staff attitude towards aggression. The tool is devised to support decision making concerning the management of aggressive behaviour on a ward. As there is also a lack of knowledge about staff attitude in various countries, the tool should also facilitate international

comparative research.

2 to explore the factors (subjective norm and personal characteristics) that are related to the attitude towards aggression. If we have a basic understanding of what factors influence the attitude nurses have towards aggression, this information can be useful in additional research with a focus on the function of such factors in the interaction dynamics taking place between nurses and patients preceding the occurrence of an aggressive incident.

In FIGURE 2, the reasearch model of this thesis is presented as an element of the Theory of Planned Behavior.

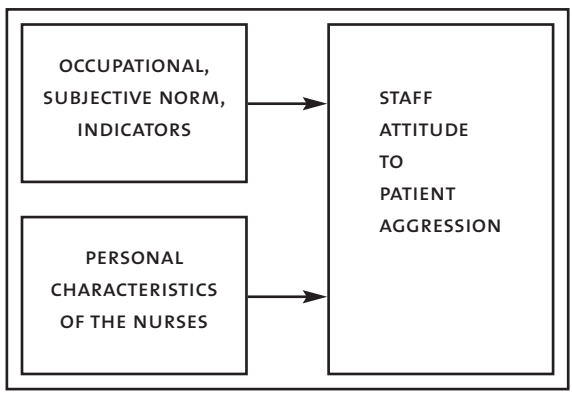

FIGURE 2 THE RESEARCH MODEL, INDICATING THE PREDICTORS OF STAFF ATTITUDE TO PATIENT AGGRESSION

Research questions

The aims of the thesis lead to the formulation of the following research questions:

1 to what extent is the concept of 'attitude', as defined within the Theory of Planned Behavior, addressed in existing instruments?

2 what are the theoretically relevant aspects belonging to coherent dimensions or domains of attitude towards aggressive inpatient behaviour?

3 what is the result of the evaluation of the psychometric properties (construct validity and internal consistency) of the measures within and across countries?

4 what is the valid operationalization of these aspects of the attitude psychiatric nurses have towards patient aggression.

5 which personal characteristics of nurses and which characteristics of the organization as the occupational environment (subjective norm) predict their attitude to aggression?

6 are there cross-cultural differences in the attitude nurses have to inpatient aggression?

1.7 Study Samples, Operationalization and Data Collection procedure

Samples

The studies in this thesis comprise both national and international samples. The majority of respondents are psychiatric nurses working in psychiatric hospitals. The studies reported on in CHAPTERS 3 and 4 are based on Dutch samples, whereas the studies presented in the CHAPTERS 5 and 6 have an international sample.
In the first Dutch study (CHAPTER 3) nurses from five psychiatric hospitals were included. These hospitals were located throughout the country. In the second Dutch study (CHAPTER 4), the study sample comprises nurses from one institution for the demented elderly and nurses from about 30 psychiatric institutions for children and adolescents. These institutions are also spread throughout the country. The international sample (CHAPTERS 5 and 6) consists of psychiatric nurses from the Netherlands, Germany, Norway, the United Kingdom and Switzerland.

Operationalization

Consistent with the research model, three groups of variables are considered by this thesis: the attitude, the subjective norm indicators and the personal characteristics of the nurses.

The operationalization of the concept of attitude, relies for its basis on the outcome of a qualitative study on the characterization and perception of patient aggression by nurses working on psychiatric wards in a psychiatric hospital in the Netherlands (Finnema *et al.,* 1994). Five categories of definitions emerged from that study: definitions containing a value statement on aggression, definitions describing a form of aggressive behaviour, definitions describing the feeling aggression arouses in nurses, definitions describing a function of aggression and definitions describing the consequences of aggression.

The 'subjective norm' indicators related to the occupational environment of nurses were operationalized as:

- the care setting of the organization respondents were working in (adult psychiatry, child/adolescent psychiatry, psycho-geriatrics)
- the type of ward (acute ward, short stay, long stay)
- the prevalence of aggression on the ward the nurses worked on
- the legal status of the patient on admission (voluntary or involuntary)
- the health sector where the respondents were employed (adult, child psychiatry, psycho geriatrics)
- the making use of constraining interventions such as separation and fixation

The third component in the research model, the personal characteristics of nurses, includes:

- the gender of nurses
- age
- nursing grade or qualification
- years of work experience
- involvementor not in training aggression management
- full-time or part-time work
- shifts (day/evening/night)

The variable 'shift' corresponds to what is described as 'the time of the day' factor in the literature.

Data collection procedure

In the Netherlands the questionnaire was sent to contact persons in the selected hospitals and institutions. The international data-set was achieved within the framework of the European Violence in Psychiatry Research Group (EViPRG). The EViPRG was founded in 1997 in the UK. The group now comprises members from about 15 countries, including Finland, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Slovenia, Spain, Sweden, Switzerland and the UK. It promotes the dissemination of expertise and knowledge on violence in psychiatry among its members and outside the EViPRG. In the group, each country is represented by experts in research, education, psychiatry, psychiatric nursing, psychology, sociology and trainers who specialize in the management of violence. Group members of the EViPRG in the five participating European countries collected the data in their home country.

1.8 Summary of Contents

The following overview describes the various studies and the contribution they make towards the study objectives.

CHAPTER 1 provides a general description of patient aggression in health care settings with the focus on aggression in psychiatric hospitals. It also introduces the conceptual framework, the aims of the thesis and the research questions.

CHAPTER 2 gives an answer to research question 1 by reporting on a review of the international literature on staff attitudes towards aggression. Research is reviewed on staff attitudes towards aggression by patients in psychiatric settings as well as in general hospitals. The aim of the study is to firstly examine the extent to which the concept of 'attitude' is addressed in research, and secondly to get an insight into the attitude objects that are described.

Throughout the CHAPTERS 3 to 5 answers are provided to research questions 2 and 3, that is, those concerning the development of an instrument to measure the attitude to aggression, and also to research question 4 which pertains to the prediction of the attitude.

CHAPTER 3 presents the draft version of the instrument. The questionnaire that is developed is based mainly on 60 definitions which nurses formulated concerning patient aggression. The information is taken from the qualitative study mentioned in the previous section. The sample comprises psychiatric nurses from five Dutch psychiatric hospitals. The aim of the study is to develop a measure of the perception that nurses have of patient aggression. The study focuses on the concept of 'perception' to denote the perspective of the health care worker on aggression by patients. For this reason the initial instrument is called the Perception of Aggression Scale (POAS).

CHAPTER 4 reports on a study that was also undertaken in the Netherlands however, this time the sample included nurses from psycho-geriatric homes and nurses working in psychiatric institutions for children and adolescents. For the first time results are reported using the Attitudes Towards Aggression Scale (ATAS). A shift is made from the concept of perception to the concept of attitude due to respondents being asked to react by giving their opinion on verbal statements defining aggression. Their evaluation of the statements about aggression, whether they agree or disagree is considered to be an expression of their attitude towards aggression.

CHAPTER 5 is devoted to the testing of the psychometric properties of the ATAS. In this international study, the construct validity of the instrument was evaluated. The sample consisted of nurses from five European countries.

CHAPTER 6 presents the final empirical study. Again, this study is an international study, with the aim of exploring the differences in attitude to patient aggression between nurses from five countries. The study starts with an exploration of the personal and ocupational subjective norm indicators of the nurses, which are related to the types of attitude in the total sample. The study concludes with an answer to research question 6 regarding the differences in attitude between nurses from the participating countries.

CHAPTER 7 presents a general discussion of the findings of the dissertation. Its limitations and implications are described and conclusions are drawn regarding the further use of the ATAS.

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Chapter 2
Staff Attitudes towards Aggression in Health Care: a Review of the Literature

G.J. Jansen, Th.W.N.Dassen, G. Groot Jebbink (2005)
Journal of Psychiatric and Mental Health Nursing 12, 3-13

Abstract

The aim of this literature review was to explore the attitudes of health care workers towards inpatient aggression and to analyse the extent to which attitudes, as defined from a theoretical point of view, were addressed in the selected studies. Databases from 1980 up to the present were searched, and a content analysis was done on the items of the selected studies. The concepts 'cognition' and 'attitude' from the framework of 'The Theory of Reasoned Action' served as categories. The self-report questionnaire was the most common instrument used and three instruments specifically designed to measure attitudes were found. These instruments lacked profound validity testing. From a total of 78 items, two thirds focussed on cognitions and only a quarter really addressed attitudes towards aggression. Research was particularly concerned with the cognitions that nurses had about aggression, and attitudes were studied only to a limited extent. Researchers used different instruments, which makes it difficult to compare results across settings.

Keywords: attitudes, health care workers, patient aggression

2.1 Introduction

Aggression directed towards health care workers by patients is a frequently studied phenomenon in health care.
Many studies on aggression involve the assessment of the prevalence and prediction of the behaviour. A limited number of studies, however, focus on the attitudes that health care workers have regarding aggression. Caregivers who are confronted with aggressive behaviour are not confined to workers in psychiatric hospitals. The phenomenon is known and studied to some extent in general hospitals

(Whittington *et al.,* 1996, Wells & Bowers, 2002), and among caregivers outside the hospital environment, for example, among general practitioners (Hobbs, 1991; Ness *et al.*, 2000). Many concepts are used to study nurses' attitudes towards violence; these concepts are 'beliefs', 'views','perception' and 'experience'.

2.2 **Aim of the Study**

It is already known from the literature that the attitude of caregivers towards the patient, and the patient's aggressive behaviour, has a significant impact on the nature of the interventions that will be implemented to manage the behaviour. For this reason the primary concern of this study was to make an inventory of the data regarding the attitudes of health care workers towards inpatients' aggression. The second goal of the study was to gain an understanding of the extent to which attitudes, as defined from a theoretical point of view, were covered by the instruments used in the identified studies. For this reason the study addressed the following questions:

1. What is known from the literature about the attitude of health care workers towards inpatient aggression?
2. To what extent are attitudes, as defined from a theoretical point of view, addressed in research?

2.3 **Methods**

To answer the first question, the literature from 1980 until the present time was reviewed using the key words 'attitudes','beliefs', 'views', 'perception', 'aggression', 'experience' and 'violence'. Several electronic databases, namely Medline, PsycINFO, Pubmed, Cinahl, Invert, and the Cochrane Library, were searched using these key concepts.
To answer the second question, a content analysis of all the items from the questionnaires was carried out. Content analysis is a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use (Krippendorff, 2003, p. 18). The method was applied in this study to describe the characteristics of the message content. The unit of analysis (items) was identified, and that then wasused to categorize the content into meaningful groupings (Polit & Hungler, 1999).
The first step was to make a distinction between items that revealed objective information about aggression and those offering subjective information about aggressive behaviour. Items that revealed information about aggression based on observable phenomena and presented factually, that is, uninfluenced by the person's emotions or personal

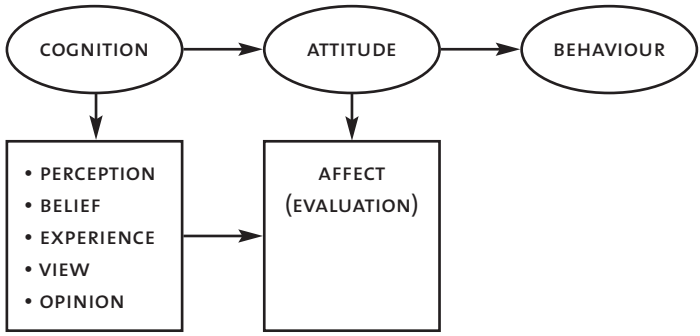

FIGURE 1 THEORETICAL MODEL FOR CONTENT ANALYSIS OF ITEMS

prejudices, were considered to be objective in nature. In contrast, items in the selected studies that offered information about respondents' views on or perception of aggression were labelled as subjective because this information proceeded from, or took place, in a person's mind rather than in the external world.

The second step was to categorize the subjective items into a form of classification. A theoretical model was adopted to enable such a classification (FIGURE 1). The model was based on Ajzen's Theory of Reasoned Action (Ajzen, 1988). The Theory of Reasoned Action is concerned with the 'causal antecedents of volitional behaviour'. It is based on the assumption that intention is an immediate determinant of behaviour, and that intention, in turn, is predicted from attitude and social subjective normative factors. Ajzen suggested that the attitude component of the model is a function of the beliefs or cognitions held about the specific behaviour, as well as the evaluation of the likely outcomes. *Attitude* therefore may be conceptualized as the amount of affect – feelings – for or against some object, or a person's favourable or unfavourable evaluation of an object. *Behaviours* are overt and observable acts, for example, the management of aggression (Ajzen, 1988). *Cognition* is the action or faculty of knowing, or having the knowledge, consciousness, or acquaintance with a subject (Webster Dictionary, 1996). All key words used to identify the data for this study were given a working definition and were fitted into the model. Belief was defined as representing the information a person has about the object; it links an object to some attribute, for example, the object can be a psychiatric patient, and the attribute is that he or she behaves aggressively. *View* can be defined as a particular manner or way of considering, or regarding, a matter or a question, such as a conception, opinion, or theory formed by reflection or study. *Opinion* can be defined as what one thinks about a particular thing, subject, or point, and is a judgement formed or a conclusion reached regarding a belief, view, or notion (Webster Dictionary, 1996). *Perception* was defined as 'the neurophysiological processes, including memory, by which an organism becomes aware of and interprets external and internal stimuli or sensations' (Zebrowitz, 1990). *Experience* was defi-

ned as the knowledge a person has that resulted from actual observation or from what one has undergone (Webster Dictionary, 1996). Given these definitions, perception, belief, view, experience and opinion were considered to be cognitions. However, once a cognition was evaluated as favourable or unfavourable with respect to a given object (agree or disagree), it was regarded as an attitude in correspondence with the Theory of Reasoned Action.
The subjective items were classified into two categories of the model, cognition or attitude. Two researchers began independently to carry out the analysis in order to enhance the objectivity. Differences in classification were discussed to obtain a consensus. The definitions of the concepts served as a guideline in carrying out the analysis.

2.4 **Results**

The literature search produced 22 research papers. TABLES 1 and 2 present an overview of these studies. A distinction was made between studies about views on aggression in predominantly general health care settings (N = 5, TABLE 1) and samples that are mainly from psychiatry (N = 17, TABLE 2).
In both studies, the survey design was the most widely applied and the samples sizes ranged from 29 to 209 in general hospitals and from 24 to 999 in psychiatric settings.

2.4.1 **Instruments**

The self-report questionnaire was the most common instrument used in the studies (Lanza, 1983; Farrell, 1997, 1999; Jansen *et al.,* 1997; Zernike & Sharpe, 1998; O'Connell *et al.,* 2000, Abderhalden *et al.,* 2002; Muro *et al.,* 2002; Whittington, 2002). In four studies interviews were used for data collection (Finnema *et al.,* 1994; Farrell, 1997; Duxbury, 2002; Spokes *et al.,* 2002). In two other studies (Collins, 1994; Erickson & Williams-Evans, 2000) the use of the *Attitudes Toward Physical Assault Questionnaire* is mentioned (Poster & Ryan, 1989). This self-report questionnaire consists of 31 statements on a five-point Likert scale (strongly disagree – strongly agree) focussing on four areas: beliefs and concerns of staff about safety, staff competence and performance, legal issues and patient responsibility for behaviour. Another attitude scale, the *Management of Aggression and Violence Attitude Scale* (MAVAS) was developed by Duxbury (2002). This scale had four subscales, three reflecting explanatory models for aggression (situational, external and internal) and one reflecting views about management approaches.
The Attitudes Toward Physical Assault Questionnaire (Poster & Ryan, 1989) was tested on reliability (test-retest, r = 0.69) and content validity by a literature review and a panel of nurse experts.

The instrument items used by O'Connell (O'Connell *et al.,* 2000) had a high reliability with correlations between 0.7 and 1.0 and was developed from literature and based on expert opinion.
The Violence Scale was tested on reliability (Cronbach's α 0.68–0.91) and interrater reliability (Cohen's Kappa 87%). The construct validity was examined by factor analysis. The factors extracted explained 70% of the variance.
The Attitudes Toward Aggressive Behaviour Questionnaire was developed by Collins. This questionnaire addressed five themes: prediction, patient motivation/ responsibility for aggression, staff anxiety/fear of assault, the need for skilled intervention and staff confidence in managing violent behaviour. The test-retest reliability of the items in the questionnaire used by Collins was 0.972 (Collins, 1994). The reliability of the MAVAS was 0.89 and the item loading on the four subscales was ≥ 0.80.
The construct validity of the Perception of Aggression Scale (POAS) was examined in two studies (Jansen *et al.,* 1997; Abderhalden *et al.,* 2002). In the first study, three scales were constructed. The items of the scales had factor loadings ≥ 0.30 and a reliability ranging from 0.70 to 0.89. In the latter study, a two-factor solution was extracted, with item factor loadings ≥ 0.35 and reliability coefficients of 0.80 and 0.88.

2.4.2 **Classification of Items**

Items from the replica studies in which the instrument was used were excluded from the analysis. With some items there was an initial difference between the two researchers in the way the items were classified. In the study by Zernike (Zernike & Sharpe, 1998) it was not clear whether the data about the resources to manage aggression, the responses to and the outcome of the incident were based on information from records or from respondents' experience and recall. Seventy-eight items were classified, and of these, 10% pertained to objective information and 90% contained subjective information (TABLE 3).
The objective items described factual information about staff characteristics, patient demographics, the responses to and the outcome of the incident. Most items classified as subjective information were cognitive items in the sense that respondents were asked to present their viewpoint based on their knowledge of, and/or experience with, aggression, and also about the causes and types of aggression, the perpetrators, the frequency of exposure to aggression, the management and their reactions to aggression, and actions taken after the incident. Attitude items referred to the agreement or disagreement of respondents to statements about aggression. These statements were related to patient and staff responsibility for aggressive behaviour, feelings of safety, and the definition of aggression. The findings from the studies will be presented in these three categories.

TABLE 1 CONTENT ANALYSIS ON ATTITUDE DIMENSIONS OF ITEMS EVALUATING AGGRESSIVE BEHAVIOUR IN PREDOMINANTLY GENERAL HOSPITAL SAMPLES

Study	*N*	*Sample/design*	*Instrument*		*Items*	*Objective*	*Cognition*	*Attitude*
Farrell (1997)	29	University and clinical nurses grounded theory	Interview	1	Experience VAS rates with types of intrastaff aggression		√	
				2	Empathy for patient aggression			√
Zernike & Sharpe (1998)	68	General hospital wards (psychiatry excluded) survey study	Self-report survey form	3	Demographic information	√		
				4	Reporters, time of day and location of the incident occurrence		√	
				5	Belief about effectiveness of staff training		√	
				6	Nature of aggressive incident		√	
				7	Factors preceding the incident		√	
				8	Management of the incident (verbal, mechanical/chemical)		√	
				9	Resources to manage the incident	√		
				10	Acclimatization to aggression			√
				11	Responses to the incident	√		
				12	Injuries sustained	√		
				13	Feelings experienced			√
Farrell (1999)	270	University school of nursing and nurses from a general hospital survey study	Nine-item self-report questionnaire based on the pilot study of by Farrell (1997)	14	Respondents views on frequency of types aggression (either involved in or witnessed)		√	
				15	Opinion about most distressing type of aggression to deal with		√	
				16	Views on current level of aggression in workplace		√	
				17	Most frequently experienced nature of aggression		√	
				18	Views on actions taken following incidents		√	
				19	Perceived helpfulness of actions taken		√	
				20	Most distressing aspect of nurses' work		√	
Erickson & Williams-Evans (2000)	55	Emergency wards correlational study with survey techniques	Attitudes Toward Patient Physical Assault Questionnaire (Poster & Ryan 1989) (self-report)	21	Assault demographics	√		
				22	Feelings of nurses about safety			√
				23	Opinion (agree/disagree) about patient responsibility for aggressive behaviour			√
O'Connel *et al.* (2000)	209	General hospital (emergency and psychiatric wards excluded) cross-sectional descriptive	23-item self-report questionnaire	24	Opinions about definition of aggression		√	
				25	Frequency of aggressive incidents experienced		√	
				26	Sources of aggression (patients, family, doctors other employees)		√	
				27	Frequency of types of aggression	√		
				28	Emotions experienced related to aggression		√	
				29	Identification of most supportive persons		√	

TABLE 2 CONTENT ANALYSIS ON ATTITUDE DIMENSIONS OF ITEMS EVALUATING AGGRESSIVE BEHAVIOUR IN PREDOMINANTLY GENERAL HOSPITAL SAMPLES

Study	*N*	*Sample/design*	*Instrument*	*Items*	*Objective*	*Cognition*	*Attitude*
Lanza (1983)	40	Nursing assistants and registered nurses of neuropsychiatric wards Descriptive, explorative	Retrospective analysis of reports and a self-report questionnaire	30 Staff and patient characteristics	√		
				31 Outcome for nursing staff		√	
				Intensity ratings by victim of his/her reactions to assault (short- & long-term):			
				32 Biophysical		√	
				33 Emotional			√
				34 Cognitive		√	
				35 Social (change in relationship)		√	
				36 Opinions about predictive cues for assault		√	
1 Poster & Ryan (1989)	184	Psychiatric units (child, adolescent,adult, geropsychiatric)	Attitudes Toward Patient Physical Assault Questionnaire (31 statements related to physical assault)	*Opinion (agree/disagree) about assault in four areas:*			
				37 Patient responsibility for behaviour			√
				38 Staff competence and performance		√	
2 Poster & Ryan (1994)	557	Replication of the study by Poster & Ryan (1989) multiregional sample		39 Legal/ethical issues		√	
				40 Feelings of safety		√	
3 Poster (1996)	999	Multinational sample of nursing staff members in psychiatric facilities all descriptive					
Morrison (1993)	69	Mixed sample of doctoral students in nursing and psychiatric nurses Explorative	Violence Scale (18 item behavioural rating scale; verbal/physical violence towards self, others and property)	*Ratings of seriousness of violent behaviour by doctoral students and psychiatric nurses in the categories:*			
				41 Violence to self		√	
				42 Verbal and physical violence to others		√	
				43 Violence to property		√	
Finnema *et al.* (1994)	24	Nurses from one psychiatric hospital Explorative	Interview (analysis: constant comparative method)	*The opinion of nurses about:*			
				44 Definition of aggression		√	
				45 Causes of aggression		√	
				46 Interventions for aggression		√	

TABLE 2 CONTINUED

Study	*N*	*Sample/design*	*Instrument*	*Items*	*Objective*	*Cognition*	*Attitude*
Collins (1994)	31	Pre-post test of a programme to prevent and manage aggression	Attitudes Toward Aggressive Behaviour Questionnaire Three items of the Attitudes Toward Patient Physical Assault Questionnaire Poster & Ryan (1989)	*Opinion (agree/disagree) on 12 statements of aggression clustered into five themes:*			
				47 Prediction			√
				48 Patient motivation/responsibility for aggression			√
				49 Staff anxiety/fear of assault			√
				50 Need for skilled intervention			√
				51 Staff confidence in managing violent behaviour			√
Lanza & Kayne (1995)	26	Explorative	Interview with most closed ended questions (based on pilot study Lanza 1983	*Congruency between opinion of patient and nurse about:*			
				52 Objective information		√	
				53 Subjective information		√	
Jansen *et al.* (1997)	279	Nurses from five psychiatric hospitals	Perception of Aggression Scale (POAS), based on Finnema *et al.* (1994)	54 Opinion (agree/disagree) of respondents on statements about aggression on the 60-item questionnaire (POAS)			√
Muro *et al.* (2002)	90	Nurses from 106 inpatient psychiatric wards	POAS	*Opinion (agree/disagree) of respondents on 32 statements about aggression*			√
Abderhalden *et al.* (2002)	729	Survey	POAS	*Opinion (agree/disagree) of respondents on 32 statements about aggression*			√
Whittington (2002)	37	Nursing staff of a community mental health trust crosssectional survey	POAS	*Opinion (agree/disagree) of respondents on 32 statements about aggression*			√
Wynn & Bratlid (1998)	85	62 nurses and 23 therapists from a university psychiatric hospital survey	Questionnaire	55 Types of assault experienced		√	
				56 Reported absence to work due to assault		√	
				57 Opinion about difference between assaultive behaviour of male and female patients		√	
				58 Opinion about preference of patient for physical or pharmacological restraint		√	
				59 Main reasons given for physical restraint		√	
				60 Opinion about time of day aggression takes place		√	
				61 Belief about the influence of physical restraint on patient's recovery		√	

TABLE 2 CONTINUED

Study	*N*	*Sample/design*	*Instrument*	*Items*	*Objective*	*Cognition*	*Attitude*
Nolan *et al.* (1999)	375	Survey Postal questionnaire		62 Characteristics of the victims	√		
				63 Experienced exposure to violence		√	
				64 Identification of perpetrators of violence		√	
				65 Severity of violent act		√	
				66 Experiences with sources of support after exposure to violence		√	
Duxbury (1999)	66	34 mental health nurses from acute inpatient settings 32 general nurses from acute medical/surgical wards explorative (critical incident technique)	Unstructured questionnaire	*Experiences of nurses with violent patients and:*			
				67 Types of aggression encountered		√	
				68 Attribution of aggression		√	
				69 Opinion about causes		√	
				70 Management approaches to aggression		√	
Duxbury (2002)	162	80 patients 72 nurses 10 medical staff members evaluation	• Attitude Scale: The Management of Aggression and Violence Attitude Scale (MAVAS) • Incident form: MSOAS, modified version of SOAS (Yudofski *et al.* 1986) • Semi-structured interview	71 Views of patients and staff about causes of aggression			√
				72 Reported incidence		√	
				73 Reported cause		√	
				74 Views on management approaches		√	
Spokes *et al.*(2002)	108	Qualified and unqualified mental health nurses of 10 psychiatric admission wards, 2 intensive care units and 1 low secure unit. qualitative	Semi-structured interview with the Staff Interview Form (SIF)	75 Views about staff related precursors to violent patient incidents (e.g. administration of medication, detention under the Mental Health Act)		√	
				76 Suggestions by respondents for training needs		√	
				77 Views about types of staff action leading to the incident		√	
				78 Views about own clinical, interpersonal and personalskills to prevent and manage aggression		√	

TABLE 3 CLASSIFICATION OF ITEMS (n = 78 ITEMS)

	Objective	Subjective	
		Cognition	Attitude
Number of items (%)	8 (10)	53 (68)	17 (22)

2.4.3 **Objective information**

Only the study by Nolan provided information about some staff characteristics. A comparison was made of the victims and non victims and it was found that three quarters of the victims were 39 years of age or younger. A significantly higher proportion of victims had only 6–10 years of experience and were less satisfied with their work (Nolan *et al.,* 1999).

The occurrence of aggression in patients in a general hospital was identified to be related to the length of hospitalization: 50% of the patients became aggressive within the first 2 days of admission, 49% of the aggressive patients had no medical history, 15% had an organic brain syndrome, 16% had a secondary psychiatric diagnosis and 20% were intoxicated. In the 68 incidents reported in the study, 62% of the patients involved were male (Zernike & Sharpe, 1998). In a study on neuropsychiatric wards it was found that 32 male patients were involved in 40 assaults, with a mean age of 58 years and the most common diagnoses were paranoid schizophrenia, Alzheimer's disease and organic brain syndrome (Lanza, 1983). The response to such incidents was that a doctor and the hospital security service were notified (Zernike & Sharpe, 1998).

2.4.4 **Cognitions about aggression**

Nurses' exposure to violence

Erickson reported that 82% of the emergency ward nurses in the study said they had been physically assaulted during their careers and that 11% experienced more than 15 assaults during their careers (Erickson & Williams-Evans, 2000). O'Connell *et al.* (2000) found that 95% of the nurses in a general hospital had experienced verbal aggression in the last 12 months and 80% had experienced physical aggression in the last 12 months. Farrell (1999) found that 30% of the nurses reported that they had experienced aggression on a nearly daily basis. Nurses with the longest work experience were assaulted the most, and 60% were assaulted by patients they had known for several months (Lanza, 1983). Nurses were exposed to violence significantly more often during their careers than psychiatrists (Nolan *et al.,* 1999). As for the time of the day, nurses believed that most incidents took place during evening and night shifts (Zernike & Sharpe, 1998). In the study by Wynn, however, 72% reported that aggression took place during the afternoon and evening more than at any other time of the day (Wynn & Bratlid, 1998).

Causes and types of aggression

The patients themselves, environmental factors, treatmentrelated factors and interactional factors were all identified by respondents as causes of violent behaviour. Patient characteristics that were mentioned were sex – male patients are more physically violent towards others whereas females direct the violence more against themselves (Wynn & Bratlid, 1998); age (20–39 years) (Zernike & Sharpe, 1998); mental state during alcohol withdrawal (Zernike & Sharpe, 1998); and psychopathology such as dementia, paranoid schizophrenia, Alzheimer's disease, and organic brain syndrome (Lanza, 1983; Duxbury, 1999). Environmental factors that could lead to an aggressive incident were identified as ward turmoil, an inadequate number of staff (Lanza, 1983), the lack of privacy, the lack of freedom on closed wards, irritations between patients (Finnema *et al.,* 1994), inadequate organization (Duxbury, 2002), a vague unit policy (Finnema *et al.,* 1994), and the circumstances surrounding the illness of the patient (Farrell, 1997). Accident/emergency wards were found to have a high prevalence of aggression (Lanza, 1983; Zernike & Sharpe, 1998).

Treatment-related factors that could possibly increase the incidence of violence were reported to be the use of restrictive measures such as restraint, seclusion and a change of medication; the length of hospitalization (< 2 days) (Zernike & Sharpe, 1998); the controlling style of nursing staff as experienced by patients (Duxbury, 2002); the denial of something to a patient; and help with the activities of daily life (Zernike & Sharpe, 1998). Problematic interaction was reported by Duxbury (2002). In the study by Finnema this was specified by reporting the fact that the staff behaved inadequately: they did not listen to patients; they failed to keep appointments; they deliberately provoked, neglected and interrupted patients; and they did not understand patients and asked too much of them (Finnema *et al.,* 1994).

Spokes *et al.* (2002) found that majority of the interviewed staff had weaknesses in dealing with patient violence. Actions leading or contributing to an incident mentioned by the nurses in this study were goal prevention, being confrontational, giving medication, being rude or making personnel comments.

According to the respondents, verbal abuse, verbal threats and physical assault such as biting, kicking, hitting, scratching, grabbing, pinching, spitting or pulling hair were the most common types of aggression experienced (Wynn & Bratlid, 1998; Zernike & Sharpe, 1998; O'Connell *et al.,* 2000; Duxbury, 2002).

The staff and the patients were found to have opposing views about the causes of patient aggression. The patients believed more in the fact that interaction was the cause of aggression (Duxbury, 2002). The staff believed less that interaction was the cause. In the same study, views about the management of aggression also varied between staff and patients. Staff wanted 'seclusion' to be continued whilst the

patients did not. Patients and staff disagreed on the effectiveness of de-escalation techniques.

Perpetrators

This study is concerned with inpatient aggression. In mental health settings patient-to-nurse aggression was the most prevalent type of aggression. Farrell studied different types of intra-staff aggression in general hospitals. The most prevalent type of aggression in this setting was doctor-to-nurse aggression, followed by patients' relatives to nurses, and patients' relatives to nurses over the phone. Patient-to-nurse aggression came fourth in the rank order of prevalence (Farrell, 1999).

Management of aggression

Several management approaches were mentioned by the respondents. These included pharmacological interventions such as sedation, and physical restraint in the general hospital setting (Zernike & Sharpe, 1998). In the psychiatric setting other types of interventions were reported, such as talking to the patient, distracting and paying attention to the patient, seclusion, restraint and medication, or removal from the situation and de-escalation (Finnema *et al.,* 1994; Duxbury, 1999). Respondents believed there was a need for skill to prevent and manage aggression adequately (Collins, 1994). A majority of patients said they preferred pharmacological restraint to physical restraint (Wynn & Bratlid, 1998). In the study by Zernike, respondents were asked to indicate how many staff members were required to contain an aggressive patient. It was reported that in 54% of the incidents the patient was contained by one to two staff members (Zernike & Sharpe, 1998).

Injuries

Zernike reported that 5% of the 68 staff members of the general hospital sample had a visible injury, two of which required treatment, and 4% of the 68 incidents resulted in property damage (Zernike & Sharpe, 1998). Lanza found that 21% of the 40 registered nurses and nursing assistants received a life-endangering injury or a combination of several injuries: 5% were unconscious, 10% had fractures, 26% had lacerations, and 38% were sore or bruised. The staff who received the most severe injuries indicated less fear of the patient who assaulted them than staff who were less severely injured. Most victims received first aid or outpatient treatment (Lanza, 1983).

Data about days of sick leave as a consequence of the exposure to aggression varied. The study by Wynn (Wynn & Bratlid, 1998) found that most victims (78%) did not have to be absent from work because of the assault, 3% had to be absent for 1 day or less and 9% had to be absent for more than 1 day. The study by Lanza showed that 55% did

not lose any time from work and that sick leave had a range from 1 day to 1 year (Lanza, 1983). Erickson & Williams-Evans (2000) found that about 4% of emergency ward nurses had 1 or more days of sick leave.

2.4.5 **Attitude towards aggression**

Definition of aggression

One study that addressed the issue of the definition of aggression was found (O'Connell *et al.,* 2000). In this study the issue is conceived as types of aggression, i.e. verbal abuse, physical abuse and intimidation. Defining aggression in this way may be regarded as a structural definition. A more conceptual approach to defining aggression was found in the studies by Finnema (Finnema *et al.,* 1994) and the 'Perception of Aggression Scale' studies (Jansen *et al.,* 1997; Abderhalden *et al.,* 2002; Muro *et al.,* 2002). These studies constructed different scales reflecting different perspectives of nurses on the subject of aggression. These perceptions were labelled as 'normal reaction', 'violent reaction' and 'functional reaction' (Jansen *et al.,* 1997) or 'aggression as dysfunctional/undesirable phenomenon' and aggression as functional/comprehensible phenomenon (Abderhalden *et al.,* 2002), and 'tolerance of aggression' (Whittington, 2002).

Safety

Of the 55 nurses working on emergency wards, 34% indicated that they felt safe most of the time and 2% felt safe all the time (Erickson & Williams-Evans, 2000). In a study among nurses on general hospital wards more than 50% of nurses felt they had become acclimatized to aggression and accepted it as part of the work (Zernike & Sharpe, 1998). In the same study, staff reported that they felt threatened as a result of the incident on 85% of the occasions. In the studies on psychiatric wards about 80% said they felt safe from physical assault most or all of the time.

Reactions of staff

Several studies focussed on the emotional and physical reactions of staff to an aggressive incident. The feelings of respondents relating to verbal and physical aggression were frustration, anger, feeling hurt, fear, resentment, helplessness, anxiety and irritation (Zernike & Sharpe, 1998). Short-term reactions of the victims included anger, anxiety, helplessness, apathy, depression, self-blame, dependency, and fear of other patients. The long-term reactions indicated by respondents were a change in social relationships with co-workers, difficulty returning to work, headaches and body tension (Lanza, 1983; Poster & Ryan, 1994). Colleagues were felt to be the most important source of support for the victims after exposure to violence (Nolan *et al.,* 1999; O'Connell *et al.,* 2000).

Patient and staff responsibility for aggressive behaviour
Two thirds of the psychiatric nurses believed that mentally ill patients were not responsible for all their behaviour. The majority of respondents agreed with the statement that staff could expect to be physically assaulted. Most psychiatric nurses said that they believed that physical assault is not the result of staff performance deficiency, clinical incompetence or personality traits of the nurse (Poster & Ryan, 1989, 1994; Poster, 1996). Nurses from psychiatric settings were uncertain about the ethical appropriateness of taking legal action against assaultive patients (Poster & Ryan, 1989).

2.4.6 **Attitude and staff characteristics**

A few studies attempted to link a type of attitude towards aggression to staff characteristics. Muro studied the relationship between the perception of aggression of nursing students and the presence of psychiatric morbidity and personality disorders. No significant relationship with these factors was found, only scores on the perception of violence differed significantly between male and female students. Women agreed more than men that aggression was a violent reaction (Muro *et al.,* 2002). In another study that used the same perception scales, no relationship was found between the perception of aggression and patient or staff characteristics (Abderhalden *et al.,* 2002). Whittington (2002) found that staff with more than 15 years of experience were more tolerant towards aggression than those with fewer years of experience. A tolerant attitude proved to correlate significantly with all three subscales of the Maslach Burnout Inventory-Human Services Survey. Tolerance was found to correlate negatively with 'exhaustion' and 'depersonalisation', and positively with 'personal accomplishment'.
In the study by Poster & Ryan (1989), the relationship between attitudes and some demographic data of nurses was examined. These included age, sex, grade, type of ward and previous assault. Attitudes proved to be consistent for all demographic factors.

2.5 **Conclusion**

Most items appeared to be related to cognitions of nurses about aggression. Some of the items were labelled as objective and about one quarter of all items were by nature a question of attitude, meaning that these items expressed an evaluation made by nurses of aggressive patient behaviour. Objective data included staff data such as age and years of experience, and patient characteristics included age, diagnosis, and length of hospitalization. The opinions, ideas, beliefs and views (cognitions) that nurses had about patient aggression were related to the extent of exposure to aggression experienced,

the causes and types of aggression, the perpetrators, the management of aggression and the severity of injuries sustained. This review shows that research on attitudes towards aggression in health care addresses diverse items. The aim of this study was to research the literature about information regarding the attitudes of nurses towards aggression, and therefore the conclusion will be confined to this category of findings.

Most attitudinal items were found in three instruments: the Attitudes Toward Patient Physical Assault Questionnaire (Poster & Ryan, 1989), the Attitudes Towards Aggressive Behaviour Questionnaire (Collins, 1994) and the POAS (Jansen *et al.,* 1997). The Attitudes Toward Patient Physical Assault Questionnaire (Poster & Ryan, 1989) and the Attitudes Towards Aggressive Behaviour Questionnaire both focussed on identical themes, i.e. the attitude towards patient responsibility for aggression, staff safety and competence in managing violent behaviour. The POAS is concerned more with the appraisal and characterization by nurses of patient aggression than the first two instruments. This focus is reflected by the subscales that constitute the POAS. Except for the 'years of working experience', staff characteristics appeared to be independent of attitude.

The use of various instruments makes it difficult to compare the results of attitude studies across settings in general and psychiatric hospitals. The psychometric properties of the different instruments in use are not well established. Most scales lack profound validity testing. To give a more scientific basis to attitude studies of aggression, the validity and reliability issues should be addressed in future studies.

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Chapter 3
The Perception of Aggression

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Summary

Several academic and clinical disciplines are involved in clarifying the concept of aggression by formulating operational and descriptive definitions.
In this paper the validity of the definitions of aggression, reported by nurses in an earlier qualitative study is examined, using a survey approach among nurses of five general psychiatric hospitals in the Netherlands. Three dimensions of aggression were found; aggression as a normal, adaptive reaction, aggression as a violent reaction and aggression as a functional reaction. These findings match the results of the qualitative study. It was tested if there was a relation between personal and environmental characteristics of the nurses and the way they perceive aggression. The gender of the respondents, the setting they were working in, the degree to which they used constraint measures and wether patient were voluntarily admitted or not, were related to the perception of aggression. The study points out that different instruments are needed to measure the prevalence or incidence of aggression and to diagnose or to intervene on aggression in clinical practice.

key words: psychiatric nursing, aggression, perception

3.1 Introduction

In recent years aggression has become an important issue in health care. Multiple studies have been carried out to examine the prevalence of aggressive incidents in psychiatric settings. Yet it appears to be difficult to offer reliable data about the prevalence of aggression. The findings of the previous studies indicate that there is much variety in the number of aggressive incidents.

3.2 **Literature Review**

After comparing the number of formal incident reports of assaults on staff with the assaults on staff noted in the daily ward reports at a psychiatric hospital, (Lion *et al.,* 1981) concluded that five times as many assaults were recalled by the respondents as were formally reported by them. A study carried out in 39 general psychiatric hospitals over a period of 6 months showed that the number of reports by nurses about aggressive acts, based on educated guesses, ranged from 1 incident in one hospital to 1120 in another (Geneeskundige Inspectie Geestelijke Volksgezondheid, GIGV, 1992). Underestimation of the actual incidence is confirmed in a study by Dekker (1993). Formal registration showed that 218 aggressive incidents had taken place in one psychiatric hospital in one year, while, according to nurses who were interviewed, 4300 incidents had occurred in the same period. According to Kay (1988) the different outcome from studies about the prevalence of aggression is due to lack of reliable measuring instruments. Important explanations for the diversity found with respect to the prevalence of aggression are the incomparability of the patient populations involved in the studies and the way aggressive incidents are registered. Another reason mentioned in literature for the variety in the number of reports about aggressive acts by patients is lack of clarity about the concept of aggression (Davis, 1991). James (1990) concludes that there is no generally accepted definition of aggression. This last reason underlies this study.

Several studies offer conclusions about the role of some personal and environmental characteristics of staff members and patients in inpatient settings. A study by Carmel (1989) e.g. shows that male nursing staff were nearly twice as likely to be injured than female staff members and nearly three times as likely to suffer containment-related injuries. There is considerable agreement that wards with less stable patients (e.g. admission and locked wards) are most often the scenes of violence (Fottrell, 1980).

Conflicting data exist as for the time of day when most violent acts occur. Fottrell (1980) found that most physical attacks occurred in the morning, when there were fewer structured activities. Nijman (1995) found a cumulation of aggressive incidents taking place in the afternoon. Infantino (1985) found a statistically significant difference in the incidence of assaults on staff members who had received aggression control training and those who had not. Yet the relevance of staff training programs to prevention of patient assaults and reduction of assault-related injuries has not been conclusively illustrated.

Involuntary admission is mentioned by Whitman (1976) as another factor attributing to the increased risk of assault. Carmel (1989) found that more recently hired and inexperienced staff were more likely to

be injured from assault. Soloff (1983) and Carmel (1989) found that attacks on staff often occurred when they were administering medication or restraining agitated patients.

3.2.1 **Definitions of Aggression**

In literature many definitions of aggression can be found (Tedeschi, 1983; Schuur, 1987; Alexander, 1991). Aggression is defined both in a positive manner (Bach and Goldberg, 1974; Bakker and Bakker-Rabdau, 1980) and in a negative way (Tedeschi, 1983; Schuur, 1987). However, it is more common to define aggression and violence as manifestations of disrupted or negative behaviour (Schuur, 1987).
A qualitative study by Finnema (1994) focused on the characterization and perception of patient aggression by nurses working on psychiatric wards of one psychiatric hospital in the Netherlands. Five categories of definitions emerged from that study: definitions containing a value statement on aggression, definitions describing a form of aggressive behaviour, definitions describing the feeling aggression arouses in nurses, definitions describing a function of aggression, definitions describing the consequences of aggression.

3.2.2 **Research Questions**

The aim of this study was to explore the dimensions psychiatric nurses perceive in aggression. That is why the research was founded on the following questions:

1. how do qualified psychiatric nurses perceive the concept of aggression?
2. is there a relationship between the perception of aggression and their personal and environmental characteristics?

3.3 **Methods**

3.3.1 **Design**

The design used for the purpose of the study, was a survey sample approach. The survey was used as a method to gather information on the opinion of nurses about aggression.

3.3.2 **Subjects**

The population consisted of registered nurses working in general psychiatric hospitals. In 1986 there were 43 psychiatric hospitals and 8822 registered psychiatric nurses (NZI, 1984). No data are available about the proportion of nurses working in specific settings. The sample consisted of five general psychiatric hospitals, geographically spread over the country; two in the western region, one in the east and the south and one hospital in the northern part of the country.

The sample was also stratified by the setting; the questionnaires were distributed in four different settings of every participating hospital: admission wards, short stay and long stay wards and rehabilitation settings.
From the 360 questionnaires that were mailed to the hospitals, 274 were completed and returned, giving a response of 76%. All subjects were psychiatric nurses. Of the respondents 136 were male nurses and 146 were female. Their average number of years of working experience was 10.7, SD 6.8 years, with a range of 29 years.

The majority of the respondents (N=197) was educated in a hospital based program, and 35 respondents had a baccalaureate degree. In the Netherlands nurses from both groups are registered nurses. The third group of respondents (N=55) can be compared with the licensed practical nurses in the USA. Nearly half of the respondents (49%) had had an aggression management training. Most of the nurses (61%) worked part-time, 39% had a full-time job. Of the respondents 81% were charge nurses, 19% had staffing tasks or a combination of staffing and practice tasks. The majority of the nurses (86%) worked in day shift as well as in night shift.
As to the setting, 34% of the nurses were employed at an admission ward, 29% at a short stay ward, 22% at a long stay ward and 15% were working in a rehabilitation setting.

Respondents were asked to rate the proportion of the patient population that was involuntary admitted and to indicate to what extent they apply constraint measures (like seclusion or fixation) to their patients (TABLE 1).

TABLE 1 FREQUENCY OF INVOLUNTARY ADMISSIONS AND APPLICATION OF CONSTRAINT MEASURES (N = 279).

frequency	% of total	% of total
allways	< 1	5
often	28	27
sometimes	40	36
rarely	16	17
never	15	14

It can be concluded from the frequencies presented in TABLE 1, that involuntary admissions usually occurred sometimes on the wards and constraint measures were used with caution.

3.3.3 **Data-collection instrument**
Data were obtained by means of a questionnaire. The questionnaire consisted of a set of items. The items used to measure perception of aggression by nurses consisted of 60 definitions or statements regar-

ding aggression. The definitions were listed in random order, that is without any theoretical structure. From these 60 definitions 46 were selected from the pilot study (Finnema *et al.,* 1994). The other 14 definitions were added from literature. Every definition was given a Likert-type scale ranging from strongly agree given value 5, to strongly disagree given value 1.

3.3.4 **Procedure**

The questionnaires were mailed to the hospitals and distributed by a contact person of the hospital to all nurses working on the selected wards of the participating hospitals. When the questionnaire was filled in, it was returned to the contact person. On average it took half an hour to complete the questionnaire.

3.3.5 **Statistics**

Mokken scale analysis was used to identify what dimensions nurses conceptualize regarding aggression. This technique permits the use of summated scores on each factor and only requires that the items are measured at an ordinal level (Mokken, 1971; Molenaar *et al.,* 1994). Items with a Hg scalability < 0.30 were dropped.

Multiple regression analysis (method backward) was performed, to find a relation between the definition scales (as the dependent variables) and the personal or environmental characteristics (as the independent variables).
Interaction effects between the personal and environmental variables were tested by a χ^2 test. Differences within groups were tested by means of a T-test or by means of one way analysis of variance (LSD procedure).

3.4 **Results**

3.4.1 **Perception of aggression**

Three scales were identified. As a result of the scale construction, the initial set of 60 items in the questionnaire was reduced to 29 items. Cronbach's α, as a measure of internal consistency of the three scales, was calculated. Cronbach's α must be related to the number of items in the scale to determine the average interitem correlation. For each of the three scales the average interitem correlation was at least 0.30.

TABLE 2 HG SCALABILITY COEFFICIENTS FOR STEPWISE SELECTION OF SCALES 1, 2, 3 (H > .30) ON THE DEFINITION OF AGGRESSION ITEMS.

ITEM	HG
AGGRESSION:	
ACCEPTABLE NORMAL REACTION; SCALE COEFFICIENT H = .46, RELIABILITY RHO = 0.89	
– has a positive impact on the treatment	.45
– is constructive and consequently acceptable	.53
– is all human energy necessary to attain one's end	.37
– is necessary and acceptable	.53
– reveals another problem the nurse can take up	.32
– improves the atmosphere on the ward; it is beneficial to the treatment	.43
– is an acceptable ways to express feelings	.52
– is communicative and as such not destructive	.46
– is a normal reaction to feelings of anger	.46
– is constructive behaviour	.43
– an adaptive reaction to anger	.45
– must be tolerated	.51
VIOLENT REACTION 2; SCALE COEFFICIENT H = .36, RELIABILITY RHO = 0.84	
– is violent behaviour to others and self	.34
– is directed at objects or self	.35
– is to beat up another person through words or actions	.34
– is threatening others	.34
– is an inappropriate, nonadaptive verbal/physical action	.42
– is a disturbing interference to dominate others	.38
– is to hurt others mentally or physically	.41
– is a physical violent action	.35
– is used as a means of power by the patient	.36
– is every expression that makes someone else feel unsafe, threatened or hurt	.37
– verbal aggression is calling names resulting in hurting	.32
FUNCTIONAL REACTION, SCALE COEFFICIENT H = .35, RELIABILITY RHO = 0.70	
– is an expression of emotions, just like laughing and crying	.32
– is an emotional outlet	.32
– offers new possibilities for the treatment	.33
– is an opportunity to get a better understanding of the patient's situation	.41
– a way to protect yourself	.34
– will result in the patient quietening down	.37

The interpretation attached to the items of the Mokken-scales is, that the first scale represented aggression as a normal and acceptable reaction to feelings of anger. The items of the second scale suggested that aggression was expressed by means of violence. If aggression was violent, it was experienced as threatening. Scale 3 described the function aggression has for the patient and the effects it has on his/her treatment.

Summated scores of each respondent on the three factors were calculated.

TABLE 3 SUMMATED SCORES ON THE DEFINITION SUBSCALES

	N	$\bar{x}$	SD	minimum-maximum score	Cronbach's α
normal reaction	253	38.8	7.8	14-56	0.87
violent /hreatening reaction	260	34.4	7.8	12-54	0.85
functional reaction	274	19.1	3.6	6-25	0.69

As the normal reaction subscale and the violent reaction subscale each consisted of 12 items, the summated scores on these scales could vary from 12 (minimum score) to 60 (maximum score). The subscale functional reaction had 6 items, so scores on this scale could vary from 6 to 25.

3.4.2 **Personal and environmental characteristics**

Regression analysis showed no significant relationship with the perception of aggression on the variables: years of working experience, type of professional education, training on aggression management, percentage of employment, care or staffing tasks, shift schedule (daytime, nighttime) and the hospital nurses were working in. With respect to four variables however, a statistically significant relation was found. The χ^2 test showed there were no interaction effects between these variables ($p > 0.05$).

Aggression as a normal reaction

The gender of the respondents proved to be significant variable in the regression analysis on this scale (ß 2.48, R^2 0.04, $p < 0.05$).

Aggression as a violent reaction

In the regression analysis, the setting (ß − 2.33, R^2 0.05) and whether patients were admitted voluntarily or not, were significant on this scale (ß 1.10, $p < 0.05$).

Aggression as a functional reaction

The gender of the respondents (ß 0.99, R^2 0.04) and the degree to which nurses use constraint measures, proved to be significant variables in the regression analysis (ß − 0.47, $p < 0.05$).

With respect to the degree to which constraint measures were applied, a significant difference in scores on the scale of aggression as a functional reaction was found. Nurses who stated they never apply constraint measures were more positive about this dimension of aggression (mean 0.58, $p < 0.05$) than nurses who sometimes did use constraint measures like separation or fixation (mean − 0.32, $p < 0.05$). For the other three variables, no statistically significant differences between the groups were found.

3.5 **Discussion**

Three distinct perceptions of aggression were identified in this study; aggression as a normal reaction to feelings of anger, aggression as a violent and threatening reaction and aggression as a functional reaction. It can be concluded that according to nurses, aggression is rather a multi- than an unidimensional phenomenon. The perceptions found in the study match the findings of Finnema's study (1994), mentioned earlier.

As to the internal validity of the study, it is concluded that the reliability of the subscales was sufficient. The average inter-item correlation of 0.30 was sufficient. The drop out proportion of 24% with this type of research is a very acceptable one, and might be the result of nurses not working at the wards at the time of the data-collection, due to being on holiday, having some days off or illness. The sample of the study was representative for the entire population because the participating hospitals were regionally spread and the sample was stratified by the setting nurses were working in. This means that there were no severe threats to the external validity and the findings can be generalized to the study population.

In this study, six personal characteristics (e.g. training on aggression management) and one environmental characteristic of the respondents (hospital working in), often associated in literature with the occurrence of aggression, could not be related to the way nurses perceive aggression. At the start of the study, it was expected these characteristics would have an impact on the perception of aggression. It was assumed e.g. that trained nurses would think more positive about aggression than those nurses who were not trained, because aggression trainings focus on dealing with aggression in a constructive way for both nurse and patient.

For four of the eleven personal and environmental variables associated in literature with the occurrence of aggression, a relationship was found with the way aggression was perceived. Nurses working on wards where constraint measures were not applied, proved to be more positive about the functional dimension of aggression than nurses on wards where fixation and separation occurred. This finding could be explained by assuming that nurses who worked on a ward where seclusion and fixation were applied, intervened this way because aggression of patients manifested it self by violent behaviour. Nurses however, who did not use constraint measures on their wards, because aggression was not manifested by the use of violence, perceived aggression as being more normal and functional.

As mentioned before, studies to estimate the incidence of aggression offered different outcomes. If aggression is perceived as violent behaviour, nurses will report on the occurrence of this aggressive incident. However, if aggression is perceived as normal or functional behaviour, the signs or symptoms of aggression will be observed by nurses, but probably they are less encouraged to intervene and to report on these types of 'aggressive' acts. The operalizations of aggression within instruments such as the SOAS (Palmstierna, 1990) and the MOAS (Kay *et al.,* 1988) are more sensitive to manifestations of aggression than to the intention of the behaviour. The present study points out that existing instruments to measure aggression are more appropriate to use in research than at a patient level to diagnose aggression. To develop a valid instrument at the individual level, a study should be undertaken to see if discriminative clusters of signs and symptoms can be found that are linked to these three different perceptions of aggression.

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Chapter 4
Psychiatric Nurses' Attitudes towards Inpatient Aggression

Preliminary Report of the Development of Attitude Towards Aggression Scale (ATAS)

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in press: Aggressive Behavior

Abstract

Professional skills to adequately manage patient aggression are a prerequisite for nurses working in psychiatric hospitals. These 'technical' skills, however, are necessary but not sufficient for an effective nurse intervention. The nurses' attitude towards client aggression also contributes to their response to the patient's behaviour. In order to study the domains (types) of attitudes towards aggression, a sample was taken of nurses working in the fields of general psychiatry (N=288), psychiatry for children and adolescents (N=242) and psychogeriatrics (N=88). A cross-sectional survey design was adopted for the study. The Attitudes Towards Aggression Scale (atas) consisting of 32 items is presented, representing three types of attitudes towards aggression: aggression as a 'harming' reaction, a 'normal' and a 'functional' reaction. The strongest predictors of the type of attitude respondents had towards the aggressive behaviour of their clients were **1** the field, **2** the setting they worked in, **3** the gender and **4** the type of shifts they predominantly had. Although the measure of domains of nurses' attitudes towards aggression needs further psychometric testing, it can be a useful tool in clinical practice for the assessment of staff attitudes towards aggression. This can support the decision-making about the management of aggressive behaviour on a ward.

keywords: aggression, mental health, attitude, scale

4.1 Introduction

According to a large number of theoretical and empirical studies on violence in psychiatry, the occurrence of violent incidents, as well as their management, has to be regarded as a product of the inter-action of several variables. Among them are patient variables, e.g. psychopathology, (Yesavage, 1983; Swanson *et al.,* 1990; Beck *et al.,* 1991; Oster *et al.,* 2001; Tardiff, 1984), environmental or setting variables, e.g. ward characteristics (Depp, 1976; Bouras *et al.,* 1982; Nijman and Rector, 1999; Bradley *et al.,* 2001; Kumar and Bradley, 2001; Schanda and Taylor, 2001), interactional variables, e.g. adverse stimulation, (Sheridan *et al.,* 1990), and staff variables, e.g. education and attitudes (Schanda and Taylor, 2001). The current study focuses on one of these staff variables: the attitude of nurses towards aggression.

4.1.1 Attitudes towards aggression

There is only limited information about the attitudes nurses have towards aggression. A qualitative study by Finnema (1994) focused on the characterisation of patient aggression by nurses working on psychiatric wards in a Dutch psychiatric hospital. Four categories of definitions emerged from that study: definitions containing a value statement about aggression, definitions describing a manifestation of aggressive behaviour, definitions describing a function of aggression, and definitions describing the consequences of aggression. In three studies by Poster and Ryan, data was collected with 'The Attitudes Toward Patient Physical Assault Questionnaire'. The statements in the questionnaire addressed four components: safety concerns, frequency of assault, staff performance and legal issues. With regard to safety concerns, the majority of respondents disagreed with the statement that it is unacceptable for staff members to protect themselves when being assaulted. With respect to staff performance, the majority disagreed that assault was the result of staff performance deficiency, clinical incompetence and personality traits of the nurse (Poster and Ryan, 1989, 1994; Poster, 1996). Crowner (1994) interviewed inpatients who had been identified as assaulting other patients. The results based on a sample of 40 patients who consented to be interviewed suggested that in most cases some form of provocative behaviour was attributed to the victim. Lanza (1994b) examined the congruence of the accounts of assaultive patients and staff victims concerning assault episodes. There was congruence in at least half of the respective accounts regarding objective information (nursing staff's role, number of people involved in the assault, patient's actions, setting limits and physical contact). There was disagreement in more than half of the accounts for all subjective information examined (quality of relationship, number of patients who tried to intervene, content of patient's speech, effect, cause of the incident, nature of the situation

prior to assault). Gillig (1998) examined attitudes of patients and staff to the causes and emotional impact of verbal and physical aggression and what coercive measures were endorsed. The study revealed that staff were more likely than patients to attribute aggression to intoxication. A majority of staff also saw patient aggression as a learned behaviour rather than associated with psychiatric symptoms or personality disorder. Patients attributed more aggression to staff than the staff did themselves. Whittington (2002) found that staff with more than 15 years experience were significantly more tolerant towards aggression than those with fewer years experience.

4.1.2 **Staff variables and the occurrence of aggression**

Several staff factors related to the occurrence of aggression on psychiatric wards are reported in the literature. Among them is gender. The conclusions about gender and its associated higher risk of assault are inconclusive. In a study by Carmel and Hunter, male nursing staff were almost twice as likely as female staff to be injured and nearly three times as likely to receive containment-related injuries (Carmel and Hunter, 1989). In contrast, in two other studies no differences were found between male and female nurses and their assault rate (Whittington, 1994; Cunningham *et al.,* 2003).

The impact of education was considered, and a low level of qualification was found to be associated with higher rates of assault (Whittington and Wykes, 1994; Cunningham *et al.,* 2003). In several studies it was found that the more inexperienced staff were, the more they were exposed to assaults (Hodgkinson *et al.,* 1985; Whittington *et al.,* 1996; Cunningham *et al.,* 2003). Cunningham found that an increased number of hours of contact between nurses and patients resulted in more injuries being sustained (Cunningham *et al.,* 2003). Executive staff were most likely to be injured by patient violence (Carmel and Hunter, 1989) and charge nurses and staff nurses were assaulted more frequently than those in the non-assaulted control group (Whittington, 1994).

Studies on the time of day and an increase of aggression showed that most incidents take place in the daytime, then in the evening, with the lowest rate found during the night. Some studies reported that most assaults occurred during mealtimes and early in the afternoon (Carmel and Hunter, 1989; Lanza *et al.,* 1994; Nijman *et al.,* 1995; Vanderslott, 1998; Bradley *et al.,* 2001). Others found an increased rate in the morning (Fottrell, 1980; Hodgkinson *et al.,* 1985; Cooper and Mendonca, 1991). Most of the studies on the effects of staff education and training found that training staff about how to react to threatening situations can lead to a decline in the frequency or severity of aggressive incidents (Infantino and Musingo, 1985; Paterson *et al.,* 1992; Phillips and Rudestam, 1995; Whittington and Wykes, 1996; Rixtel, 1997).

4.1.3 **Environmental factors and the occurrence of aggression**

In the past research on inpatient aggression was focused primarily upon psychopathology and demographic characteristics (age, gender, race). In the recent years more attention is being paid to aggression and it's environmental factors. Environmental factors include the type of ward (ward culture), legal status on admission and the use of restraining interventions. There is considerable agreement in the literature that ward culture (Katz and Kirkland, 1990) and wards with less 'stable' patients (e.g. admission and locked wards) are most often the site of violence (Fottrell, 1980; Hodgkinson *et al.,* 1985; Nijman *et al.,* 1997; Katz and Kirkland, 1990). In several studies it was reported that patients admitted involuntarily under the mental health legislation proved significantly more likely to be engaged in violent acts (James *et al.,* 1990; Powell *et al.,* 1994; Delaney *et al.,* 2001; Owen *et al.,* 1998; Soliman and Reza, 2001). In some studies it is concluded that attacks often occured when nurses were administering medication or leading or restraining agitated patients (Soloff, 1983; Kalogjera *et al.,* 1989; Wynn, 2003; Morrison *et al.,* 2002).

4.1.4 **Theoretical model**

In this study, respondents were asked to react (give their opinion) to verbal statements (definitions) of aggression. Their evaluation of the statements about aggression (agree or disagree) was considered as an expression of their attitudes towards aggression. In this study, the assumption was made that sociodemographic and environmental characteristics may have an impact on nurses' attitudes towards aggression. A theoretical model in social psychology which confirms the relationship between attitudes and behaviour is Ajzen's Theory of Planned Behavior (Ajzen, 1991).

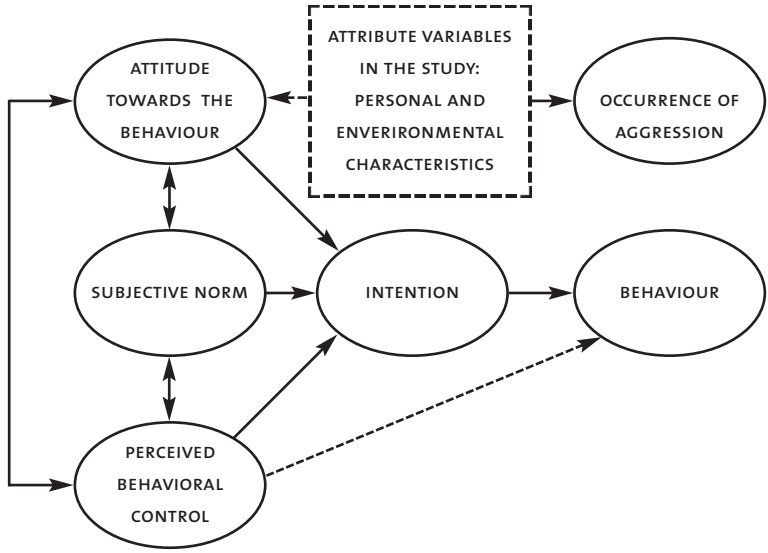

FIGURE 1 **THE ATTRIBUTE VARIABLES OF THE STUDY AND THE THEORY OF PLANNED BEHAVIOR (AJZEN, 1991)**

The TPB is an extension of the Theory of Reasoned Action (TRA). The TRA (Fishbein and Ajzen, 1975) is concerned with the 'causal antecedents of volitional behaviour'. The TPB was designed to predict behaviours not entirely under volitional control by including measures of perceived behavioural control. In the TPB, attitude is a function of the beliefs held about the specific behaviour, as well as a function of the evaluation of likely outcomes. Attitude, therefore, may be conceptualised as 'the amount of affect – feelings – for or against some object, or a person's favourable or unfavourable evaluation of an object'.
Adler (1983) underscored the importance of attitudes in relation to the evaluation of aggression by saying that the staff's general attitude towards aggression and violence is a key element in its successful management. Attitudes towards an object can vary from person to person. As Farrell and Gray (1992) pointed out, the person pushing his way to the front of the queue may be seen as aggressive or simply standing up for her or his rights – it all depends on the viewpoint adopted.

In the present study, the personal and environmental factors mentioned in the literature associated with a high risk of aggression were also considered to have an impact on the attitude of nurses towards aggression. It is assumed, for instance, that the length of professional experience will have an impact on the attitude (FIGURE 1).
In this study, an instrument was developed to measure one of the staff variables related to the occurrence of aggression, i.e. the attitudes nurses had towards aggression. The study was based on the following questions:

1 what is the attitude of nurses towards inpatient aggression?
2 which personal and environmental characteristics of the respondents are the strongest predictors of their attitudes towards inpatient aggression?

The aim of the study was to develop an instrument to measure the attitude towards aggression by care givers that can be used in clinical practice as a tool to monitor the management of the behaviour.

4.2 **Methods**

4.2.1 **Design, sample and procedure**

The study used a cross-sectional survey sample approach. Data were obtained by means of a questionnaire. The convenience sample consisted of nurses from three types of wards in five Dutch general psychiatric hospitals, nurses from thirty-three psychiatric hospitals for children and adolescents, and nurses from two hospitals for the demented elderly. The researchers contacted the hospital managers to request participation in the study. The general psychiatric hospitals for adults, children and adolescents were spread over the whole country. The two institutions for the demented elderly were located in the north and south of the country. The inclusion criterion for a ward was that the manager had information from the nursing staff that aggression was a critical issue on the ward. The questionnaires were then mailed to the hospi-tals and distributed by key persons in the hospitals to all nurses working on the selected wards. Each nurse participating in the study received a package with the questionnaire and a letter explaining the study. After completing the questionnaire, the nurse was requested to return it to the contact person in the hospital in a blank envelope. The anonymous questionnaires were then sent in bulk to the researchers.

4.2.2 **Instrument**

The instrument used to measure attitudes towards aggression was a self-administered questionnaire consisting of demographic data and 60 statements about aggression (**APPENDIX 1**). The statements were listed in random order, that is, without any theoretical structure. Of these 60 statements, 46 were selected from a qualitative study on the definition of aggression by psychiatric nurses (Finnema *et al.,* 1994). The other 14 statements were added from reviewed literature. Every statement was given a Likert-type scale ranging from strongly agree (value five), to strongly disagree (value one).

Statistical analysis

The statistical software used was the Statistical Package for the Social sciences (SPSS, version 10). Factor analysis (principal component analy-

sis, rotation method, varimax) was used to identify in which dimensions nurses conceptualised aggression.
According to Nunnally (1994) factor analysis can be used either to test hypotheses about the existence of constructs, or if no credible hypotheses are at issue, to search for constructs in a group of variables. In the former case a confirmatory approach is required, in the latter the exploratory option is more appropriate for the structuring of the data. The explorative option was preferred because the aim of the analysis was not to test existing hypotheses or theortical rationales about patient aggression, but to develop constructs that would optimally reflect from a semantic point of view the statements made by the respondents.
Only items with an absolute factor loading equal to or more than 0.40 were included in the scales. Internal consistency of the constructed scales was tested by calculating Cronbach's α. The scores of each respondent were transformed into a factor score. A factor score is the weighted sum of the scores of the original variables in which the factor coefficients are the standardised factor loading. Because the distribution of the factor scores appeared to be skewed, nonparametric tests on the mean factor scores (Kruskall-Wallis Test and post hoc tests, Mann-Whitney Test, Bonferroni adjusted) were performed to test whether there were statistically different attitudes between the groups. To answer the second research question about the predictors for attitudes towards aggression, multiple regression analysis was done (method enter) with the attitudes of aggression as the dependent variables, and the significant personal and environmental characteristics as the independent variables.

4.3 **Results**

4.3.1 **Sociodemographics**

Of the 762 questionnaires mailed to the participating wards, 618 were returned giving a response rate of 81%. The sample from 5 psychiatric hospitals for adults consisted of 288 nurses, the sample from the 33 psychiatric hospitals for children was composed of 242 respondents and the subsample from the two institutions for the demented elderly contained 88 nurses.

TABLE 1 **SOCIODEMOPGRAPHICS OF THE RESPONDENTS FROM THE THREE SECTORS (N=618)**

PERSONAL CHARACTERISTICS	N	(%)
GENDER		
male	253	41.5
female	356	58.4
total	609	
EDUCATIONAL LEVEL		
school of nursing level 1	249	42.3
hospital based	255	43.4
school of nursing level 2	84	14.3
total	588	
WORKING EXPERIENCE		
0-5 years	195	31.6
6-10 years	175	28.3
> 10 years	248	40.1
total	618	
CONTRACTUAL STATUS		
full time 80%-100%	534	87.5
part time <80%	76	12.5
total	610	
POSITION ON THE WARD		
staff	502	83.3
managers	27	4.4
mix staff/managers	74	12.3
total	603	
SHIFTS		
daytime only	79	13.3
daytime/evening	224	37.6
day/evening/night	293	49.2
total	596	
TRAINING AGGRESSION MANAGEMENT		
yes	249	40.4
no	368	59.6
total	617	

ENVIRONMENT. CHARACTERISTICS	N	(%)
SETTING		
admission	180	31.4
short stay	245	42.8
long stay	148	25.8
total	573	
LEGAL STATUS ON ADMISSION		
involuntary	364	67.7
voluntary	174	32.3
total	538	
USE OF RESTRAINING INTERVENTIONS		
yes	509	85.8
no	84	14.3
total	593	

Most nurses had a hospital-based training (43.4%) or had a level 1 education (42.3%). There are different nursing education systems in the Netherlands. Traditionally, nurses were trained in a general hospital or in a psychiatric hospital. In 1971 the first school of nursing was opened, offering a broad-based training, making it possible for nurses to work in all fields and with every category of patient. This type of education has two levels: level 1 nurses (higher vocational education) are educated to be responsible for all phases of the nursing process; level 2 nurses (secondary vocational education) perform mainly routi-

ne and standard procedural work. In all three sectors the majority of nurses worked full-time (87.5%) and did not hold a management position (4.4%). The majority of nurses (59.6%) were not trained to manage aggression and 85.8% reported that restraining interventions such as seclusion and fixation were not practised on their wards. Nearly all the missing cases for the environmental variable 'legal status on admission' came from the psychogeriatric setting. This item did not apply to the population of demented patients and so the responses should be disregarded (TABLE 1).

4.3.2 **Attitudes towards aggression**

Factor analysis carried out on the answer to the first research question 'What is the attitude of nurses towards in patient aggression?' produced three attitudes towards aggression. Aggression was labelled as a 'harming reaction', a 'normal reaction' and a 'functional reaction' (TABLE 3). From the original 60 statements in the questionnaire, 37 (62%) were included in the scale. The three factors explained 29% of the total variance. The harming reaction represented the violent and intrusive physical dimension of the concept, which was evaluated as an unacceptable manifestation of aggression. Aggression as a basic human feeling and behaviour is reflected in the attitude towards aggression as a normal reaction. The third attitude was called functional because the items in the scale described aggression as a feeling expressed by patients to meet a particular need.

TABLE 2 PRINCIPAL COMPONENT ANALYSIS OF ATTITUDES TOWARDS AGGRESSION (ATAS)

ITEM	AGGRESSION:	LOADING
	HARMING REACTION (N= 556 , RELIABILITY .87)	
1	is hurting others mentally or physically	.67
2	poisons the atmosphere on the ward and obstructs treatment	.57
3	is any action of physical violence	.57
4	is essentially beating up some one else	.57
5	is an impulse to disturb and interfere in order to dominate or harm others	.56
6	is violent behaviour to others and self	.56
7	is an example of a non-cooperative attitude	.54
8	is destructive behaviour and therefor unwanted	.54
9	is a powerful, inappropriate, nonadaptive verbal and/or physical action done out of self interest	.53
10	is threatening to damage others or objects	.53
11	is where someone's behaviour shows that there is intent to harm himself/ herself or others	.53
12	is behaviour the patient knows might cause injury to other persons without their consent	.51
13	is repulsive behaviour	.51
14	is any expression that makes someone else feel unsafe, threatened or hurt	.50
15	is directed towards objects or people	.45
16	active aggression is the threat of being forcefully handled by somebody	.43
17	is the inadequate dealing with feelings of anger	.42

TABLE 2 CONTINUED

ITEM	AGGRESSION:	LOADING
	NORMAL REACTION (N= 576, RELIABILITY .82)	
18	aggression is a normal reaction to feelings of anger	.68
19	is a healthy reaction to feelings of anger	.66
20	helps the nurse to see the patient from another point of view	.60
21	is the start of a more positive nurse-patient relationship	.58
22	is a form of communication and as such not destructive	.58
23	is energy people use to achieve a goal	.58
24	will make the patient calmer	.55
25	offers new possibilities in nursing care	.54
26	is an attempt to push the boundaries	.46
27	is an expression of feelings, in the same way as laughter or crying	.46
28	is the protection of one's own territory and privacy	.45
29	is to protect yourself	.42
	FUNCTIONAL REACTION (N= 603, RELIABILITY .50)	
30	comes from feelings of powerlessness	.55
31	is a signal asking for a reaction	.46
32	is emotionally letting steam off	.46

The Kruskal-Wallis test was performed to compare the scores of respondents on the three attitudes. Significant test results were followed up with post hoc Mann-Whitney tests for two independent samples. In these tests, the personal and environmental characteristics were the grouping variables.

The factor scores of the three attitudes towards aggression, with regard to three of the personal characteristics (gender, working experience, type of shift) and four environmental variables (sector, setting, legal status, and use of restraining interventions), differed significantly between respondents. The results will be discussed below for the separate attitudes (TABLE 3).

TABLE 3 PERSONAL AND ENVIRONMENTAL CHARACTERISTICS AND FACTOR SCORES ON ATTITUDES

PERSONAL	N	HARMING REACTION	NORMAL REACTION	FUNCTIONAL REACTION
GENDER				
male	253	0.01	0.15*	– 0.15*
female	356	– 0.11*	– 0.11*	0.12*
WORKING EXPERIENCE				
0-5 years	195	– 0.07	– 0.08	– 0.09*
6-10 years	175	– 0.09	0.04	0.09°
> 10 years	248	0.11	0.03	– 0.14* °
SHIFTS				
daytime only	79	– 0.03	0.29*	– 0.02
day/evening	224	0.00	– 0.02	– 0.15*
day/evening/night	293	0.01	– 0.07*	0.11*

ENVIRONMENTAL	N	HARMING REACTION	NORMAL REACTION	FUNCTIONAL REACTION
SECTOR				
general psychiatry	288	0.01°	– 0.01°	– 0.13*
psychiatric hospitals for children	242	– 0.14*	– 0.04*	0.19*°
psycho geriatrics	88	0.35*°	0.45*°	– 0.08°
SETTING				
admission	180	0.03	– 0.08	0.01
short stay	245	– 0.16*	– 0.03	0.11*
long stay	148	0.19	0.16	– 0.15*
RESTRAINING INTERVENTIONS				
yes	509	0.05*	0.00	0.03
no	84	– 0.35*	– 0.02	0.04

*and °post hoc Mann-Whitney test ($p < .02$)

Harming reaction

Factor scores of respondents differed significantly depending on the kind of sector and type of setting they worked in, and whether restraining interventions were used or not. More nurses from the sector psychogeriatric hospitals evaluated aggression as a harming reaction than their colleagues from adult and child psychiatry, (z value – 3.05, $p < .01$; z value – 4.29, $p < 0.01$, respectively). The same applied to nurses from long-stay wards compared to those working on short-stay wards; those working on long-stay wards agreed more with this attitude than the respondents from short-stay settings, (z value – 3.62, $p < 0.01$).

Nurses reporting the administration of restraining interventions on their wards agreed more with this attitude towards aggression than those employed in wards where no seclusion or fixation took place (z value – 3.72, $p < 0.01$).

Normal reaction

Male and female nurses differed significantly in their opinion as to what the attitude towards a normal human reaction was. Compared to their male colleagues, female nurses agreed less with this attitude (z value – 3.70, $p < 0.01$) and only nurses working daytime shifts agreed more with aggression as a normal reaction than nurses working on all types of shifts (z value – 2.83, $p < 0.01$).

Nurses working in hospitals for the demented elderly were more positive about aggression as a normal behaviour than the respondents from the adult and child psychiatric hospitals (z value – 4.68, $p < 0.01$; z value – 4.58, $p < 0.01$ respectively).

Functional reaction
Female nurses were more positive than their male counterparts about statements related to aggression as a functional reaction (z value − 3.26, $p < 0.01$). The most experienced nurses, those with more than 11 years of experience, agreed less often that aggression was 'functional behaviour' than the beginners and nurses with 6-10 years of experience (z value − 2.63, $p < 0.01$; z value 3.0, $p < 0.01$ respectively). Respondents working on all shifts were more positive than those working on day and evening shifts were about aggression as functional behaviour (z value − 3.0, $p < 0.01$). Respondents from psychiatric hospitals for children were more positive about aggression as a functional reaction than respondents from adult psychiatry (z value − 4.51, $p < 0.01$) and nurses working with the demented elderly (z value − 2.73, $p < 0.01$). The favourable attitude towards aggression as a functional reaction also applied to respondents from short-stay wards compared to those working on long-stay wards (z value − 2.84, $p < 0.01$).

4.3.3 **Predictors of the type of attitude**

A multiple regression test was performed to test which of the personal and environmental characteristics was most predictive of respondents' attitude towards aggression. Because the variables 'years of working experience', 'setting and sector working in' and 'type of shift' were not continuous variables, dummies of these variables were made to perform the regression analysis.

With respect to the regression analysis of the 'harming reaction' (N = 555), the reference group consisted of respondents from general psychiatry, working on short-stay wards, making use of restraining interventions. Respondents who did not restrain patients perceived aggression as less harming than those in the reference group (χ^2= - 0.29, t-value -2.36, p =.02). Respondents working with psychogeriatric patients were more supportive of the harming attitude towards aggression than those in the reference group (χ^2= 0.28, t-value 2.16, p =.03). The R^2 of this model was 0.05.

The reference groups for the analysis of the 'normal reaction' were the female nurses, and respondents working in adult psychiatry on day/evening/night shifts. In the analysis of the total sample of respondents (N = 588), being a male respondent (χ^2= 0.35, t-value 4.19, p <.01) or working with psychogeriatric patients (χ^2= 0.62, t-value 4.95, p <.01) were strong predictors of the attitude that aggression was a 'normal reaction', meaning they approved more than the reference groups of this dimension of aggression. The R^2 of this model was 0.07.

Female respondents working on short-stay wards with more than 10 years experience in adult psychiatry and working on day, evening and

night shifts were the reference group for the regression analysis of the 'functional reaction' (N = 546). Being a male nurse (χ^2= −.21, t-value − 2.30, p = .02) or working in psychiatric hospitals for children (χ^2= .32, t-value 3.26, p = .01) or working on day and evening shifts (χ^2= −.19, t-value −2.09, p = .04) were found to be the strongest predictors for the scores on this attitude towards aggression. The R^2 of this last model was 0.06. Male respondents agreed less often than those in the reference group (females) with this dimension, and respondents working with children or adolescents with psychiatric problems identified themselves more often with aggression being a 'functional reaction'. Respondents who worked on day and evening shifts agreed less often with those in the reference group that aggression was a functional reaction.

4.4 **Discussion**

In this study a measure to assess attitudes towards patient aggression of health professionals in psychiatry was introduced. Explorative factor analysis was used as a method to identify the different types of attitudes since the confirmative alternative was not appropriate in the inductive phase of conceptualization and operationalization of theoretically unknown types of attitudes towards aggression. The interpretation and labeling of the factors (the domains of attitude towards aggression) was not guided by theories on the etiology or on the socio-cultural meaning health professional attribute to particular modes of aggression. The interpretation of the underlying, latent constructs was the result of both a 'scree plot' indicating the 3 factors in the data and a semantic analysis of the items' correlations with a particular factor. This theory-free approach for the identification of the factors was inevitable as there are no theories available on the attitudes of health professionals towards aggression. In the current study the 'theory' was established on the meaning health professionals in psychiatry attribute to aggressive behaviour of patients. Consequently, in case this study would have been replicated by other researchers and their factor analysis revealed an identical three-factor solution as found in this study, they might have labeled these factors with different constructs. This seems to be a weakness, but the items' loadings on each factor, demonstrate that they tap information on aspects belonging to a particular dimension of an attitude towards aggression.

Bearing this in mind, the findings of this study indicate that there are three domains of attitudes towards aggression: the harming, the normal, and the functional evaluation of the behaviour.
These attitudes were constructed by labeling three groups of state-

ments taken mainly from the interviews with psychiatric nurses (Finnema *et al.,* 1994), together with some definitions of aggression found in the literature. The labels to denote the three types of attitudes were chosen in such a way that they would cover the underlying items best from a semantic point of view rather than from a theoretical perspective. In the literature, typologies of aggression are mentioned that match the labels developed in this study to a certain extent. Affective aggression is behaviour aimed primarily at injuring the provoking person, and it is accompanied by strong negative emotional states. This type of aggression comes close to what we called 'the harming reaction'. What we labelled the functional reaction could be rephrased instrumental aggression, meaning a person is aggressive not in order to hurt another person but simply as a means to some other end. What we called the normal reaction could be compared to what is called reactive aggression, i.e. reactive in the sense that it is enacted in response to provocation such as an attack or an insult (Geen, 2001). To make a better fit with the qualitative nature of the statements, we have decided to use the labels developed in this study. Whichever label one prefers to choose, 'normal' or 'reactive', respondents appraised aggression not only as affective or instrumental aggressive behaviour with the intent to harm.

This result is important given the assumption made by Fishbein and Ajzen (1975) that attitude influences one's behaviour i.e. the management of aggression. As a consequence, it might be assumed that the nurses' approach to stopping patient aggression is a function of the nurses' attitude. Broers and De Lange (1997) found that the harming attitude of aggression is usually associated with a restrictive way of managing the behaviour with the intention of protecting the patient from damaging himself or others. It may be that respondents who reported that seclusion and fixation were practised on their wards were exposed to physically violent patients more frequently than those who reported that these kind of restrictive interventions were not practised. This could explain the finding in this study that the more often nurses used restraining interventions, the more often they evaluated aggression as harmful. On the other hand, the normal and functional attitudes were related to a more permissive strategy for managing aggression (Broers and De Lange, 1997). This could explain why an underestimate of the true prevalence of aggressive incidents is mentioned in many studies, since aggressive incidents perceived as normal or functional behaviour are not likely to be reported by nurses.

Significant differences were found between the mean factor scores of male and female nurses about the attitude towards aggression corresponding with the normal reaction. More male nurses than their female colleagues considered aggression to be a normal reaction. This is consistent with the findings of other studies which concluded that

aggression is considered as inappropriate by females more often than males (Frodi *et al.,* 1977). However, female nurses approved of the functionality (instrumentality) of aggressive behaviour more than the males. This finding is inconsistent with previous literature in which it was suggested that men, more than women, represent their aggression as an instrumental act aimed at taking control over others, whereas women, more than men, represent aggression as the result of a temporary loss of control over themselves (Campbell and Muncer, 1987).

It was found that nurses from psychogeriatric hospitals approved more often of the harming and normal reaction than the respondents from the other two sectors. These results seem to contradict each other but may be due to the fact that psychogeriatric patients differ from the psychiatric population since respondents, on the one hand, refer to aggressive behaviour of the frail and elderly (normal reaction). On the other hand, they may also be confronted with physical aggression in the psychogeriatric population which is tagged as the harming reaction.

The study showed that the most experienced nurses supported the attitude of aggression as a functional reaction less often than novice nurses. If the position is taken that the functional attitude is the expression of a positive perspective about the phenomenon of aggression, nurses with the most years of experience are more likely to be disappointed about this view than the novices. Nurses from the child psychiatric hospitals had a stronger attitude towards aggression functionality than the respondents working in nursing homes for demented elderly and adult psychiatric hospitals. This finding could be related to the patients nurses cared for in these settings: young children and adolescents. Aggression in this patient population, more than with the adult psychiatric patients and the demented persons, is an expression of showing anger to reach some goal. This finding could be explained by what is known from literature about the way children express their anger. According to Crick and Dodge (1994), children lack the cognitive maturity and communication skills to solve social problems and express needs more competently.

The factorial structure of the ATAS is a three component scale. It is to be used on a group level within inpatient psychiatric settings. This scale offers ward managers, where nurses and other professionals have to deal with aggression, the possibility to monitor and evaluate the attitude they have towards aggressive behaviour. The strongest attitude towards aggression, measured on a ward with the ATAS, should be a reflection of the type of aggression most prevalent on the ward. If patients are frequently physically violent, this should be reflected by the attitude that aggression is 'harming'. If not, this finding should be an issue for the team to discuss.

4.4.1 **Study limitations**

The proposed scale needs further psychometric testing. The internal validity of all three scales may be evaluated as sufficient; however, more studies with data from larger samples should be carried out to determine whether the factor solution will stay stable under different conditions. The reliability of the instrument should also be tested in future studies. Another limitation of this study relates to the survey sample design. A survey with closed items reveals no information about contextual factors that may influence respondents' attitudes at the time of completing the questionnaire. The personal and environmental variables in this study explained only about one third of the variance. Additional information is required to get a better understanding of the variables that constituted the makeup of the attitude. Information on the past and recent experiences of respondents with aggression, as a point of reference for respondents to complete the items in the questionnaire, should be included in future studies. More information from the interactional point of view is likewise also needed. The use of the ATAS in combination with the Ward Atmosphere Scale (Moos, 1974; Rossberg and Friis, 2003) may serve this purpose.

4.4.2 **Acknowledgement**

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Chapter 5
An International Comparative Study on the Reliability and Validity of the Attitudes towards Aggression Scale

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Abstract

One of the factors known to be associated with the management of patient aggression is the attitude of staff members towards the aggressive behaviour of patients. The construct validity of an instrument measuring the attitudes of staff towards inpatient aggression in psychiatry was evaluated in this international multi-centre study. Factor analysis and simultaneous component analysis were performed with data from a convenience sample of 1769 psychiatric nurses working in psychiatric hospitals and student nurses from nursing schools. The samples were recruited by fellow researchers in their home country. The original 32-item version (POAS) was reduced to 18 items comprising five attitude scales with solid psychometric properties. The types of attitudes were labelled offensive, communicative, destructive, protective and intrusive. The format of the correlations between the types of attitudes suggested the existence of two basic underlying divergent domains in the scale. The 'communication' and 'protection' scale components on the one hand,and the 'offence', 'destruction' and 'intrusion' components on the other. The five types of attitude proved to be invariant across samples from five European countries. The Aggression Scale (ATAS) is a reliable and valid measure that will enable researchers to perform international comparative research on attitudes and aggression.

Keywords: Attitudes; Staff; Inpatient aggression; Psychiatry; Instrument

5.1 **Introduction**

In order to develop models for the management of aggression it is important to know the significant domains in the attitudes of health professionals towards aggressive patients. In the reasoned action model, the attitude towards an object (person,events) is a predictor of behaviour (Fishbein and Ajzen, 1975). In the context of aggression,the aggressive patient must be considered as the object and the management of aggression by staff members as the behaviour to be predicted on the basis of the type of attitude.

Several studies were performed to clarify the perception of aggression in samples of nurses working in general hospitals (Zernike and Sharpe, 1998; Farrell, 1997, 1999) and in psychiatric hospitals (Lanza, 1983; Morrison, 1993; Wynn and Bratlid, 1998). These studies tend to focus on the opinions nurses have about aggression-related issues, such as the causes of aggression,its various manifestations, characteristics of the perpetrators, severity of the injuries sustained and the management of aggression, rather than on attitudes towards aggression (Jansen *et al.,* 2004). Attitudes in contrast to opinions are always evaluative by nature, in that they relate to feelings towards an object in terms of a person's favourable or unfavourable evaluation (Fishbein and Ajzen, 1975). Studies that focus on the attitudes of staff towards patient aggression in admission wards are predominantly concerned with the issues of patient responsibility for behaviour and staff safety (Poster and Ryan, 1989; Collins, 1994). Bowers (2002) studied the attitudes of nurses towards patients with a specific psychiatric diagnosis, namely patients with personality disorders. This study concludes that although a majority of the sample had been attacked or seriously threatened, there was no significant correlation between being confronted with patient aggression and an overall negative attitude towards patients with personality disorders.

The perception of aggression among nurses was studied with the Perception of Aggression Scale (POAS) in a number of the studies cited below. The concept of 'perception' is in conflict with operationalization in the POAS scale due to the evaluative character of the scale's items. Therefore,the concept of 'attitude' has now entered use, derived from the widely applied model of reasoned action (Fishbein and Ajzen, 1975), which resulted in the relabelling of the POAS as the 'Attitude Towards Aggression Scale' (ATAS), reflecting what it really purports to measure.

One of these 'POAS' studies includes a Dutch sample of 618 nurses from psychiatric hospitals, psychiatric hospitals for children and respondents from psychogeriatric nursing homes,where three domains (scales) were identified by factor analysis (oblique rotation), reducing the original 60-item version of the scale to 37 items.

The original 60-item questionnaire was a self-administered question-

naire consisting of demographic data and 60 statements about aggression. The statements were listed in random order, that is,without any theoretical structure. Of these 60 statements, 46 were selected from a qualitative study on the definition of aggression by psychiatric nurses (Finnema *et al.,* 1994). The other 14 statements were added from reviewed literature. Every statement was given a Likert-type scale ranging from strongly agree (value five), to strongly disagree (value one).
The three dimensions found were that nurses experienced patient aggression as: **1** a harming reaction, 17 items,alpha .87, **2** a normal reaction,12 items,alpha .82 and **3** a functional reaction,three items alpha .50 (Jansen *et al.,* 2004). The harming reaction represented the violent and intrusive physical dimension of the concept,which was evaluated as an unacceptable manifestation of aggression. Aggression as a basic human feeling and behaviour is reflected in the attitude towards aggression as a normal reaction. The third attitude was called functional because the items in the scale described aggression as a feeling expressed by patients to meet a particular need.
In an international pilot study with a sample of four European countries (N = 366), 32 items were found to be identical throughout the countries (Jansen and Mamier, 2000). Abderhalden (2002) tested this 32-item version on a sample of nurses working in the inpatient psychiatric departments of German-speaking hospitals in Switzerland. In this study, two components were identified: factor 1: aggression as a functional and comprehensible phenomenon (11 items, alpha .80), and factor 2 aggression as a dysfunctional,undesirable behaviour (19 items, alpha,.88). Needham *et al.* (2004) developed a shortened version of the 32-item scale with the same two-component structure (factor 1: alpha .67, six items, factor 2: alpha .69 six items). On the item level test-retest correlation, coefficients varied from .26 to .70.
Psychometric properties of five questionnaires/instruments were found in the literature:

1. The Attitudes Towards Physical Assault Questionnaire (Poster and Ryan, 1989) is a self-report questionnaire consisting of 31 state ments on a fivepoint Likert scale (strongly disagree-strongly agree) focussing on four areas: beliefs and concerns of staff about safety, staff competence and performance, legal issues and patient responsibility for behaviour. The Attitudes Towards Physical Assault Questionnaire by Poster and Ryan was tested on reliability (test-retest, r = .69) and content validity by a literature review and a panel of nurse experts.
2. The Management of Aggression and Violence Attitude Scale (MAVAS) was developed by Duxbury (2002). This scale had four subscales, three reflecting explanatory models for aggression (situational, external, and internal) and one reflecting views about management approaches. The reliability of the MAVAS was .89 and the item loading on the four subscales was ≥ .80.

3 The instrument items used by O'Connell (O'Connell *et al.,* 2000) had a high reliability with correlations between .7 and 1.0 and was developed from literature and based on expert opinion. The test-retest reliability of the items in the questionnaire used by Collins was .972 (Collins, 1994).
4 The Violence Scale was tested on reliability (Cronbach's α .68–.91) and interrater reliability (Cohen's Kappa 87%). The construct validity was examined by factor analysis. The factors extracted explained 70% of the variance.
5 The construct validity of the POAS was examined in two studies (Jansen *et al.,* 1997; Abderhalden *et al.,* 2002). In the first study,three scales were constructed. The items of the scales had factor loadings ≥ .30 and a reliability ranging from .70-.89. In the latter study, a two-factor solution was extracted, with item factor loadings ≥ .35 and reliability coefficients of .80 and .88.

In conclusion, research on staff attitudes towards aggression is mainly focussed on cognitions of staff about patient aggression related issues and only a few studies address the attitude component in the sense of an evaluation of the aggressive behaviour. Some studies investigate attitudes towards aggression, but these studies are hampered by the lack of valid and reliable instruments. Consequently, the aim of this international study was to evaluate the stability or invariance of the components (domains) of the ATAS across five European countries. A standardized instrument to measure attitudes towards inpatient aggression in psychiatry would enable the comparison of attitudes between countries. Accordingly, the 32-item version of ATAS was given to nurses in Germany, Switzerland, UK, the Republic of Ireland, Norway and China.
The research question addressed in this study was as follows. To what extent does the construct validity and the reliability of the 32-item scale for the measurement of attitudes towards inpatient aggression in psychiatry vary in five European countries?

5.2 **Method**

5.2.1 **Data collection procedure**

Data were collected in collaboration with the participating members of the European Violence in Psychiatry Research Group in their home countries. Each member used his/her own professional network to recruit participants for the present study. The way the samples were accessed varied from country to country, depending on the type of network of the member. This could be a group of nurses working on the wards in a psychiatric hospital the member of the group was employed at, or a sample of nurses the member had a teaching relati-

on with. In another situation the member of the group used the research network of his organisation. The European Violence in Psychiatry Research Group (EViPRG) promotes the sharing of expertise and knowledge between researchers studying psychiatry. Each member nation is represented by experts in research, education, psychiatry, psychiatric nursing, psychology, sociology and trainers specialised in the management of violence. The group has gained wide experience in the translation and cross-cultural analysis of survey instruments. Members of the group have good access to their local hospitals and work areas and utilise appropriate occasions to approach large groups of nurses to participate in this study.

5.2.2 **Translation procedure**

The questionnaire consisted of 32 statements that nurses could appraise as relevant definitions of aggression. The response options varied from 'totally agree' with the statement (value 5) to 'totally disagree' (value 1). The translation of the 32-item Dutch version of ATAS into German, English, Norwegian and Chinese sought equal familiarity and colloquialness in both source and target languages (Chapman and Carter, 1979). The most common and recommended procedure for verifying the translation of an instrument is back translation (Jones, 1987). The initial forward and back translation (Dutch-English-Dutch) was carried out by the author and revised by the City University of London. The clarity of each item of the English version was discussed with some native Dutch and Englishspeaking members of the EViPRG.

Some item descriptions were modified to attain a greater degree of familiarity in both countries. The final English translation was developed following this translation protocol,which served as the source document for the Norwegian, Chinese and German versions; the German version was also used in the participating German-speaking regions of Switzerland.

5.2.3 **Sample**

The sample was composed of nurses working in psychiatric hospitals and student nurses from seven countries: Germany (N = 253), UK (N = 154), Republic of Ireland (N = 41), The Netherlands (N = 566), Switzerland (N = 725), Norway (N = 104) and China (N = 103).

5.2.4 **Statistical methods**

The factor analysis (principal component analysis (PCA), Oblimin rotated) was used to examine the factor structure of ATAS. A scree plot was used to determine the principal components for retention. Although a three-factor solution was known from an earlier ATAS study,an explorative rather than a confirmative approach was preferred. Items with a factor loading lower than .50 were assumed to have no associa-

tion with the underlying construct and were eliminated from further analysis. Simultaneous component analysis (SCA) was used to examine the hypothesis that ATAS has identical dimensions across the samples from five different countries. In SCA, a component is defined as a variable that is constructed as a weighted sum of the original variables. Furthermore, a loading is defined as the correlation between a variable and a component. It should be noted that the term loading does not refer to an element of the pattern matrix (Kiers, 1990). By comparing the results of the SCA analysis with the results of a PCA, it was possible to check whether a certain component structure was stable over several samples (e.g. countries). In PCA, the optimal variable structure was assessed for all samples separately, whereas in SCA this structure is estimated simultaneously for all samples. As a result, PCA accounts for the maximum amount of variance,while SCA tests component weights in such a way that the components optimally summarise the variables in all populations simultaneously (Kiers, 1990). By comparing the amount of variance explained by PCA and SCA, an indication can be obtained of whether or not the components are invariant across the subsamples (countries). If the explained variance of the separate PCAS is much larger than the explained variance found by SCA, the idea of common components has to be reconsidered. Finally,the reliability coefficients (Cronbach's α) were computed for all components of ATAS in every sample (country) and in the combined sample of all countries. The last step in the analysis was to examine the intercorrelations between ATAS subscales for each country and for the merged sample of all countries. After construction of the scales,missing data on a particular item of a scale were replaced by the mean score of the respondent on the remaining items of the scale in question. The coefficient alpha in connection with the number of items included in the scales was used as the criterion for the number of missing data that were allowed to be replaced (Sonderen, 2000). To illustrate the principle consider the following: when e.g. the number of items in the scale is seven and alpha is at least .87, it is allowed to replace the missing scores of no more than two items within that scale by the mean the same respondent scored on the remaining five items of that particular scale. When the scale has a length of 20 items and the alpha is at least .93, then a maximum of eight missing items can be replaced. In order to investigate the invariance of ATAS components across the participating countries' samples, items were selected according to the following criteria:

1 Items should correlate sufficiently (factor loading > .50) with the expected factor in the data from each country using the 32-item version of ATAS. A factor is a group of linear combinations of items all indicating the same underlying construct. If an item had a factor loading < .50, the linear relation of the item with the construct (factor) was considered to be too weak, meaning,less than 25% of

the variance in the scores on the item was explained by the factor. In general, a factor loading .30 is considered to be sufficient for its contribution to a factor (Nunnally and Bernstein, 1994).

2 Items with dual factor loadings in one of the countries on more than one ATAS dimension were eliminated. If an item loaded inconsistently across the countries on the factor it belonged to, this was considered to be a violation of the assumption that the item exclusively contributed to the assessment of a particular factor or dimension.

3 The number of observations had to meet the criteria required by Principal Component factor Analysis and SCA. As a rule of thumb the minimal number of observations required is 10 times the number of variables (items). In this study that would be 10 x 32 = 320 observations (Nunnally and Bernstein, 1994). If the number of observations is too small this could result in an unstable factor solution due to chance.

4 Compared to the results from the PCA, items had to correlate identically with the factor in the SCA. Differences in the correlation matrix of an item with a factor between the PCA and SCA would indicate instability of the item over several countries. If so, the item was removed since the goal of the study was to develop an instrument for international research.

5 Items with inconsistent PCA loadings on the expected factor (in the comparison of the factor solution across the countries examined) were removed if a factor loading was < .50 on the target factor in more than one country. The aim of the study was to develop a valid instrument for the assessment of the attitude towards aggression. For this reason it is vital that there is a consistent correlation pattern between the item and the target factor in all samples (countries) examined. The pattern of item loadings should be independent of the country (i.e. the cultural impact). The 'consistency criterion' that the size of an item loading should not deviate substantially from .50 in more than one country, was formulated by the researchers themselves.

5.3 **Results**

The results of the component analysis (PCA) of the data of the five countries in turn will be presented in this section, then the PCA results will be combined with the sca data. Unfortunately, the Chinese and Irish data were not suitable for analysis as the distributions of scores were skewed and the correlation coefficients of the items belonging to the domains were extremely low compared to the other samples. Further analysis showed that the factor structure in the Chinese data was substantially different compared to the other

samples in the study. Using the Chinese data would have led to invalid results. Translation bias seems to be the source of unreliable and invalid measures of the constructs. Since the translation problems did not apply to the Irish data set, the non-fit between the items in this data set and the domains has to be attributed to sampling bias.
From the original 32-item set, 15 items were removed according to the criteria described below:

- One item was removed because the loading deviated in more than one country from the expected factor.
- Twelve items were removed either because they had a factor loading < .50 or they had a factor loading > .50 but were correlated inconsistently (with a varying combination of items) with the expected factor in the Dutch reference sample as well as in the sample concerned.
- One item was removed in the SCA as it only correlated with the expected factor in the Dutch sample and in the simultaneous comparison with the Swiss and German samples.

For the final versions of the ATAS in English, Dutch and Norwegian, see **APPENDIX 2.**

5.3.1 **The invariance of component structure**

It was hypothesised that the components or subscales were invariant across the five countries. This hypothesis was a necessary condition in obtaining evidence to answer the question of whether ATAS is a suitable instrument for international comparative research. Furthermore, the decision to test the stability of five components (domains) was primarily based on the factors found in the Dutch sample in which the ATAS was initially developed. As a result of the PCA, five components were identified and were labelled as (**TABLE 1**):

1. Offensive, in the sense of insulting, hurtful, unpleasant and unacceptable behaviour including verbal aggression.
2. Communicative, in the sense of a signal resulting from the patient's powerlessness aimed at enhancing the therapeutic relationship.
3. Destructive, a component indicating the threat of or an actual act of physical harm or violence.
4. Protective, indicating the shielding or defending of physical and emotional space.
5. Intrusive, expressing the intention to damage or injure others.

After identification of the items that correspond to the scales both by PCA and SCA, the item loadings were checked for incorrect or suspect items by country. An item was regarded as 'incorrect' if the highest loading was not on the intended component but on another, unintended component. An item was described as 'suspect' when it loaded on the intended component but also relatively highly on another, unintended component.

TABLE 1 also shows the loading range of the scale components (item scale correlations) for the 18 items in ATAS for all five countries. The component structure of the five ATAS components was found to be identical in all countries. The lowest factor loading was .53 (item 35) on the 'offensive scale' and the highest loading found was .89 (item 7) on the 'communication scale'.

5.3.2 Reliability, means and standard deviations

TABLE 2 shows the reliability coefficients (Cronbach's α) for the five subscales. As explained in the method section,missing data on a particular item of a scale were replaced by the mean score of the respondent on the remaining items of the scale in question. The coefficient alpha in connection with the number of items included in the scales was used as the criterion for the number of missing data that were allowed to be replaced (Sonderen, 2000).
Since the 'protective' scale consisted of only two items, the alpha is in fact the Pearson correlation coefficient of the scores on the two items. The highest coefficient was found for the 'offensive' scale (.87 in Germany) with a maximum of seven items. The lowest mean inter-item correlation found was for the 'destruction' scale in The Netherlands and the 'intrusiveness' scale in the Swiss sample (.33).

5.3.3 Inter-component analysis

The scale component analysis provided evidence of the multi-dimensionality of ATAS.
The Pearson correlation coefficients between the components were calculated using summated respondent scores on the individual scale components (TABLE 3).
A strong correlation was found between the 'offensive' (1) and the 'intrusive' (5) dimensions (r = .55) in each of the five countries included in the analysis. This means that approximately 30% of the variance in the 'offensive' scale scores was linearly explained by the variance in the 'intrusive' scale scores. Furthermore, a moderate percentage of explained variance was found between the 'destructive' (3) and the 'offensive' (1) components (R^2 = .15). With the exception of the Norwegian sample (R^2 = .01),a moderately strong linear association was found between the 'destructive' (3) component of the ATAS and the 'intrusive' (5) component (R^2 = .17). A moderately strong correlation was also found between the 'communicative' (2) and 'protective' (4) components (R^2 = .12). Negative correlations were found between the 'offensive' (1) and 'communicative' (2) dimensions but also between the 'offensive (1) and the 'protective' (4) components.
TABLE 4 presents the explained variance percentages for the five SCA and PCA components.
The total variances accounted for by SCA (60.2%) and by the separate PCAs per country was small (The Netherlands 59.6%, Germany 62.7%, Switzerland 59.4% and Norway 62.9%).

TABLE 1 PRINCIPAL COMPONENT FACTOR ANALYSIS (OBLIMIN ROTATED) AND THE RANGE OF ITEM LOADINGS WITH THE AGGREGATED DATA FROM THE NETHERLANDS, SWITZERLAND, GERMANY, ENGLAND AND NORWAY (N = 1769)

ITEM NO[1]:	AGGRESSION ...	FACTOR I		FACTOR II		FACTOR III		FACTOR IV		FACTOR V	
		Offensive		Communicative		Destructive		Protective		Intrusive	
		Item loading	Range of loadings	Item loading	Range of loadings	Item loading	Range of loadings	Item loading	Range of loadings	Item loading	Range of loadings
9	is destructive behaviour and therefore unwanted	.69	.61 / .77	–.05		–.15		.01		.01	
20	is unnecessary and unacceptable behaviour	.72	.76 / .83	–.06		–.00		.09		–.10	
28	is unpleasant and repulsive behaviour	.79	.66 / .81	.05		.05		.06		.03	
35	is an example of a non-cooperative attitude	.52	.53 / .64	.14		.04		–.05		–.22	
37	poisons the atmosphere on the ward and obstructs treatment	.62	.60 / .70	–.05		–.08		–.10		–.01	
39	in any form is always negative and unacceptable	.78	.79 / .84	–.07		.02		–.01		–.01	
57	cannot be tolerated	.78	.74 / .79	–.08		–.01		.03		.07	
13	offers new possibilities in nursing care	–.02		.81	.78 / .81	–.09		.07		.14	
30	helps the nurse to see the patient from another point of view	–.05		.76	.76 / .81	–.01		–.02		.11	
44	is the start of a more positive nurse relationship	–.04		.61 –.00	.66 / .70	.07		–.17		–.00	
2	is when a patient has feelings that will result in physical harm to self or to others	–.01		–.03		.85	.74 / .84	– .03		–.02	
7	is violent behaviour to others or self	.06		.01		.83	.79 / .89	–.02		.01	

TABLE 1 CONTINUED

ITEM NO[1]:	AGGRESSION ...	FACTOR I		FACTOR II		FACTOR III		FACTOR IV		FACTOR V	
		Offensive		Communicative		Destructive		Protective		Intrusive	
		Item loading	Range of loadings	Item loading	Range of loadings	Item loading	Range of loadings	Item loading	Range of loadings	Item loading	Range of loadings
12	is threatening to damage others orobjects	.15				.58	.69 / .80	.07		–.07	
38	is to protect oneself	–.09		.04		.06		–.85	.84 / .86	–.04	
42	is the protection of one's own territory and privacy	.09		.11		.08		–.81	.83 / .85	.07	
17	is a powerful, mistaken, non-adaptive, verbal and/or physical action done out of self-interest	.02		–.09		–.11		–.08		–.70	.70 / .81
18	is expressed deliberately, with the exception of aggressive behaviour of someone who is psychotic	.06		.06		.09		.09		–.72	.64 / .76
19	is an impulse to disturb and interfere in order to dominate or harm others	–.02		–.04		–.09		–.08		–.78	.78 / .83

[1]The item numbers refer to the original 60-item version.

TABLE 2 INTERNAL CONSISTENCY (CRONBACH'S α),INTER-ITEM CORRELATIONS, MEANS AND STANDARD DEVIATIONS OF THE ATAS WITH 5 SUBSCALES

Scale component	Offensive	Communicative	Destructive	Protective	Intrusive
Number of scale items	(7 items)	(3 items)	(3 items)	(2 items)	(3 items)
Scale scoring range	7–35	3–15	3–15	2–10	3–15
The Netherlands (N = 571)					
Cronbach's α	.83 [1]	.63	.60	.63	.62
Mean inter-item corr.	.42	.36	.33	.46	.35
Mean	18.23	8.70	8.93	6.30	7.4
SD	4.99	2.07	2.46	1.72	2.14
Germany (N = 252)					
Cronbach's α	.87	.63	.70	.65	.66
Mean inter-item corr.	.50	.37	.44	.48	.39
Mean	18.54	8.44	11.57	6.44	8.67
SD	6.13	2.46	2.31	1.88	2.64
England (N = 123)					
Cronbach's α	.82	.65	.67	.60	.67
Inter-item corr.	.40	.38	.40	.43	.40
Mean	23.26	8.50	11.28	5.54	9.39
SD	5.86	2.60	2.67	1.96	2.56
Switzerland (N = 730)					
Cronbach's α	.86	.61	.68	.62	.60
Mean inter-item corr.	.48	.34	.41	.45	.33
Mean	18.10	8.96	10.59	6.65	7.82
SD	5.93	2.31	2.65	1.73	2.48
Norway (N = 93)					
Cronbach's α	.84	.60	.80	.62	.65
Mean inter-item corr.	.43	.34	.57	.45	.38
Mean	21.06	8.97	11.75	7.29	9.14
SD	5.75	2.07	2.60	1.54	2.30
Combined data of all countries (N = 1769)					
Cronbach's α	.86	.62	.69	.62	.65
Mean inter-item corr.	.46	.35	.42	.45	.38
Mean	18.72	8.77	10.30	6.46	7.90
SD	5.82	2.27	2.74	1.79	2.50

[1] Within this scale 1 missing item was replaced according to the van Sonderen (2000) principle.

TABLE 3 THE SCALE (COMPONENTS) CORRELATIONS OF THE ATAS IN THE NETHERLANDS, SWITZERLAND, ENGLAND, GERMANY AND NORWAY

The Netherlands	I	II	III	IV	V
I Offensive		– .29	.39	– .20	.55
II Communicative			– .05	.35	– .07
III Destructive				– .03	.41
IV Protective					– .03
V Intrusive					

This result indicated that the common components produced by SCA fitted the data almost as well as the components of the separate PCAs. Therefore, the same linear combinations (components) of the variables can be used to describe the data in all subsamples. Furthermore, the SCA solution with the five original subscales (the intended subscales) as components explained 59.69% of the total variance (the non-

optimal, simple weight method). The optimal weight solution explained only 0.5% more (60.2%, TABLE 4).

In general, it can be concluded from TABLE 5 that the rotated SCA weights matched the item solution found by the PCA perfectly. A more detailed inspection of the item weights revealed that some items also loaded on scales other than the intended ones. Item 9, 'aggression is destructive behaviour and therefore unwanted,' not only loaded on the intended 'offensive' attitude but also on the 'destructive' component of the scale (.13). Item 35, 'aggression is an example of a

TABLE 4 PERCENTAGES OF EXPLAINED VARIANCE FROM SCA AND PCA ANALYSES IN SAMPLES FROM THE 5 COUNTRIES

Components	SCA	PCA				
		Netherlands	Germany	Switzerland	England	Norway
I Offensive	28.2	26.3	30.6	30.3	28.7	25.8
II Communicative	40.7	39.1	42.8	40.8	42.9	39.9
III Destructive	49.0	46.0	51.2	48.3	50.6	50.7
IV Protective	55.0	52.3	57.8	54.1	56.9	57.3
V Intrusive	60.2	59.6	62.7	59.4	62.5	62.9

TABLE 5 THE ROTATED WEIGHTS MATRIX YIELDED BY SCA COMMON TO THE 5 COUNTRIES

	FACT I	FACT II	FACT III	FACT IV	FACT V
FACT I OFFENSIVE					
Item 9 unwanted	.34	.00	.13	.02	.05
Item 20 unnecessary	.40	.01	.00	.12	.01
Item 28 repulsive	.37	.01	.00	.03	.02
Item 35 non-cooperative	.26	.13	.01	.01	.19
Item 37 poisons atmosphere	.32	.05	.04	.11	.09
Item 39 negative	.48	.01	.08	.03	.06
Item 57 not tolerable	.42	.05	.01	.01	.08
FACT II COMMUNICATIVE					
Item 13 new possibilities	.03	.64	.04	.05	.13
Item 30 another point of view	.02	.60	.01	.04	.10
Item 44 positive relationship	.03	.46	.05	.15	.02
FACT III DESTRUCTIVE					
Item 2 physical harm	.04	.01	.61	.02	.02
Item 7 violent to others / self	.03	.02	.61	.03	.04
Item 12 physical violence	.00	.02	.47	.02	.10
FACT IV PROTECTIVE					
Item 38 protect	.03	.00	.01	.71	.05
Item 42 territory	.02	.02	.01	.66	.04
FACT V INTRUSIVE					
Item 17 non-adaptive	.00	.04	.02	.02	.56
Item 18 expressed deliberately	.04	.06	.01	.08	.48
Item 19 impulse to interfere	.02	.05	.04	.04	.60

non-cooperative attitude' had a loading of .26 on the intended 'offensive'attitude,but also moderately strong loadings on the 'communicative' and the 'intrusive' attitudes (.13 and .19, respectively). Finally, item 13, 'aggression offers new possibilities in nursing care', part of the 'communicative' component, had a logical negative loading on the 'intrusive' attitude (.13).

5.4 **Discussion**

The aim of this study was to test the invariance of components (construct validity) of an instrument developed to measure staff attitudes towards inpatient aggression in psychiatric settings. ATAS's psychometric properties will now be discussed with respect to this aim.
Five components or factors expressing nurses' attitude towards aggression by inpatients in psychiatry could be clearly identified in all five countries. The minor differences in variances accounted for by SCA and by the separate PCAs per country imply that the same linear combination of variables could be used in all populations to describe the data adequately (Kiers, 1990). The intended five-component structure of ATAS accounted for only .5% less variance than the optimal weights solution. This result is supported by the fact that not a single incorrect item was found in the structure matrix. The internal consistency (Cronbach's α) of the five subscales was satisfactory. For all countries together, the reliability coefficients can be considered as good for the 'offensive' scale (.86) and somewhat less good for the other four scales (about .60).
The configuration of correlations between the components of ATAS found in all five countries suggested the existence of two basic underlying divergent domains in the scale. The 'communication' and 'protection' scale components on one hand, and the 'offence','destruction' and 'intrusion' components on other. The domains can be regarded as divergent because of the negative correlations found between the two sets. The convergent combination of 'communication' and 'protection' can be characterised as positive human energy or behaviour, in contrast to the attitudes termed as 'offence','destruction' and 'intrusion', which can be considered to be the violent and negative perspectives on aggressive behaviour. In the first ATAS study (Jansen *et al.,* 1997), three subscales were identified and labelled as the harmful,the functional and the normal attitudes towards aggressive behaviour. The items on the earlier 'violence' scale are now spread out over three separate scales, differentiating between disapproval of the behaviour (offensive), a physical act of violence without expressing a value judgement (destructive) and an intent to hurt or dominate others (intrusive). The items that made up the 'normal' and 'functional' scales in the earlier study were rephrased in this study as the 'protective' and

the 'communicative' perspectives on aggression. The two basic, almost complementary, domains of acceptance and rejection of the behaviour were also found in the study by Bowers. In this study a negative attitude towards patients with personality disorders was found, though some staff were able to manage the disruptive behaviour in a positive manner (Bowers, 2002).

According to one-way analysis of variance, the mean values on all five scales were significantly different across the five countries. The same holds true for ATAS as a whole. Additional research is required to obtain an understanding of which factors actually account for these differences.

The analysis of the data in this study started with 32 items. In this international study, more components were extracted than when using the original scale, five this time and three the previous time, resulting in a reduced number of items for the total scale. The original scale had 32 items, which was reduced to 18 items. This result will make ATAS easier to administer. Needham (2004) derived a shortened 12-item version from the 32item POAS with the basic assumption of a twodimensional factor structure. Six items of the shortened 12-item POAS were identical to the 18 items that remained in the five component ATAS solution found in this study. Some items in the two-factor shortened Swiss solution version had poor retest correlation coefficients. Retest reliability assessment with the ATAS items should indicate ATAS's superiority over the two-dimensional POAS. The test-retest reliability of the five ATAS scales will be evaluated in a follow-up study.

The study had a nonprobability sampling design which can be appraised as a methodological weakness. Therefore, it might be questionable whether the sample scores can be treated as country scores that reflect a representative indicator of the national attitude of psychiatric nurses towards inpatient aggression. There was no stratification on age, sex, nurses' work environment or on other key characteristics of the target population. Using a convenience sampling approach, overestimation or underestimation of some segments in the population may have occurred. This weakness may affect the external validity of the findings. Despite this sampling procedure, identical attitude components were identified across the country samples involved in the study with nonstratified nonprobability samples. However, for the aims of this study,specifically the validation of ATAS in terms of the construct validity, the representativeness of the samples is of minor importance.

As mentioned in the introduction, there is no instrument available to measure attitudes towards aggression from an uniform perspective in the way this instrument does. This instrument does not focus on cognitions nurses or other health care workers may have about aggression. These cognitions can relate to the nurses' ideas about the causes, frequency, nature or the management of aggression. This instrument

does, however, address another, more fundamental issue, namely that of the evaluation of the function of aggressive patient behaviour. The idea that there are different types of aggression expressing different functions is not new. Various typologies of aggressive behaviour are described in the literature (Buss, 1961; Geen, 2001). However, the unique approach inherent in this ATAS study is that some of these different connotations are captured within the instrument. With respect to this result, it should be noted that the instrument was not developed from literature, but mainly relied on qualitative statements made by respondents (Finnema *et al.,* 1994).

In this study, factor analysis was used as the only method for construct validation. Factor analysis, in effect, constitutes another means of looking at convergent and discriminant validity of a large set of measures (Polit and Hungler, 1999). Additional alternative approaches such as the use of the known group technique or the multi-trait–multi-method matrix method would have resulted in more information about the construct validity of ATAS, but these techniques were not possible given the uniqueness of the instrument. Nevertheless, this study offers a valid instrument for international research. The study population was limited to psychiatric nurses and student nurses. However, aggression by patients is not a phenomenon exclusive to psychiatric or mental health care. Aggression by patients against staff is an issue and often a problem in general health care settings as well. For this reason, we feel that the instrument is useful in a professional respect,and not merely for nurses but also other professionals who have to cope with aggression in a mental health care setting.

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Chapter 6
Cross-cultural Differences in Psychiatric Nurses' Attitudes to Inpatient Aggression

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Abstract

Little is currently known about the attitudes of psychiatric nurses towards patient aggression, particularly from an international perspective. Attitudes towards patient aggression of psychiatric nurses from five European countries were investigated using a recently developed and tested attitude scale.
Data were collected from a convenience sample of 1769 student nurses and psychiatric nurses. Regression analysis was performed to identify personal and professional characteristics of the respondents able to predict their attitude towards aggression. anova was used to identify significant differences in attitudes between and among countries. Attitude was predicted by gender, contractual status (full versus part-time) and the type of ward on which subjects worked. With one exception (communicative attitude) attitudes differed across countries. More research on attitude formation is needed to determine which factors account for these differences.

6.1 Introduction

There is an enormous literature on determinants of patient aggression in psychiatric setting. Generally, these determinants are categorizedinto three domains: **1** characteristics of health professional staf **2** patient characteristics, and **3** environmental factors. This paper addresses just one aspect of health professional staff determinants – staff attitudes toward aggressive behaviour of patients. Attitudes play an important role in guiding how we react to the behaviour of other people. For this reason, it is important to study the attitudes of psychiatric nurses towards patient aggression. The way nurses manage aggression will be influenced by their attitudes towards the behaviour.

This link between attitude and behaviour is also reflected in Ajzen's Theory of Planned Behavior (TPB). Central to the TPB is the conception of intention. As the principal predictor of behaviour, intention is regarded as the motivation necessary to engage in a particular behaviour: the more one intends to engage in behaviour, the more likely be its performance. Underlying intentions are attitudes towards the behaviour, subjective norms and perceived behavioural control.
In the TPB, attitude is a function of the beliefs held about the specific behaviour, as well as a function of the evaluation of likely outcomes. Attitude, therefore, may be conceptualized as 'the amount of affect – feelings – for or against some object or a person's favourable or unfavourable evaluation of an object'. The second determinant of intention subjective norm is defined as perception of general social pressure from important others to perform or not to perform a given behaviour. Perceived control is defined as 'the perceived ease or difficulty of performing the behaviour' and is assumed 'to reflect past experience as well as anticipated impediments and obstacles' (Ajzen, 1988). This study focusses on the concept of attiudes. Attitude is the tendency to think, feel, or act positively or negatively towards objects in our environment (Eagly & Chaiken, 1998; Ajzen, 2001). Attitudes are derived from salient behavioural beliefs. Furthermore, attitudes are learned predispositions to respond in consistently favourable or unfavourable ways as the result of past experiences. The formation of attitudes is influenced mainly by the principle of learning, like modelling and other forms of social learning (Olson & Fazio, 2001). The social learning theory of Bandura emphasizes the importance of observing and modeling the behaviors, attitudes, and emotional reactions of others. Social learning theory explains human behavior in terms of continuous reciprocal interaction between cognitive, behavioural, and environmental influences (Bandura, 1977). From this point of view a common corollary to the hypothesis that attitudes are learned is the idea that attitudes are environmentally determined.
That is, if attitudes develop through experience, then it seems to follow that attitudes are determined by environmental factors. One major factor of the environment to affect the formation of attitudes is the national sociocultural values and beliefs. These assumptions are reflected by the conceptual model for the study represented in FIGURE 1.

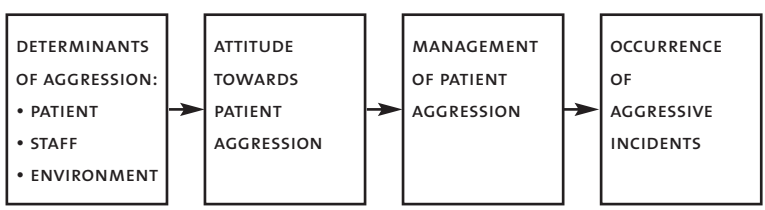

FIGURE 1 CONCEPTUAL MODEL OF THE STUDY BETWEEN ENVIRONMENTAL INFLUENCES AND ATTITUDE

The purpose of the present study was primarily to explore the attitudes of nurses to patient aggression from a multicultural perspective within the field of psychiatry. Secondly, the relationship between attitude towards aggression and relevant personal and professional characteristics of the respondents was investigated. Data were collected in five European countries.

6.2 **Literature review**

Attitudes towards aggression

A review of the literature on staff attitudes and patient aggression revealed that most items in the research instruments dealing with the topic are related to cognitions of nurses about aggression and not to attitudes. The cognitions nurses have about patient aggression are concerned with the extent of exposure to aggression experienced, the causes and types of aggression, the perpetrators, the management of aggression and the severity of injuries sustained (4). Most attitudinal items were found in the Attitudes Toward Patient Physical Assault Questionnaire (5) and in the Attitudes Toward Aggressive Behaviour Questionnaire (6). Both instruments focus on identical themes, i.e. the attitude towards patient responsibility for aggression, staff safety and competence of staff in managing violent behaviour. Duxbury (7) developed a tool (Management of Aggression and Violence Attitude Scale, mavas) to survey the views of both patients and staff concerning the broader approaches used to manage patient aggression.

International comparative research

Limited information was found in the literature about staff attitudes towards patient aggression across countries, or about predictors of staff attitudes towards aggression. Most studies in the psychiatric field have national samples and the focus in most of these studies is on the comparison between the patient and the staff attitudes towards aggressive incidents (Duxbury, 2002), or on the differences in attitudes between nurses from different types of wards (Duxbury, 1999; Farrell, 1997; Winstanley & Whittington, 2004), or on the attitudes of different clinical disciplines (Farrell, 1999; Nolan, Dalender *et al.*, 1999). Available comparative international research focuses on aggression-related issues other than attitudes, such as the prevalence of aggression and training programs. One study compared five European countries: Italy, Norway, the Netherlands, Sweden and the UK. Large variations were found to exist with respect to the organization of psychiatric services, the training of psychiatric nurses and the methods used by nurses to control and contain disturbed patients (Bowers *et al.*, 1999). In two studies, significant differences were reported with British nurses experiencing more violence than their

Swedish counterparts. The support system for British nurses who had experienced violence appeared to be less well developed than for their Swedish counterparts (Lawoko *et al.*, 2004).

Determinants of aggression

In contrast to the literature about attitudes, many studies have been carried out to explore the relationship between the occurrence of patient aggression and staff, patient and environmental variables. One of the staff variables is gender. Whether gender is associated with higher risk of assault is inconclusive. In a study by Carmel and Hunter, male nursing staff were almost twice as likely as female staff to be injured and nearly three times as likely to receive containment-related injuries (Carmel & Hunter, 1989). In contrast, in two other studies no differences were found between male and female nurses and their assault rate (Whittington, 1994; Cunningham, Connor, Miller & Melloni, 2003). In several studies it was found that more inexperienced staff were more likely to be exposed to assaults (Hodgkinson, *et al.*, 1985; Whittington, *et al.*, 1996; Cunningham *et al.*, 2003).
Studies on the ralationship between time of day an increase in aggression show that most incidents take place in the daytime, followed by the evening, with the lowest rate found during the night. Some studies reported that most assaults occurred during mealtimes and early in the afternoon (Carmel *et al.*, 1989; Lanza, *et. al.*, 1994; Nijman, *et al.*, 1995; Vanderslott, 1998; Bradley, *et al.*, 2001). Others found an increased rate in the morning (Fottrell, 1980; Hodgkinson *et al.*, 1985; Cooper & Mendonca, 1991; Cohen, 1988).
Environmental factors comprise variables such as the type of ward, legal status of the patient on admission (voluntarily admitted or not) and the use of restraining interventions. There is considerable agreement in the literature that ward culture (Katz & Kirkland, 1990) and wards with less 'stable' patients (e.g. admission and locked wards) are most often the site of violence (Fottrell, 1980; Hodgkinson *et al.*, 1985; Katz *et al.*, 1990; Nijman, *et al.*, 1997). In several studies it was reported that patients admitted involuntarily under mental health legislation were significantly more likely to be engaged in violent acts (James, *et al.*, 1990; Powell, *et al.*, 1994; Delaney, *et al.*, 2001; Owen, *et al.*, 1998; Soliman & Reza, 2001). In some studies it was concluded that attacks often occurred when nurses were administering medication or leading or restraining agitated patients (Soloff, 1983; Kalogjera *et al.*, 1989; Morrison *et al.*, 2002; Wynn, 2003).
The literature reveals that most studies on the determinants of aggression relate to the occurrence of inpatient aggression in psychiatric settings and not to attitudes of staff towards aggression. The current study explores whether prevalence-related variables (gender, type of ward, years of professional experience of the nurses and working part-time or full-time) are associated with types of attitude towards aggression as well (FIGURE 1).

It can be concluded from this review of the literature that the prevalence and the determinants of aggression are well studied, but as yet, little is known about attitudes of nurses towards aggression, certainly not from an international point of view. For this reason the following research questions were posed:

1. Which factors are predictors of the type of attitude towards aggression from a multinational (European) perspective?
2. Do nurses from different countries have different attitudes towards aggression?

6.3 **Material and Methods**

Subjects

The total sample (N = 1963) was composed of nurses working in psychiatric hospitals and student nurses from 5 countries: Germany (N = 297), the United Kingdom (N = 153), the Netherlands (N = 618), Switzerland (N = 791) and Norway (N = 104).

Measure

The development of the Attitudes Toward Aggression Scale (ATAS) has been described in earlier studies (Jansen, *et al.*, 1997, 2004, 2005). The ATAS is an 18-item self-reporting scale for the assessment of attitudes of staff members towards the inpatient aggression of psychiatric patients. The ATAS consists of 18 statements that nurses appraise as relevant definitions of aggression (see appendix). The response options vary from 'totally agree' with the statement (value 5) to 'totally disagree' (value 1). The scale can be used in clinical practice on a group (country) level to monitor the management of aggression by staff. Staff may include all members of the multidisciplinary team directly exposed to the disruptive behaviour. The atas comprises 5 types of attitudes, measured by the following subscales:

1. *Offensive attitude*: viewing aggression as insulting, hurtful, unpleasant and unacceptable behaviour including verbal aggression (7 items)
2. *Communicative attitude*: viewing aggression as a signal resulting from the patient's powerlessness aimed at enhancing the therapeutic relationship (3 items)
3. *Destructive attitude*: viewing aggression as an indication of the threat or actual act of physical harm or violence (3 items)
4. *Protective attitude*: viewing aggression as the shielding or defending of physical and emotional space (2 items)
5. *Intrusive attitude*: viewing aggression as the expression of the intention to damage or injure others (3 items)

Since there are no reference scores known with cutoff points, it is impossible to convert a score into a categorical variable: agreement or disagreement. A mean score can only be interpreted in relation to the mean score of another group (country). The higher the score on the scale, the more it matches with the attitude to aggression expressed by that particular scale.

Data collection procedure

Data were collected in collaboration with the participating members of the European Violence in Psychiatry Research Group in their home countries. Each member used his/her own professional network to recruit participants for the present study. The way the samples were accessed varied from country to country, depending on the type of network of the member. This could be a group of nurses working on the wards in a psychiatric hospital where the member of the group was employed, or a sample of nurses with which the network member had a teaching relationship. In another situation the member of the group used the research network of his organization. The eviprg promotes the dissemination of expertise and knowledge among researchers studying psychiatry. Each member nation is represented by experts in research, education, psychiatry, psychiatric nursing, psychology, sociology and trainers specialized in the management of violence. The group has gained wide experience in the translation and cross-cultural analysis of survey instruments. Members of the group have good access to local hospitals and work areas and utilise appropriate occasions to approach large groups of nurses to participate in this study. The uk was the only country in which an institutional review was required specifying the aims, methods and subjects involved in the research project. In the other countries data collection was carried out after informed consent form the nurse managers in charge. No substantial barriers to this research were encountered because there were no patients involved and there was no intervention to be implemented or evaluated.

Analysis

Regression analysis on data of the total sample was performed to answer the first research question, concerning the influences of four characteristics on the type of attitude nurses had towards aggression. These characteristics were gender, part-time of full-time status, years of work experience as a nurse and the type of ward. Three types of wards were identified: admission wards, short-stay wards (treatment or hospitalization for a maximum of two years) and long-stay wards that cared for for people with chronic mental illness who required hospitalization for two years or more.

To answer the second research question concerning the differences in attitudes between countries the significance of the estimated country

effect was tested per scale ($\alpha = .05$) while controlling for the influence of the following predictors of types of attitude, which were the result of the analysis addressing the first research question: **1** gender, **2** years of experience, **3** type of ward and **4** contractual status (ANOVA). By controlling for these predictors, their confounding influence was eliminated. Subsequently, the scale means were grouped in homogeneous subsets of countries (Scheffé).
In addition, effect sizes (Cohen, 1977) were calculated in order to interpret the magnitude or relevance of the observed differences in the scores on the attitude scales between countries. Effect sizes (ES) is the name given to a family of indices that measure the magnitude of a (treatment) effect. Unlike significance tests, these indices are independent of sample size. In general, ES can be measured as the standardized mean difference between groups expressed in units of standard deviations. An effect size (ES) of < 0.20 indicates a trivial effect, an ES of ≥ 0.20 to < 0.50 a small effect, an ES of ≥ 0.50 to < 0.80 a moderate effect and ES > 0.80 a large effect.

6.4 **Results**

Socio-demographics

The demographic and work-related data of the sample are presented in TABLE 1. The largest samples were from Switzerland and the Netherlands, N =791 and N = 619 respectively. Most respondents in the sample were female nurses and had extensive experience (>10 years).

TABLE 1 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS PER COUNTRY

	TOTAL N=1963	NORWAY N=104	UK N=153	GERMANY N=297	NETHERLANDS N=618	SWITZERLAND N=791
GENDER						
male	732	54	64	73	253	288
female	1208	47	87	222	356	496
missing	23	3	2	2	9	7
YEARS OF EXPERIENCE						
0-5 years	690	55	56	54	195	330
6-10 years	435	30	32	62	175	136
>10 years	795	18	39	177	248	313
missing	43	1	26	4	–	12
CONTRACTUAL STATUS						
full time	1187	85	142	235	233	492
part time	762	18	9	61	377	297
missing	14	1	2	1	8	2
TYPE OF WARD						
admission	692	24	90	97	180	301
short stay	408	3	13	74	245	73
long stay	700	74	30	60	148	388
missing	163	3	20	66	45	29

The number of student nurses is not known. Probably particularly in Germany and the Netherlands students particpated in the study which would explain the relatively high number of missing data about the type of ward in these two countries.
Most nurses worked full time (61%) and the majority of nurses (40%) were employed in long-stay wards (TABLE 1). The internal consistency (Cronbach's α), the mean scores and the standard deviations on the five scales of the atas in each country and for the total sample are presented in TABLE 2. All types of attitudes proved to have a normal distribution in each country.

TABLE 2 SCALE DESCRIPTIVES OF THE 5 ATAS DOMAINS PER COUNTRY

Scale Component	offensive	communicative	destructive	protective	intrusive
Number of scale items	(7 items)	(3 items)	(3 items)	(2 items)	(3 items)
Scale scoring range	7-35	3-15	3-15	2-10	3-15
THE NETHERLANDS (N=571)					
Cronbach's α	.83*	.63	.60	63	.62
Mean inter-item corr.	.42	.36	.33	.46	.35
Mean	18.23	8.70	8.93	6.30	7.4
SD	4.99	2.07	2.46	1.72	2.14
GERMANY (N=252)					
Cronbach's α	.87	.63	.70	.65	.66
Mean inter-item corr.	.50	.37	.44	.48	.39
Mean	18.54	8.44	11.57	6.44	8.67
SD	6.13	2.46	2.31	1.88	2.64
UNITED KINGDOM (N=123)					
Cronbach's α	.82	.65	.67	.60	.67
Inter-item corr.	.40	.38	.40	.43	.40
Mean	23.26	8.50	11.28	5.54	9.39
SD	5.86	2.60	2.67	1.96	2.56
SWITZERLAND (N=730)					
Cronbach's α	.86	.61	.68	.62	.60
Mean inter-item corr.	.48	.34	.41	.45	.33
Mean	18.10	8.96	10.59	6.65	7.82
SD	5.93	2.31	2.65	1.73	2.48
NORWAY (N=93)					
Cronbach's α	.84	.60	.80	.62	.65
Mean inter-item corr.	.43	.34	.57	.45	.38
Mean	21.06	8.97	11.75	7.29	9.14
SD	5.75	2.07	2.60	1.54	2.30
COMBINED DATA OF ALL COUNTRIES (N=1769)					
Cronbach's α	.86	.62	.69	.62	.65
Mean inter-item corr.	.46	.35	.42	.45	.38
Mean	18.72	8.77	10.30	6.46	7.90
SD	5.82	2.27	2.74	1.79	2.50

The ATAS was found to be a valid measure for the attitudes of nurses and other professionals in a mental health care setting towards inpatient aggression in psychiatry. In an earlier study on the ATAS (Jansen, 2004), the highest Cronbach's α coefficient was found on the 'offensi-

ve' scale (.87 in Germany) with a maximum of 7 items. The lowest mean interitem correlation (.33) found was for the 'destructive' scale in the Netherlands and the 'intrusive' scale in the Swiss sample (TABLE 2).

6.5 Predictors of the Types of Attitudes

From this point in the text italics will be used to denote the types of attitudes obtained from the scores on the atas (*offensive*, *communicative*, *destructive*, *protective*, and *intrusive*).
The results of the regression analysis (TABLE 3) showed a gender effect for the *communicative* and the *destructive* scale. Men had higher scores than their female colleagues on the *communicative* attitude, but they had lower scores than their female colleagues on the *destructive* attitude. Furthermore, nurses who worked part time had lower scores than those who worked full time on the *offensive*, the *destructive*, and the *intrusive* attitudes towards aggression. Nurses from the short-stay wards had lower scores on the *offensive*, the *destructive*, the *protective*, and the *intrusive* attitudes than the nurses from the other two types of wards.

TABLE 3 SIGNIFICANT PREDICTORS OF TYPE OF ATTITUDE IN THE TOTAL SAMPLE

ATTITUDE	OFFENSIVE	P	COMMUNICATIVE	P	DESTRUCTIVE	P	PROTECTIVE	P	INTRUSIVE	P
total sample (N)	1713		1682		1682		1697		1690	
GENDER			male		male					
RG: female			β .282	.01	β –.271	.00				
EXPERIENCE	6-10 yrs	.03								
RG: > 10 years	β .814									
	>10 yrs								> 10 yrs	
	–1.127	.00							β .361	.01
CONTR. STATUS	part-time				part-time				part-time	
RG: full time	β –1.051	.00			β –.751	.00			β –.663	.00
TYPE OF WARD			admission				admission			
RG: long stay			–.564	.00			–.258	.01		
	short stay				short stay		short stay		short stay	
	β –.934	.01			β –.692	.00	β –.402	.00	β –.738	.00
R^2 of the model if:										
'country' excluded	.02		.02		.03		.01		.04	
'country' included	.08		.02		.15		.04		.11	

RG = the reference group in the regression analysis

The variance explained by each of the five models ranged from 2% to 4% if the variable 'country' was excluded from the regression analysis. Except for the communicative scale, 'country' proved to be a significant predictor for the scores of nurses on all the other four scales. If 'country' as a predictor was added to the analysis, 15% of the variance in the scores on the destructive scale and 11% of the variance on the

intrusive attitude scale could be explained by the models. If the variable 'country' was added to the models of the other three scales, no significant contribution to the percentage of variance explained was observed (TABLE 3).

Differences in attitudes to aggression across countries

To answer the second question, the significance of the estimated country effect was tested, corrected for the influence of the predictor effects. The predictors are presented in TABLE 3. The results of the one-way ANOVA tests are shown in TABLE 4. We will discuss the results by scale.

Nurses from the five countries appeared not to differ significantly ($p < 0.05$) the *communicative* attitude. The mean score ranged from 8.4 in Germany to 9.0 in Switzerland.

Significant differences between countries were found on the other four attitude scales. The UK nurses had the highest mean score for the offensive attitude (23.4), while the Swiss, Dutch and German nurses had the lowest scores for this attitude (group mean, 18.2). When the focus is on the *destructive* attitude, the UK nurses and the German and Norwegian nurses had significantly higher scores this attitude (group mean 11.6) than the Dutch and the Swiss nurses. The UK nurses had the lowest scores for the *protective* attitude; the Norwegian nurses the highest score. Finally, the UK nurses had the highest score on the *intrusive* scale (9.6) compared to the scoring by the nurses from the other four countries.

Magnitude of the differences

To calculate the magnitude of the differences found between the country scores on the attitude scales, we used Cohen's effect size statistic 'd' (TABLE 4). The effect sizes found between (groups of) countries varied from 'trivial' to 'large' according to Cohen's thresholds. Most differences detected were classified as 'large' (75%) and related to the *offensive* attitude, while most 'small' differences (16%) were found with respect to the *protective* attitude. One 'trivial' difference (0.15) was found between the scores of Switzerland and the mean scores from the United Kingdom, Germany and Norway on the *destructive* scale.

Patterns of the differences

Two patterns manifested themselves in the way the types of attitudes were scored across the countries. The first pattern related to the way the uk nurses scored. They had the highest score for both the *offensive* attitude (23.4) and the *destructive* attitude (11.4), along with the German and Norwegian respondents. In addition, the uk nurses had the highest score for the *intrusive* attitude. However, their scores for the *protective* attitude were the lowest of all countries (5.6). According to the effect sizes calculated, these differences had to be classified as

TABLE 4 DIFFERENCES BETWEEN COUNTRIES IN TYPES OF ATTITUDES TOWARDS AGGRESSION

agreement	low group 1	mean	moderate group 2	mean	high group 3	mean	mean group 1	mean group 2	mean group 3	ES gr 1-2	ES gr 2-3	ES gr 1-3
ATTITUDE							(sd)	(sd)	(sd)			
OFFENSIVE	Switzerland (N = 735)	18.1	Norway (N=100)	20.9	United Kingdom	23.4	18.2	20.8	23.4	.46	.44	.92
	Netherlands (N = 564)	18.2			(N = 105)		(5.6)	(5.8)	(5.9)	•••	•••	••••
	Germany (N = 221)	18.7										
DESTRUCTIVE	Netherlands (N = 551)	8.9	Switzerland (N=726)	10.6	United Kingdom (N = 119)	11.4	8.9	10.6	11.6	.66	.15	1.1
					Germany (N = 221)	11.6	(2.5)	(2.6)	(2.4)	•••	•	••••
					Norway (N = 95)	11.8						
PROTECTIVE	United Kingdom (N = 124)	5.6	Netherlands (N = 560)	6.3	Norway (N = 101)	7.3	5.6	6.5	7.3	.49	.44	.89
			Germany (N = 218)	6.5			(2.1)	(1.8)	(1.6)	••	••	
			Switzerland (N = 749)	6.6								
INTRUSIVE	Netherlands (N = 554)	7.1	Germany (N = 219)	8.6	United Kingdom (N = 100)		7.5	8.8	9.6	.55	.30	.90
	Switzerland (N = 730)	7.8	Norway (N = 99)	9.0			(2.3)	(2.6)	(2.7)	•••	••	••••

Cohen's effect size thresholds: • trivial, •• small, ••• moderate, •••• large

'large'. The second pattern found was the grouping of Switzerland and the Netherlands and Germany. Respondents from these countries had identical scores for the *offensive* and the *protective* attitudes and, except for Germany, on the *intrusive* scale as well.

6.6 **Discussion**

The objective of this study was to explore the differences in the attitudes of psychiatric nurses towards patient aggression from an international (European) perspective. Five types of attitudes were investigated. The study started with an identification of the predictors for the various types of attitude in the total sample. We will discuss three of them: **1** gender, **2** contractual status, and **3** the type of ward.
A gender effect was found for the destructive and *communicative* attitudes. In the total sample men appeared to disagree more than their female colleagues with the *destructive* attitude and to agree more with the communicative attitude. What do these findings mean? The first finding indicates that female nurses, more than their male colleagues, perceived aggression as a *destructive* phenomenon. We think that this result can be explained by the notion that in general female nurses feel more intimidated by the verbal and physical expressions of aggression than male nurses. In our opinion the latter result, i.e. male nurses more than the female nurses experienced aggression as an attempt to communicate, was related to the first finding. It seems likely that men, more than women, had the option of perceiving the relational dimension of aggressive behaviour because they felt less intimidated and afraid. We know from experimental cognitive psychology that with anxiety, memory, attention and reasoning are affected. A person is overwhelmed by emotions and unable to attend to external events, and he or she is concentrated on their own feelings of distress (Eysenck, *et al.*, 1987).
In addition to gender as a predictor, we found that nurses working part time had lower scores than those who worked full time for the offensive, the *destructive* and the *intrusive* attitudes towards aggression. We asked ourselves two questions. Firstly, why did we find a significant relation between contractual status and this combination of attitude scales, and, secondly, why did we find this with the part-time workers in particular? In answer to the first question it must be noted that the common factor in the *offensive*, *destructive* and *intrusive* attitudes towards aggression can be labelled as the perspective that it is violent and harmful, while the *protective* and *communicative* attitudes can be characterized as the more tolerant view towards aggression. From this perspective, it is obvious that an effect was found on the combination of these specific scales. The finding that part-time workers agreed less with these attitudes than full-time workers might be attri-

buted to the fact that part-time workers had less opportunity than full-time workers to become involved in violent incidents. The underlying rationale is that the more violent situations you have experienced with a client, the more you will agree with the *destructive*, *intrusive* and *offensive* attitudes.
The third predictor to discuss is the finding that nurses from admission wards agreed less with the *protective* and *communicative* attitudes than the nurses from the other two types of wards. As mentioned before, these two scales represented the more permissive, tolerant attitudes towards aggression. In the literature review we showed that admission wards more than the others wards are often the site of violence. Reasoning by means of analogy with the explanation given for the predictor effect of the part-time workers, it can be argued that nurses working on admission wards, being the victims of violence more often, had less affinity with these two attitudes than the nurses from the short and long-stay wards.
To conclude the discussion about the predictors, the issue of the percentage of variance explained by the models is addressed here. The percentage of variance that was explained by all five models proved to be very small. If the variable 'country' was added to the models, we found an increase in the percentage of variance explained, of 12 % on the *destructive* scale and of 7 % on the *intrusive* scale. From this finding, it can be concluded that for the scoring of these two scales the cultural background of respondents was important.

We now come to the main focus of this study, differences in attitudes between countries. The overall conclusion that can be drawn from this study is that nurses from the five European countries had different opinions about four types of attitudes. The majority of these differences were classified as 'large'. No difference between countries was found with respect to the *communicative* attitude.
There were two patterns in the divergence of attitudes that caught the eye. In the first place there is the scoring of the UK nurses. They had the highest scores on the *offensive*, *intrusive* and *destructive* attitude scales. This means that the UK nurses agreed, more than the respondents from any other country in the study, with the violent, harmful perspective on aggression. On the other hand, they agreed less than any other country with the more tolerant attitude towards patient aggression (*protective* scale).
The second result we want to highlight is that the Swiss, German and Dutch nurses had identical scores for the *offensive* and *protective* attitudes and, except for the German nurses, for the *intrusive* attitude as well. The Norwegian nurses seemed to hold a kind of middle position between the UK on the one hand, and the Dutch, Swiss, and German nurses on the other. How can these patterns be accounted for?
It was argued above that attitudes have an impact on the management of client aggression by nurses (**FIGURE 1**). For that reason the *intru-*

sive and *destructive* attitudes, i.e. the idea that aggression is violent and harmful, would result in more restrictive methods of managing violent behaviour. If we look at what we know from earlier studies about the current management styles in some of the countries, we can link these styles to the prevailing attitudes we found in a particular country. From the study of Bowers *et al.* (1999) we know that mechanical restraint is not practiced in the uk, in contrast to Norway. Seclusion is abhorred in Norway, but is applied in the UK and in the Netherlands. In our opinion, all these styles represent interventions that are coercive in nature, and therefore each of these approaches is linked to the *intrusive* or *destructive* attitudes. To make a valid link with the management styles and the *communicative* and *protective* attitudes, it is vital to have cross-cultural information about the non-restraining interventions, such as talking down and other de-escalation techniques.
What other plausible explanations can be found for the different attitudes across countries? As stated in the introduction, the problem in finding clarifications other than from the findings within this study is that from a cross-cultural perspective, only limited knowledge is available from earlier research on staff attitudes and patient aggression. This gap in knowledge hampers any attempt to offer valid explanations. If we focus on the variables in this study we have to conclude that the four characteristics of respondents which were included because they were determinants of patient violence, proved to be inadequate to explain the differences in attitudes found between the countries. Obviously, variables other than the determinants of aggression have to be studied to gain insight into what caused the cross-cultural differences.

However, two sources of bias may have affected the results: **1** Since the hospitals were used as sample-units, selection bias may have resulted in samples that are not representative for the populations of nurses working in the psychiatric hospitals from the counties participating in the study. **2** The statistical conclusion validity may be weakened by the fact that statistical tests for simple random samples were applied on data from convenient samples.
In order to reduce both sources of confounding, in a follow-up study random sampling from the strata gender and age is indicated.

Finally, we would like to comment on attitude change. We have talked about country attitudes in this study of psychiatric nurses towards client aggression as if they were static. The data that were collected in the study came from a cross-sectional design. This means we have no information about the variation in attitudes over time. According to social psychologists (Schwarz & Bohner, 2004), attitudes have three components, cognitions, feelings and behaviour. An attitude will change over time as its components change. Cognitions and feelings

can change under the influence of past experiences with violence on a ward or even under the influence of violent events occurring outside a hospital. Public acts of violence, such as terrorist attacks and victimization, will have an impact on public opinion about violence. Nurses' attitudes towards client aggression will be affected by public opinion as they are also members of the community or society.

In conclusion, this study demonstrated that there are different attitudes of nurses towards patient violence in psychiatric inpatient settings across countries. We also showed that the variance in attitudes found between countries could not be predicted adequately by the variables in this study. Cultural variance in attitudes towards aggression is not a problem, of course. What is important is to gain a better understanding of the factors that account for the differences in attitudes. Another possibly effective way of addressing the issue would be to concentrate on the process of attitude formation within the work setting. According to Bandura (1999) attitudes are formed by modelling and other forms of social learning. Social learning is a powerful source of the socialization process through which nurses learn about which behaviour is and is not appropriate in their (professional) culture. To enable research in this direction we first have to consider what important patient, client and environmental effects there are on the social learning of nurses who deal with aggression.

Implications

This study reveals that psychiatric nurses differentiate in the way they evaluate aggressive behaviour of psychiatric clients. This finding is in contrast to the negative connotation of the phenomenon of aggression predominantly found in the literature. In this study psychiatric nurses from different countries were found to appraise the aggressiveness as positive energy as well. This finding is important input for both clinical practice and training programmes aiming at the management of aggression. In European countries training programs such as Control and physical Restraint (C&R) address and emphasize the violent and physical dimension of aggressive behaviour because of the damaging impact physical aggression may have on the victim. However, this cross cultural study shows that it is relevant to stress also the other side of the medal in such educational programmes. Since role models are important in attitude formation or attitude change, it is important that staff members such as trainers and ward managers make and keep nurses aware of and sensitive to the positive attitudes to aggressive client behaviour.

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Appendix

The Attitude Towards Aggression Scale (ATAS)

Aggression ...

offensive

1 is destructive behaviour and therefore unwanted
2 is unnecessary and unacceptable behaviour
3 is unpleasant and repulsive behaviour
4 is an example of a non-cooperative attitude
5 poisons the atmosphere on the ward and obstructs treatment
6 in any form is always negative and unacceptable
7 cannot be tolerated

communicative

8 offers new possibilities in nursing care
9 helps the nurse to see the patient from another point of view
10 is the start of a more positive nurse relationship

destructive

11 is when a patient has feelings that will result in physical harm to self or to others
12 is violent behaviour to others or self
13 is threatening to damage others or objects

protective

14 is to protect oneself
15 is the protection of one's own territory and privacy

intrusive

16 is a powerful, mistaken, non-adaptive, verbal and/or physical action done out of self-interest
17 is expressed deliberately, with the exception of aggressive behaviour of someone who is psychotic
18 is an impulse to disturb and interfere in order to dominate or harm others

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Chapter 7
General Discussion

Guided by the research questions that were formulated in the first chapter, this final chapter starts with a summary of the main findings of this thesis and then critically reflects on methodological and conceptual aspects of the dissertation. Implications are stated and finally areas for further research are delineated.

7.1 Introduction

Aggression is a common phenomenon in health care settings. Aggression by patients towards health professionals is not only manifest in psychiatric care services where patients may loose control over their behaviour, but also takes place in general hospitals as well as among patients without psychiatric disorders. In the field of mental health, aggression is reported not only by in in-house services but also by outpatient clinics. In research until now much attention has been paid to the assessment of the prevalence of aggression. However, in contrast with these studies on the prevalence of aggression in a psychiatric setting, the studies in this thesis were designed to explore the attitudes of nurses towards aggressive behaviour by patients in psychiatric hospitals.

The focus on attitudes towards aggression is important, because several theories indicate that attitude guides the behaviour of professionals when coping with aggressive patients. Besides the exploration of the attitude nurses may have towards patient aggression and the operationalization of the theoretically relevant aspects of these attitudes, the question of the reliability and validity of such operationalization across several countries was also addressed in this thesis. The next question focused on the predictors of attitudes to aggression across these international samples. In order to investigate this question a set of personal and subjective norm indicators of the occupational environment of the respondent nurses were used in the analysis.

The final aim was to research the cross-cultural differences in attitudes to aggression among nurses from five European countries.

In summary the dissertation had the following objectives:

1. to explore to what extent the concept of 'attitude', as defined within the 'Theory of Planned Behavior', is addressed in existing research instruments;
2. to explore theoretically relevant aspects belonging to coherent dimensions or domains of attitude towards aggressive patient behaviour;

3 to evaluate the psychometric properties of the measure within and across countries;
4 to attain a valid operationalization of these aspects of the attitudes that psychiatric nurses have towards patient aggression;
5 to describe which personal characteristics of nurses and which characteristics of the organization as an occupational environment (subjective norm) may predict their attitude to aggression;
6 to explore the cross-cultural the differences in attitudes of nurses to inpatient aggression.

To fulfil these objectives five studies were undertaken. In the next section the main findings, providing answers to the six research questions will be presented in six separate subsections.

7.2 **Main Findings**

Research question 1
The first research question was to what extent the concept of 'attitude', as defined within the Theory of Planned Behavior, is addressed by existing instruments. This question guided a systematic search of the literature concerning what is currently known about attitude and aggression from studies within the domain of health care. The review revealed that no structured research or clinical tools were available to measure attitudes to aggression. In most of the 22 studies that were analysed, self-report questionnaires were used as an opportunity to collect data about patient-related aggression. Most items in these survey questionnaires appeared to be related to the cognitions of nurses about aggression and not to their attitudes. A significant result from this study was that approximately 25% of the investigated items were attitude items by nature, indicating that these items expressed an evaluation of aggressive patient behaviour made by nurses. All other items were indicators of objective data such as age and years of experience of staff members, or to patient characteristics, such as age, diagnosis and length of hospitalization. The opinions or cognitions that nurses have about patient aggression were related to the extent of exposure to aggression, causes and types of aggression, perpetrator characteristics, modes of management of aggression, and the risk of sustaining injuries. The review showed that research on attitudes and aggression over that period lacked reliable and valid measures of nurses' attitudes towards aggressive patient-behaviour.

Research question 2
The next research question to answer was: what are the theoretically relevant aspects that belong to coherent dimensions of the attitude to aggression? In order to answer this question an instrument called the

Attitude Towards Aggression Scale (ATAS) was developed in three subsequent studies. The number of attitude domains that were identified as belonging to the measure shifted from three domains in the first two Dutch studies to five domains in the final international research project, due to a more appropriate factor analytical approach and to the validation of the final factor structure across five European countries. The initial 29-item and 32-item versions of the measure which are described in CHAPTERS 3 and 4, comprised three attitude dimensions:

1. The first dimension was the *harming* reaction representing the violent and intrusive physical dimension of the concept, which was evaluated as an unacceptable manifestation of aggression.
2. Aggression was considered in the second dimension as a basic human feeling and behaviour, or as a *normal* reaction.
3. The third dimension was called *functional* because the items in the scale described aggression as a feeling expressed by patients in meeting a particular need.

The final version of the instrument, presented in CHAPTER 5, comprised 18 items and five coherent dimensions or domains:

1. the *offensive* domain, in the sense of the respondent's evaluation of aggression as insulting, hurtful, unpleasant and non-acceptable behaviour including verbal aggression;
2. the *communicative* domain, meaning a signal stemming from the powerlessness patient's sense of powerlessness with the aim of enhancing the therapeutic relationship;
3. the *destructive* domain or dimension as an actual or threatening act of physical harm or violence;
4. the *protective* domain indicating the shielding or defending of the physical and emotional space;
5. the *intrusive* domain by which respondents evaluate aggression as the intention of a patient to damage or injure others.

Research question 3

The next research question addressed the evaluation of the psychometric properties of the measures within and across countries. The psychometric properties (construct validity and internal consistency) of the ATAS proved to be satisfying. The small differences in variances found per country imply that the same linear combination of variables could be used in all populations to describe the data adequately. The internal consistency (Cronbachs α) of the five subscales was also satisfactory. For all countries, the reliability coefficients can be considered as good for the 'offensive' scale (0.86) and somewhat lower for the other four scales (about 0.60). The configuration of correlations between the domains of the ATAS assessed in the international sample suggested the existence of two basic underlying concurrent domains

in the scale, on the one hand the scale domains *communication* and *protection* and on the other hand the domains of *offence*, *destruction* and *intrusion*. These domains may be regarded as concurrent because of the negative correlations found between the two sets. The convergent combination of *communication* and *protection* may be characterized as positive human energy or behaviour, in contrast to the attitudes termed *offence*, *destruction* and *intrusion* that may be considered to be the violent and negative perspective on aggressive behaviour. Considering these findings, the overall conclusion in answer to this research question is that the ATAS is a reliable and valid measure of the construct 'attitude to aggression'.

Research question 4

Once the domains and the psychometric properties of the ATAS were identified, the next question to answer was: what is the valid operationalization of these aspects of the attitudes psychiatric nurses have towards patient aggression?

The development of the instrument started with a total of 60 items from which 48 were derived from a qualitative content validity analysis and the remaining 12 items were added from the literature. This substantial number was reduced to 29 items (version 1) in the first Dutch study. The 29-item version was extended again to 32 items in the second Dutch study (version 2). The final version (version 3) comprised 18 items (**TABLE 7.1**). From the 18 items of the final version, 6 items were definitions of aggression which were taken from the literature, while the remaining 12 were the result of the initial qualitative analysis. Eight items of the ATAS proved to be consistent across all the three versions of the instrument (**TABLE 7.1**). These items were:

Aggression described as:

- violent behaviour to others and self (item 7)
- destructive behaviour and therefore unwanted (item 9)
- threatening others (item 12)
- offering new possibilities for treatment (item 13)
- a powerful, inappropriate, non-adaptive verbal and/or physical action undertaken out of self-interest (item 17)
- an impulse to disturb and interfere in order to dominate or to harm others (item 19)
- helping the nurse to see a patient from another point of view (item 30)
- poisoning the atmosphere on the ward and obstructing the treatment (item 37)

TABLE 7.1 THE CONSISTENCY OF THE 60 ATTITUDE ITEMS ACROSS THE 3 SCALE VERSIONS

original 60 item questionnaire aggression:	29-item version (Chapter 3)	32-item ATAS (Chapter 4)	18-item intern ATAS (Chapter 5)
1 basic feeling			
2 physical harm			11
3 release of emotions			
4 expression of feelings	25	27	
5 positive impact on treatment	1		
6 intent to harm		11	
7 violent behaviour to others and self	13	6	12
8 directed at objects or self	14	15	
9 destructive and unwanted	2	8	1
10 emotionally letting off steam	26	32	
11 to assault with words or actions	15		4
12 threatening others	16	10	13
13 new possibilities for treatment	27	25	8
14 energy used to achieve a goal	3	23	
15 any attempt to push the boundaries		26	
16 more threatening in some patients			
17 powerful inappropriate action	17	9	16
18 expressed deliberately if not psychotic			17
19 impulse to disturb and interfere	18	5	18
20 unnecessary and unacceptable	4		2
21 like a hidden threat; feel unsafe			
22 to hurt mentally or physically	19	1	
23 any action of physical violence	20	3	
24 passive aggression is threatening			
25 needs not to act with force			
26 active aggression is actual violence		16	
27 negative expression of aggression			
28 repulsive behaviour		13	3
29 normal reaction to feelings of anger		18	
30 another point of view	28	20	9
31 leads to burn out			
32 might cause injury to another		12	
33 reveals another problem	5		
34 victims try to defend themselves	29		
35 a non-cooperative attitude		7	4
36 non-directed expression of anger			
37 poisons the atmosphere	6	2	5
38 a way to protect yourself		29	14
39 always negative and unacceptable	7		6
40 a tool to exercise power	22		
41 communication and not destructive	8	22	
42 protection of territory and privacy		28	15
43 healthy reaction to anger	9	19	
44 start of a positive relationship		21	10
45 make someone else feel unsafe	23	14	
46 a signal asking for reaction		31	
47 constructive behaviour	10		
48 comes from powerlessness		30	
49 will make the patient calmer	30	24	

TABLE 7.1 CONTINUED

original 60 item questionnaire aggression:	29-item version (Chapter 3)	32-item ATAS (Chapter 4)	18-item intern ATAS (Chapter 5)
50 to be touched when not wanted			
51 always related to anger			
52 can be managed			
53 verbal aggression is calling names	24		
54 assess reaction to stressors			
55 reveals how vulnerable you are			
56 adaptive reaction to anger	11	17	
57 cannot be tolerated	12		7
58 leads to withdrawing			
59 has verbal and non verbal forms			
60 is dependent on size of patient			

The numbering of items in all 5 versions of the measure corresponds with the rank order of the items as presented in the tables in the subsequent chapters.

indicates consistency of an item across all scale versions
indicates the item had no significant component loading in any version

When the results from the two national studies are compared to the outcome of the international study, the items that belonged to the earlier 'harming' attitude dimension are now scattered over three separate dimensions; the offensive, the destructive and the intrusive attitude domains. The items that were part of the 'normal' and 'functional' domains in the earlier study were dispersed over the 'protective' and the 'communicative' attitude in the international validation study.

Research question 5

The fifth research question was: which personal characteristics of nurses and which characteristics of the organization as the occupational environment (subjective norm indicators) predict the attitude to aggression?

In the studies presented in CHAPTERS 3, 4 AND 6, regression analysis was performed in which the scale domains were the dependent variable, and the environmental (subjective norm indicators) and socio-demographic characteristics of the nurses were the independent variables. As mentioned before, in the two studies based on the Dutch samples a three-factor solution was developed as a measure for the attitude domains, whereas at the end of the development process, in the final version of the attitude scale, a five-factor solution was derived from samples across five European countries. In order to avoid confusion, these two different factor analytical outcomes require a separate approach in answering this research question.

The seven *personal characteristics* of nurses that were included in the national studies were: **1** gender, **2** age, **3** grade, **4** their years of work

experience, **5** involvement in training for aggression management, **6** full-time or part-time work, and **7** the type of shifts (day/evening/night) they predominantly worked. The personal characteristics of age, nursing grade or qualification and participation in training for aggression management were not associated with either type of attitude.
The overall conclusion about the role of the personal characteristics of nurses as predictors from the national and the international study is that the studies had two corresponding personal characteristics. These are the gender and the years of work experience of the nurses. In the national studies, the male nurses evaluated aggression as normal behaviour more than the female nurses and in the international study it was found that males had higher scores on the communicative attitude scale and lower scores on the destructive domain of the ATAS.
Based on these findings the conclusion about the role of gender as a predictor for the type of attitude is that male nurses evaluated aggression as constructive behaviour more often than the female nurses.
In the large national study, nurses with more than 10 years experience had the lowest scores for functional attitude. In the international study the most experienced had the highest scores for offensive and intrusive attitude. These results point in the same direction, indicating that the nurses with more than ten years of work experience in the psychiatric field identify themselves with the violent attitude towards aggression more than their less experienced colleagues.

The *subjective norm indicators* included in the analysis were: **1** the setting respondents worked in (adult psychiatry, child/adolescent psychiatry, psycho geriatrics), **2** the type of ward (acute ward, short stay, long stay), **3** the prevalence of aggression on the ward, **4** the legal status of the patient on admission (voluntary or involuntary), **5** the health sector where the respondents were employed (adult, child psychiatry, psycho geriatrics) and finally **6** whether constraining interventions such as seclusion and fixation were practised on the wards. These variables were supposed to be indicators of the subjective norm which according to the theoretical model of the thesis influences the attitudes.
In both the Dutch and international study the 'setting' was the only common subjective norm indicator. However the results are inconclusive. In the international study it was found that nurses from the admission wards had lower scores on the protective and communicative attitude scale than the nurses from the long-term ward. However, the findings from the national study did not support this result. This category of nurses did not have lower scores on the corresponding functional and normal scale. The predictive power of the variables tested by the regression models proved to be very small as the explained variance ranged from 2% to 15% even if the country variable was included in the model.

Research question 6

The final question to answer was: 'are there cross-cultural differences in the attitudes nurses have to inpatient aggression? Nurses from the five European countries that were included in the study, had different opinions about four of the five types of attitudes. The majority of these differences were classified as 'large'. No difference between countries was found with respect to the *communicative* attitude.
The UK nurses had higher scores on the violent, harming perspective on aggression than the respondents from any other country in the study, and they had lower scores on the more tolerant attitude towards patient aggression (*protective* scale) than the respondents from any other country.
The Swiss, German and Dutch nurses had identical scores on the *offensive* and *protective* attitudes. The Norwegian nurses seemed to hold a kind of middle position between the UK nurses on the one hand and the Dutch, Swiss and German nurses on the other. It is concluded that although attitudes to aggression differ from country to country, the study failed to reveal what factors are accountable for this finding.

7.3 Methodological Reflections

The primary aim of the cross-sectional studies described in this dissertation was to develop a valid measure for the assessment of attitudes nurses may have towards aggression by patients in psychiatric care. As a consequence a five-domain scale called the ATAS, preceded by a three-domain scale was developed. The following considerations refer to the adequacy of the procedures employed in these studies to enhance the validity of the ATAS.

Data reduction and consistency of items

Although the three versions that are developed within this thesis were based on the same original 60 items, all three instruments had different number of items and domains: the first instrument version had 29 items, the second 32 items and both versions had three domains, whereas the final ATAS comprises 18 items and five domains. Several reasons can be put forward to explain this result. In the first place two different statistical techniques were used for item reduction: Mokken scale analysis and factor analysis. The application of the Mokken technique was justified because it permitted the use of summated scores on each factor and it only required items to be measured at an ordinal level. In the second study, factor analysis in combination with factor scores was introduced as a method because it is known and available internationally, enabling researchers from other countries to perform replica studies. The use of two different item reduction techniques might have yielded different outcomes.

The second reason might be the fact that in the first study an item had to have an Hg scalability > 0.30, whereas in the second study the factor loading of an item had to be > 0.40 and in the final international study at least 0.50. This repositioning in the cut-off point of item loadings may have resulted in a shift of the items to other components or led to items being dropped because they did not meet the set criterion.

There is another instrument described in the literature that can be used for comparison with the items of the ATAS. Needham (2004) derived a 12-item version from a 32-item version based on the data set of the Swiss nurses. The instrument was called the shortened Perception of Aggression Scale (POAS). The issue that is discussed here is: why does the shortened POAS, which was derived from the same original questionnaire as the ATAS, share so few items with the ATAS? It is important to discuss this issue because it relates to the construct validity of the ATAS. To answer this question more information must first be provided about the way Needham's instrument was developed.

Three parameters were taken into consideration in Needham's shortened version leading to the decision to exclude items or to include them in the analysis in order to obtain homogeneous scales: **1** the results of a separate test-retest reliability study **2** the results from the PCA, and **3** the amount of variance in the data set explained by the 12 items of the short version. Confirmatory factor analysis produced a two component solution. The 12 items were proportionally distributed between the two scale domains termed as the violent perspective on the one hand and the functional/normal perspective on aggression on the other hand. When we compare the results of Needham's shortened version with the reduced 18-item ATAS version, it must be concluded that these two instruments only have five identical items (TABLE 7.1). These shared items are:

- aggression is when a patient has feelings that will result in physical harm to self or others (2)
- aggression offers new possibilities in nursing care (13)
- aggression helps the nurse to see the patient from another point of view (30)
- aggression is the protection of one's own territory and privacy (42), and
- aggression is the start of a more positive nurse-patient relationship (44)

The item numbers between parentheses refer to the original 60-item numbering in the original questionnaire.

It must be noted that a valid comparison of the two shortened instruments is somewhat problematic because the ATAS is a five-component scale, whereas the Swiss instrument has a two-component structure. One plausible reason may be that in the Swiss study items were eliminated on the basis of the test-retest criterion and not on the internal consistency criterion. The test-retest parameter used by Needham was the correlation between the scores on an item at two measurements, which is not an index for construct validity. Furthermore, the correlation coefficient is not an appropriate indicator of the stability of an item over time. Items that do not detect change over a short period of time in which no significant events occur, may still have a strong correlation with the underlying concept they purport to measure.
A more valid approach to assess the construct validity of an item is to calculate the effect size which captures the magnitude of change of an item over time. A trivial effect size would be an indication of the high stability of an item.

Validity

The studies in this dissertation were aimed at the development of a tool for the measurement of attitudes towards aggression. Crucial in the development of an instrument is that it must meet the criteria of validity and reliability. For this reason much attention is paid in all studies to the internal consistency and the construct validity of the ATAS, whereas other important aspects of validity such as the content validity and the criterion related validity are scarcely addressed or not addressed at all.
Although not stated explicitly in the studies, content validity is sought by interviewing experts. The experts were a panel of 24 psychiatric nurses from a psychiatric hospital in the Netherlands who were asked to give their opinion about the aggressive behaviour of patients (Finnema *et al.,* 1994). As a result of this study the 46 statements about aggression were formulated and this set was completed with 14 more formal definitions of aggressive behaviour found in the literature. Since content validity is concerned with the sampling adequacy of items for the construct that is being measured, the issue is whether the 60 statements represent the universe of all attitudes nurses might have to patient aggression. The review of the international research literature presented in CHAPTER 2 did not reveal additional information. On the other hand, the possibility cannot be ruled out that a replica study, in another country, of the Dutch qualitative study would result in new information.
Criterion-related validity was not assessed for the ATAS. The requirement for establishing this aspect of validity is that there must be some other reliable and valid criterion with which the ATAS could be compared. Since the ATAS is a unique instrument focusing on an abstract concept such as the meaning nurses attribute to aggressive behaviour, no valid external criterion was available.

Another issue regarding external validity is the representativiness of the samples in the international data set. Since the hospitals were used as sample units selection bias may have resulted in samples that are not representative for the populations of nurses working in the psychiatric hospitals from the counties participating in the study. In order to reduce this source of confounding, in a follow-up study random sampling from the strata gender and age is indicated.

Prediction of attitudes

Another issue to discuss is the explained variance of the predictors on the attitude scales. The predictive power of the variables of the regression models found in both the national and the international study was poor. The highest percentage in the Dutch study was only 7% for the normal attitude and in the international study 11% for the intrusive attitude. In psychological research where causal inferences and predictions are often problematic and hazardous, an explained variance of 50% is not unusual (Stevens, 1986). The predictor variables considered here were derived from studies aiming at the explanation of the occurrence of aggression and not from theories or research about attitude formation.

Construct validity

The last step in the process of moving from the original 60 items to the ATAS revealed a five-factor structure which was validated among samples from Germany, UK, Switzerland, Norway and the Netherlands. In the psychometric part of the multi-centre study Simultaneous Components Analysis (SCA) was used in order to test the invariance of components across countries. To this end the results of the separate Principal Component Analysis (PCA) per country were compared to the overall result of the SCA. One of the criteria in this analysis is that, if the explained variance found in the separate samples by the PCA is much larger than the explained variance found by the simultaneous component analysis, then the idea of common components has to be rejected. On the other hand, when the difference between the PCA's and the SCA is rather small, one can conclude that components are invariant across samples. The total variances with the ATAS accounted for by SCA were 60.2% and those accounted for by the separate PCA's per country ranged from 59.4 % to 62.9%. This implies that the maximum difference between the SCA and the PCA is 'only' 3.5%. However, whether the differences are to be considered as large or small is not clearly specified. Clearer rules with respect to which differences in explained variance should be considered to be invariant components would help the users of SCA to make more uniform decisions.

Clinical Use

The next point of discussion is related to one of the aims that was formulated for this thesis. The first aim was to develop an instrument to measure the attitudes of institutional staff to patient aggression in psychiatry. The measurement instrument is thought to be a useful tool in clinical practice particularly on a group level and it has been devised to support decision making about the management of aggressive behaviour on a ward. However, in this thesis the ATAS was not tested for clinical use. This implies that there is no evidence so far that the ATAS is a functional tool in the decision making process concerning the management of aggressive incidents on a ward. This issue must be clarified in future studies.

7.4 Conceptual Considerations

There are two issues we will discuss here. The first issue relates to the theory-free approach we adopted in terming the attitudes. As stated in CHAPTER 4, the labels denoting the types of attitudes were chosen in such a way that they would cover the underlying items best from a semantic point of view rather than from a theoretical perspective. In doing so we intentionally disregarded the accepted nomenclature that corresponds with our labelling – affective, instrumental and reactive aggression – in order to emphasize the inductive way of reasoning and so as to correspond more closely with the qualitative nature of the statements.

The second issue is the shift of concepts. In the first national study we speak of 'perception' whereas in the subsequent studies we shift to the concept of 'attitude' to designate the construct under investigation. In fact in the preceding qualitative study, the definitions of aggression which are used and the use of the concept 'perception', even led to international publications with the Perception of Aggression Scale (POAS). Yet, as the project advanced, it was decided that it was preferable to work with the concept of 'attitude', because it better described what was intended to be measured – the evaluation by respondents of verbal statements about aggression. By indicating the degree of their consensus with the statements (agree or disagree), they expressed their attitude (their favourable or unfavourable evaluation), rather than their cognitions (knowledge) about the aggressive behaviour of patients. The second rationale underlying the conceptual shift from perception to attitude is that according to the Theory of Planned Behavior, attitude is assumed to influence the intention of nurses and consequently their management behaviour of aggression. This is an important difference, because it means that the ATAS is embedded in a theory promoting behavioural change which would be absent if it were working with the 'perception' perspective. This theoretical grounding of the ATAS offers directions for future research with the instrument.

7.5 Implications and Recommendations

In this final section the implications of the study results will be delineated and subsequently, recommendations for practice and research will be formulated. The section will be concluded with some reflective remarks.

7.5.1 Implications

In this thesis a valid and reliable instrument for the measure of the attitudes nurses have towards patient aggression in institutional psychiatry has been developed. This outcome has several implications. As described in the introduction to the thesis, the negative connotation about patient aggression is the one most often cited. This thesis reveals that, in addition, nurses have a more permissive attitude towards aggression. This finding could explain why there is a general under reporting of aggressive incidents in hospitals.
In the second place, now that there is a validated measure, the ATAS will enable further international comparative research into attitudes towards aggressive behaviour. In the comparative study reported in CHAPTER 6, it has been demonstrated that nurses across countries differ in their attitudes. As CHAPTER 2 concluded international research lacked such an instrument up until now. The ATAS is a valuable extension of the existing range of self-report and observer based aggression-related instruments as it adds a new dimension. The ATAS differs from other observer based instruments, as it reflects the evaluation of patient behaviour instead of rating the frequency or intensity of aggression by patients on a ward.

7.5.2 Recommendations

The first recommendation relates to the further validity testing of the ATAS. The methodological discussion revealed that the whole range of techniques that are available to assess the validity of an instrument, was not used for the testing of the ATAS. Since no valid external criterion or golden standard, is available to test the criterion validity of the ATAS, the use of the known groups technique is worth being considered. It might be assumed for example that nurses who work on wards where no aggression occurs will have higher scores on the communicative and protective attitude scales than nurses who are employed on wards where physical violence is experienced everyday.

The second recommendation also relates to the further validity testing of the instrument. So far no information is available about the sensitivity of the ATAS to attitude change. Although attitudes do not change easily, attitude change can be the goal of education programmes. In many institutions at present nurses are enrolled in in-house-aggression management – control and restraint – courses. One of the

main elements in these courses is to enhance the technical skills of nurses to handle aggression adequately. Since perceived control or self- efficacy as it also called, increases by learning new techniques, attitudes to aggressive behaviour may change as well. The ATAS can be used in training situations as an instrument to measure attitude change as one of the training outcomes.

The third recommendation is related to the predictors of the attitudes. This thesis mostly failed to identify factors that are predictive for the type of attitude. Therefore, it is recommended that future studies include variables other than the subjective norm indicators and the personal characteristics used in this thesis. These factors should relate preferably to attitude formation principles such as social learning within educational programmes in the work setting such asintervision and supervision.

The fourth recommendation concerns the use of the instrument in clinical practice. As yet the ATAS has not been used in clinical practice. For this reason, it is recommended that the instrument be tested alongside a registration of the management of aggression. The hypothesis for this recommendation is that there should be a certain degree of correspondence (proportionality) between the prevailing management style on the one hand that is, the actual aggression management behaviour of the nurse – repressive versus permissive – and the attitude towards aggression – offensive, destructive and intrusive versus communicative and protective – on the other. The registration of the nature of aggression with the SOAS-R on a ward can provide indirect information about the management style. Apart from this clinical motive there is also a theoretical premise to link up the type of attitude to the management behaviour of nurses. This premise was outlined in the conceptual framework for this thesis, where it is postulated that attitude guides nurse behaviour.

The final recommendation pertains to the users of the ATAS. The ATAS was developed among and for psychiatric nurses in institutional psychiatry, because they are the profession most at risk. This does not imply that other professionals such as psychiatrists, social workers, psychologists or occupational therapists are not also exposed to violence. Most of the time these professionals work within a multidisciplinary team together with the psychiatric nurses. This fact brings us to the final recommendation: that the ATAS also be used by these team members in order to obtain a complete picture of the attitudes of the entire team. Finally, it must be mentioned that the use of the ATAS should not be restricted to institutional psychiatric care but may be useful within the psychiatric community care team as well.

Final remark

This thesis gives a report on the development of an instrument for measuring the attitude of psychiatric nurses towards patient aggression. Now that the report has been completed and the results discussed, it is time for reflection. In reflecting it is necessary to ask what this thesis adds to our knowledge about attitude and aggression.
It should be noted that in psychiatric care, more than in general care, patient accountability for their behaviour plays a major role in the evaluation by staff members of the disruptive patient behaviour. At the outset of this thesis and with the development of the ATAS, this tolerance of staff to illness-induced aggressive behaviour was thought to have consequences for the staff attitude to aggression generally. The measure that was developed in this thesis shows that psychiatric nurses differentiate in their attitudes to patient aggression. The dimensions in the ATAS are a reflection of their professional attitude to patient aggression.

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SUMMARY

The attitude of nurses towards inpatient aggression in psychiatric care; the development of an instrument.

Introduction

Among professional health care workers, nurses are more likely than other staff members to be involved in aggressive incidents with patients. Estimates show that nurses have to deal with verbal or physical aggression on an almost daily basis. One of the main reasons for their increased risk of being involved in aggression is that nurses, more than any other professionals, have multiple interactions with patients. Professional skills – cognitive and behavioural – are needed to manage patient aggression adequately. However, besides technical skills, the attitude of nurses to the behaviour is an important element in the provision of professional care. Hence, the major assumption underlying this thesis is that the type of intervention nurses decide upon will be determined by their attitude to the aggressive behaviour of the patient. For this reason, the objectives of this dissertation are to explore the attitudes of nurses towards patient aggression and to describe the characteristics of nurses and their working environment which determine their attitude to aggression.

Chapter 1

This dissertation starts with an overview of the literature on aggression in health care, specifically in psychiatry. The literature on aggression in psychiatric settings shows that inpatient aggression is multicausal. Three categories of determinants of aggression are described: patient factors, staff factors and environmental variables. This dissertation is about the attitudes of nurses to patient aggression. In the terminology of theories about attitudes, aggression by patients is understood as the attitude object, whereas the management of aggression by nurses is conceived of as the behaviour to be predicted by the attitude, that is, the nurses' attitude towards patient aggression. The theoretical model adopted to support the relation between attitude on the one hand and behaviour on the other, is Ajzen's Theory of Planned Behavior (TBP). In the Theory of Planned Behavior 'attitude' together with 'subjective norm' and 'perceived control' are the building blocks for the prediction of human behaviour. The subjective norm indicators are derived from the literature the occurrence

describing the occurrence of patient aggression. These factors all contribute to the social work environment and the occupational culture of nurses and thereby contribute to the perception of a social pressure to perform particular 'management behaviour'. The concept of 'perceived control' is not part of the thesis (FIGURE 1).

The primary aim of the thesis is to develop a valid and reliable instrument to measure the attitudes of staff to aggression displayed by patients who are admitted due to psychiatric problems. The tool can be useful in clinical practice on a group level for the assessment of the staff attitudes towards aggression. The tool is devised to support the decision-making about the management of aggressive behaviour on a ward. As there is also a lack of knowledge about the attitude of staff in various countries, the tool should facilitate international comparative research.

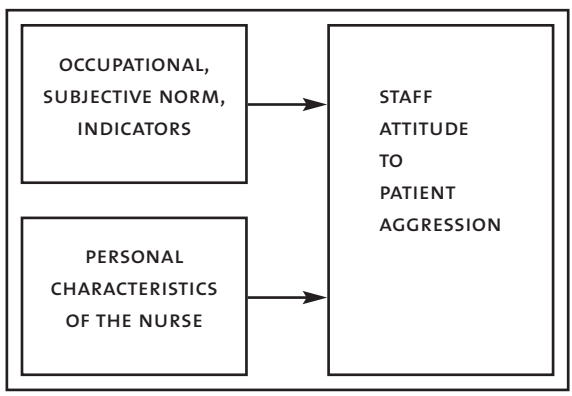


FIGURE 1 THE RESEARCH MODEL: THE PREDICTORS OF ATTITUDE TO AGGRESSION

The second aim of the thesis is to explore the question of which factors are related to the attitude towards aggression. If we have an understanding of how attitudes to aggression are formed and how they develop over time and in the work setting, the possibility of acting upon them arises, if that is wanted or asked for. As some types of aggression displayed by patients may provoke adverse feelings in psychiatric nurses, aggression management courses, supervision, or other ways of supporting teams, for example group counselling and debriefing provide ways of alleviating those feelings.

Chapter 2

CHAPTER 2 presents a comprehensive search of the literature on attitudes towards aggression. It reveals that little is yet known about the attitudes of staff towards aggression by patients and that no structured research or clinical tools are available to measure attitudes to

aggression. Most items in the survey questionnaires appear to be related to the cognitions of nurses concerning aggression and not to their attitudes. Only about a quarter of all items investigated are by nature a question of attitude, meaning that these items expressed an evaluation of aggressive patient behaviour by nurses. Objective data included staff data such as age and years of experience, while patient characteristics included age, diagnosis and length of hospitalization. The opinions, ideas, beliefs and views or cognitions that nurses had about patient aggression were related to the extent of exposure to aggression, the causes and types of aggression, the perpetrators, the management of aggression and the severity of injuries sustained. This review shows that research on attitudes towards aggression in health care addresses diverse items.
Most attitudinal items were found in three instruments:
1 The Attitudes Toward Patient Physical Assault Questionnaire, and **2** the Attitudes Towards Aggressive Behaviour Questionnaire, and **3** the Perception of Agression Scale. Both **1** and **2** focus on identical themes, that is, the attitude towards patient responsibility for aggression, staff safety and competence in managing violent behaviour, while the third instrument is concerned more with the appraisal and characterization of patient aggression by nurses. Most scales lack profound validity testing. To give a more scientific basis to studies of attitude in relation to aggression, the development of a new scale is described in the next chapter.

Chapter 3
This chapter describes the first empirical study using respondents from five Dutch psychiatric hospitals. A total of 60 statements (see APPENDIX 1) about the nature of inpatient aggression as perceived by psychiatric nurses were presented to the sample. In answer to the first research question pertaining to the perceptions, as the domains were called at the time, Mokken analysis produced three distinct perceptions of aggression:
- aggression as a normal reaction to feelings of anger
- aggression as a violent and threatening reaction and
- aggression as a functional reaction.

In developing the scale, the number of items was reduced from 60 to 29. As to the internal consistency of the scale, it is concluded that the reliability of the subscales was sufficient. The average inter-item correlation of 0.30 is sufficient. It is concluded that according to nurses, the interpretation of aggressive behaviour is multi- rather than one-dimensional.
In four of the eleven personal and environmental variables associated with the occurrence of aggression in the literature, a relationship was found with the way aggression was perceived:

The gender of the respondents, the setting they were working in, whether patients were voluntarily admitted or not, and the degree to which they used constraint measures on the ward, were related to the perception of aggression. To illustrate the last finding, nurses working on wards where constraint measures were not applied, proved to be more positive about the functional dimension of aggression, perceiving it as being more normal and functional than nurses on wards where constraint measures such as fixation and separation occurred. This first study points out that existing instruments for measuring the prevalence of aggression such as the MOAS captures a different aspect of aggressive behaviour. The added value this study offers is that nurses attribute diverse meanings to the aggressive behaviour of patients.

Chapter 4

CHAPTER 4 gives an account of a study in which two additional groups of nurses were included. The study sample is expanded with two samples: nurses from psychiatric hospitals for children and adolescents in the Netherlands and the second group is comprised of 88 nurses from a psycho geriatric nursing home. Again, in this survey the participants were asked to give their opinion about the aggressive behaviour of patients as they experienced it in their work environment. Rather than the 32-item scale, for the second time the entire set of 60 statements was presented to the respondents. Explorative factor analysis is used as a method to identify the different perceptions or attitudes as they were now called. The concept of 'attitude' is introduced into the study, since it expresses the degree of the affect for or against aggressive behaviour more adequately than 'perception'. The degree of affect is measured by asking respondents to indicate their degree of approval or disapproval of each statement presented in the questionnaire using a Likert type scale.
Consistent with the results found in the previous study three attitude domains or dimensions are identified:

- the attitude by which aggression is assessed as a normal reaction (12 items)
- the attitude by which aggression is evaluated as a harming reaction (17 items)
- the attitude which implies that aggression is experienced as functional behaviour (3 items)

The Cronbach's α coefficients are 0.82, 0.87 and 0.50 respectively.
Male and female nurses had different scores on the normal attitude towards aggression. Male nurses, more than their female colleagues, considered aggression to be a normal reaction. However, female nurses had higher scores on the functionality, or instrumentality, of aggressive behaviour than their male colleagues. It was found that nurses from the psycho-geriatric nursing home had higher scores on

the harming and normal reaction than respondents from the other two sectors. Furthermore, the study showed that the most experienced nurses supported the attitude that aggression is a functional reaction less often than novice nurses. It was also found that nurses from the child psychiatric hospitals had higher scores on the attitude that evaluates aggression as functional behaviour than the respondents working in the nursing home for the demented elderly and in the adult psychiatric hospitals.
The factorial structure of the ATAS consists of a three-component scale. In this study the domains found are compared to the typologies of aggression that are mentioned in the literature. 'Affective aggression' comes close to what is called 'the harming reaction'. What is labelled in the study as the 'functional reaction' can be rephrased as 'instrumental aggression'. Finally, what is called the 'normal reaction' in the study is comparable to 'reactive aggression', as it is called in the literature. The discussion of the study takes the position that the strongest attitude towards aggression measured on a ward using the ATAS should be a reflection of the type of aggression most prevalent on the ward.

Chapter 5

CHAPTER 5 reports on a study in which the invariance of the components (construct validity) of the ATAS is tested in an international sample. The sample comprises nurses from five European countries. Not three but five components or factors, expressing nurses' attitudes towards aggression by inpatients in psychiatry are identified, this time in all five countries.
The attitude components are:

- *Offensive* in the sense of insulting, hurtful, unpleasant and unacceptable behaviour including verbal aggression;
- *Communicative*, in the sense of a signal resulting from the patient's powerlessness aimed at enhancing the therapeutic relationship;
- *Destructive*, a component indicating the threat or an actual act of physical harm or violence;
- *Protective*, indicating the shielding or defending of physical and emotional space;
- *Intrusive*, expressing the intention to damage or injure others.

The psychometric properties of the ATAS were satisfying. The small differences in variances found in each country imply that the same linear combination of variables could be used in all populations to describe the data adequately. The internal consistency (Cronbach's α) of the five subscales was rather satisfactory. For all countries, the reliability coefficients can be considered as good for the 'offensive' scale (0.86) and somewhat lower for the other four scales (about 0.60).

The configuration of correlations between the components of the ATAS scale found in all five countries suggested the existence of two basic underlying divergent domains in the scale, with the scale components 'communication' and 'protection' at one end and the components 'offence', 'destruction' and 'intrusion' at the other. The domains can be regarded as divergent because of the negative correlations found between the two sets. The convergent combination of 'communication' and 'protection' may be characterized as positive human energy or behaviour, in contrast to the attitudes termed as 'offence', 'destruction' and 'intrusion' that may be considered to be the violent and negative perspective on aggressive behaviour. In the first scale study (CHAPTER 3) three subscales were identified and labelled as the harming, the functional and the normal attitude domain of aggressive behaviour. The items of the earlier 'violence' doamin are now spread out over three separate scale domains, differentiating between the disapproval of the behaviour (offensive), a physical act of violence without expressing a value statement (destructive), and the intent to hurt or dominate others (intrusive). The items that made up the 'normal' and 'functional' scale domain in the earlier study were reclassified in this study as the 'protective' and the 'communicative' perspectives on aggression.

According to a one way analysis of variance, the mean values on four of the five subscales were significantly different across the five countries. The same holds for the ATAS scale as a whole. Additional research is required to acquire an understanding of which factors may account for these differences.

The analysis of the data of this study started with 32 items. In the international study more components were extracted than was the case with the original scale, five now being used as opposed to three initially, and with a reduced number of items in the final scale. The original scale's 32 items, were reduced to 18, making the ATAS easier to administer. The conclusion is that this study offers a valid instrument for international research. Although the study population was limited to psychiatric nurses and student nurses, aggression by patients is not a phenomenon exclusive to psychiatric or mental health care. Aggression by patients towards staff is an issue and often a problem in general health settings as well. For this reason the instrument is not merely suited to nurses, but it is also helpful for other professionals who have to deal with aggression in a mental health care setting.

Chapter 6

In CHAPTER 6 a report is provided from a cross-cultural perspective concerning the differences in attitudes psychiatric nurses have towards patient aggression. The five attitudes described in CHAPTER 5 were investigated. The study started with the presentation of five regressi-

on models to identify the predictors for each type of attitude in the total sample. A gender effect was found for the '*destructive*' and '*communicative*' attitude. In the total sample men appeared to disagree more than their female colleagues with the '*destructive*' attitude and to agree more with the '*communicative*' attitude. It was also found that nurses who worked part-time had lower scores on the '*offensive*', the '*destructive*' and the '*intrusive*' attitude towards aggression than those who worked full-time. The third predictor of the type of attitude that was found was that nurses from admission wards agreed less with the 'protective' and 'communicative' attitude than the nurses from the other two types of wards. With regard to the predictors of attitudes it was concluded that the percentage of variance that was explained by all the five models was very small. With respect to the differences in attitudes across countries, it was concluded that the nurses from the five European countries had different opinions on four of the five types of attitudes. The majority of these differences were classified as 'large'. No difference between countries was found with respect to the *communicative* attitude domain.

The UK nurses, more than the respondents from any other country in the study, agreed with the violent, harming perspective on aggression, they also agreed less with the more tolerant attitude towards patient aggression (*protective* scale) than respondents from any other country.

The Swiss, German and Dutch nurses had identical scores on the *offensive* and *protective* attitudes. The Norwegian nurses seemed to hold a middle position between the UK on the one hand and the Dutch, Swiss and German nurses on the other. The conclusion is that although attitudes to aggression differ from country to country, the study failed to reveal what factors account for this finding. Several reasons are discussed that might explain this result.

Chapter 7

This final chapter provides a general discussion of the dissertation. After summarizing the main results pertaining to the different domains found as measures of the attitude of nurses to patient aggression, and to the variables that predict the attitude of nurses, various methodological considerations are reflected upon. One of the issues discussed is the consistency of the ATAS-items in the various versions throughout the reduction process. Some items are consistent through all three versions of the measure, others are not. Several reasons are discussed to explain this result. The chapter ends with some recommendations for the use of the ATAS in clinical practice and research. One of the recommendations for future research relates to the predictors of the attitudes. This thesis failed to identify factors that are predictive for the type of attitude. Therefore, it is recommended that future studies should include other variables besides the

subjective norm indicators and the personal characteristics that are used here. Preferably these factors should relate to attitude formation principles such as social learning within educational programmes and the work setting (intervision and supervision).

This thesis gives a report on the development of an instrument for measuring the attitudes of psychiatric nurses to patient aggression. Now that the report is finished and the results are discussed, it is time to make a final remark. The question must be raised concerning the extent to which this thesis adds to our knowledge of aggression. To start with it should be noted that in psychiatric care, more than in general care, patient accountability for behaviour plays a major role. At the outset of this thesis and with the development of the ATAS, this difference between the two health sectors or patient categories was also thought to have consequences for differences in the attitudes of nurses to aggression. The measure that was developed in this thesis shows that nurses do make these kinds of differentiations. This result shows that nursing is a profession, and that a profession requires professional attitudes.

SAMENVATTING

De houding van verpleegkundigen tegenover agressie van patiënten in de psychiatrische zorgverlening; de ontwikkeling van een meetinstrument

Inleiding

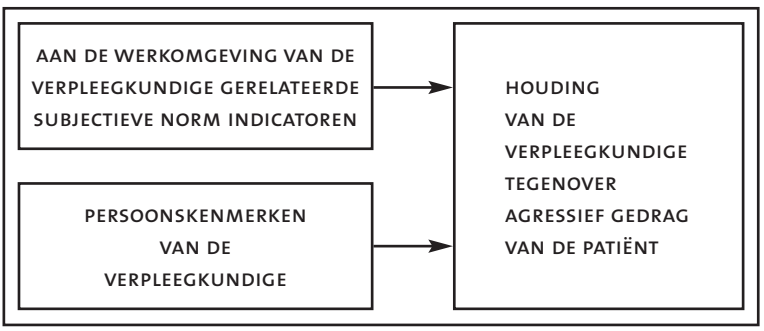
Verpleegkundigen zijn, vaker dan andere beroepsbeoefenaren in de gezondheidszorg, betrokken bij agressieve incidenten met patiënten. Schattingen laten zien dat verpleegkundigen bijna dagelijks te maken hebben met verbale of fysieke agressie. Eén van de belangrijkste redenen voor het verhoogde risico betrokken te raken bij agressie is, dat verpleegkundigen doorgaans meer interacties hebben met patiënten dan andere hulpverleners. Het beschikken over professionele competenties is noodzakelijk om op een adequate manier om te kunnen gaan met agressie van patiënten. Behalve kennis en vaardigheden, is de houding van de verpleegkundige ten opzichte van het gedrag van patiënten een essentieel onderdeel van de professionele zorgverlening. De belangrijkste aanname in dit proefschrift is, dat de aard van de interventie van de verpleegkundige bepaald wordt door de houding van de verpleegkundige ten opzichte van het agressieve gedrag van de patiënt. De doelstellingen van dit proefschrift zijn:

- het verkennen van de houding van verpleegkundigen ten opzichte van agressie van patiënten;
- het ontwikkelen van een valide en betrouwbaar instrument om de houding van verpleegkundigen ten opzichte van agressie van patiënten te meten;
- het beschrijven van de invloed van de persoonskenmerken van verpleegkundigen en van de werkomgeving op hun houding ten opzichte van agressie.

Hoofdstuk 1

Dit proefschrift begint met een overzicht van de literatuur over agressie in de gezondheidszorg in het algemeen en in de psychiatrische zorgverlening in het bijzonder. Uit de literatuur over agressie in de intramurale zorg blijkt dat meerdere factoren tot agressie van patiënten kunnen leiden. Er worden drie categorieën van factoren beschreven: patiënt gerelateerde factoren, team gerelateerde factoren en omgevingsfactoren. Dit proefschrift handelt over de houding van ver-

pleegkundigen ten opzichte van agressie van patiënten. In de terminologie van theorievorming over houding of attitude wordt als het object van de attitude beschouwd de agressie van patiënten, terwijl het interveniëren gezien wordt als het gedrag dat voorspeld wordt door de attitude. Ajzen's *Theory of Planned Behavior* (TPB) is gebruikt als model voor theoretische onderbouwing van de relatie tussen houding en gedrag. Behalve houding vormen de concepten *subjective norm* en *perceived control* de bouwstenen van de *Theory of Planned Behavior* waarmee menselijk gedrag wordt voorspeld. De indicatoren voor de *subjective norm* zijn ontleend aan de literatuur over het vóórkomen van agressie. Deze factoren hebben alle betrekking op de sociale omgeving en de cultuur in de werksetting van de verpleegkundige. Omdat de indicatoren van de subjective norm betrekking op omgevingsfactoren kan gesteld worden dat de *subjective norm* bijdraagt aan de ervaren sociale druk om bepaald gedrag te vertonen (het omgaan met agressie). Op *perceived control* wordt in het proefschrift niet nader ingegaan Tevens wordt onderzocht of persoonskenmerken van verpleegkundigen, zoals leeftijd en geslacht, van invloed zijn op de houding ten opzichte van agressief gedrag van patiënten (FIGUUR 1).



FIGUUR 1 HET ONDERZOEKSMODEL: DE VOORSPELLENDE FACTOREN VOOR DE HOUDING TEN OPZICHTE VAN AGRESSIE

Met dit proefschrift wordt beoogd een valide en betrouwbaar instrument te ontwikkelen waarmee de attituden van teamleden kan worden gemeten ten opzichte van agressie van patiënten die opgenomen zijn in een psychiatrisch ziekenhuis. Het instrument kan worden gebruikt in de klinische praktijk om op groepsniveau de attituden te meten van de teamleden. Het instrument is ontwikkeld om het besluitvormingsproces over de toe te passen interventies bij agressief gedrag op een afdeling te ondersteunen. Het instrument is tevens bedoeld om vergelijkend internationaal onderzoek naar attituden mogelijk te maken.
Het tweede doel is het verkrijgen van inzicht in de factoren die van invloed zijn op de houding van verpleegkundigen ten opzichte van

agressie. Inzicht in welke factoren bepalend zijn voor de houding, biedt de mogelijkheid voor aanvullend onderzoek naar de functie van deze factoren in de communicatie over en weer met patiënten voorafgaand aan het optreden van agressieve incidenten.

Hoofdstuk 2
In dit hoofdstuk wordt verslag gedaan van een literatuuronderzoek naar de concepten houding en agressie. Het hoofdstuk laat zien dat er nog weinig bekend is over de houding ten opzichte van agressie en dat er geen gestructureerd onderzoek is of klinische instrumenten beschikbaar zijn om houding te meten. De meeste items in de vragenlijsten die gebruikt worden bij onderzoek hebben betrekking op cognities van verpleegkundigen over agressie. Ongeveer een kwart van alle geanalyseerde items zijn items die tot doel hebben de houding van de patiënt te beoordelen. De objectieve gegevens in de geanalyseerde studies hebben betrekking op de leeftijd en het aantal jaren werkervaring van de verpleegkundigen. Patiëntkenmerken zijn leeftijd, diagnose en opnameduur. De meningen, ideeën en gedachten van verpleegkundigen over agressie van patiënten hadden betrekking op de mate waarin men te maken had met agressie, de aanleiding tot agressie, de soorten agressie waarmee men geconfronteerd werd, de agressieve personen, de reactie op agressie en de ernst van de opgelopen verwondingen. Het literatuuronderzoek toont aan dat in de onderzoeken naar houding en agressie in de gezondheidszorg, een grote diversiteit aan onderwerpen aan bod komt. De instrumenten die de meeste aan houding gerelateerde items bevatten zijn: **1** The Attitudes Toward Patient Physical Assault Questionnaire, **2** the Attitudes Towards Aggressive Behaviour Questionnaire en **3** the Perception of Aggression Scale. De eerste twee instrumenten richten zich op de thema's verantwoordelijkheid voor de agressie van de patiënt, veiligheid van de hulpverleners en de competenties in het omgaan met agressie. Het derde instrument daarentegen richt zich meer op de vragen wanneer er sprake is van agressief gedrag en hoe dit door verpleegkundigen gedefinieerd wordt. De meeste instrumenten zijn in onvoldoende mate getest op validiteit.

Hoofdstuk 3
In dit hoofdstuk wordt de eerste empirische studie van dit proefschrift beschreven. Het onderzoek richtte zich op de vraag naar de perceptie van verpleegkundigen van agressie van patiënten.
Aan de studie namen 274 respondenten van vijf psychiatrische ziekenhuizen in Nederland deel. In totaal werden 60 uitspraken over de wijze waarop verpleegkundigen agressie van patiënten ervaren (zie BIJLAGE 1) aan de respondenten voorgelegd. Met behulp van de Mokken analyse werden de volgende drie te onderscheiden percepties of dimensies van agressie gevonden:

- agressie als een normale reactie (12 items);
- agressie als een gewelddadige en bedreigende reactie (11 items);
- agressie als een functionele reactie (6 items).

Door de constructie van de drie schalen werd het aantal items gereduceerd van 60 naar 29. Wat de interne consistentie van de schaal betreft, kon worden geconcludeerd dat deze voldoende betrouwbaar was. De gemiddelde interitem correlatie bedroeg 0,30. De conclusie van het onderzoek, op basis van de drie geconstrueerde schalen, was dat de betekenis die verpleegkundigen aan agressief gedrag van patiënten geven multidimensionaal is.
Van de elf onderzochte persoonsgebonden en omgevingsfactoren die in de literatuur een relatie hebben met het vóórkomen van agressie, werd bij vier factoren een relatie gevonden met de perceptie van agressie. Het betrof de factoren 'geslacht van de respondent', 'werksetting van de respondent', 'vrijwillige dan wel gedwongen opname van de patiënt' en 'de mate waarin vrijheidsbeperkende maatregelen worden toegepast'. Het bleek bijvoorbeeld dat verpleegkundigen van afdelingen waar geen gebruik gemaakt werd van vrijheidsbeperkende maatregelen positiever waren over de functionele dimensie van agressie dan verpleegkundigen die werkten op afdelingen waar wel sprake was van vrijheidsbeperking. Verpleegkundigen die geen gebruik maakten van vrijheidsbeperkende maatregelen percipieerden agressie eerder als normaal en functioneel. Deze eerste studie maakt duidelijk dat bestaande instrumenten andere aspecten van agressie registreren dan de perceptie van agressie door verpleegkundigen. Bovendien toont dit onderzoek aan dat verpleegkundigen meerdere betekenissen geven aan agressie van patiënten.

Hoofdstuk vier

HOOFDSTUK 4 beschrijft een tweede onderzoek naar de houding van verpleegkundigen ten opzichte van agressie van patiënten. Deze keer werd de onderzoekspopulatie aangevuld met een steekproef die getrokken werd uit verpleegkundigen van instellingen voor de kinderen jeugdpsychiatrie in Nederland (N = 242) en uit verpleegkundigen en verzorgenden van een psychogeriatrisch verpleeghuissetting (N = 88). Opnieuw werd de volledige lijst met 60 uitspraken over de wijze waarop verpleegkundigen agressie ervaren aan de respondenten voorgelegd. Voor de statistische analyse werd gebruik gemaakt van de exploratieve factoranalyse om de percepties of de houding zoals ze vanaf nu aan genoemd worden vast te stellen. In dit onderzoek wordt het concept 'houding' geïntroduceerd. Het begrip houding geeft, beter dan het begrip perceptie aan dat het gaat om de ervaren gevoelens van de verpleegkundige (beoordeling) en het daaruit voortkomende gedrag tegenover agressie. De sterkte van de ervaren gevoelens wordt gemeten door op een Likert schaal aan te geven in welke mate men instemt met de uitspraken in de vragenlijst. Congruent met de

resultaten zoals die gevonden werden in de voorgaande studie, werden drie houdingen of dimensies geïdentificeerd:

- agressie is een normale reactie is (12 items);
- agressie is een beschadigende, letsel toebrengende reactie is (17 items);
- agressie is functioneel gedrag (3 items).

De Cronbachs α coëfficiënten van de drie schalen waren respectievelijk 0,82, 0,87 en 0,50.

Mannelijke en vrouwelijke verpleegkundigen scoorden verschillend op de dimensie 'agressie is een normale reactie'. Mannen vonden agressie eerder een normale reactie dan hun vrouwelijke collega's. De vrouwelijke verpleegkundigen scoorden hoger op de dimensie 'agressie is een functionele reactie' dan hun mannelijke collega's. Verder bleek dat verpleegkundigen van de psychogeriatrische verpleeghuizen hoger scoorden op de dimensies 'agressie is gewelddadig en bedreigend' en 'agressie is een normale reactie' dan de respondenten uit de volwassenen, kinder- en jeugdpsychiatrie. Tevens bleek uit deze studie dat de verpleegkundigen met het hoogste aantal jaren werkervaring het minder eens waren met de dimensie 'agressie is een functionele reactie' dan verpleegkundigen met weinig jaren werkervaring. Medewerkers uit de kinder- en jeugdpsychiatrie beoordeelden agressie eerder als functioneel gedrag dan de respondenten uit het psychogeriatrisch verpleeghuis en de volwassenen psychiatrie.

De factorstructuur van de *Attitude Towards Aggression Scale* (ATAS) zoals de schaal vanaf nu wordt genoemd, is een drie componenten oplossing. In de discussieparagraaf van dit onderzoek worden de dimensies vergeleken met de typologieën van agressie zoals die in de literatuur worden beschreven. Affectieve agressie is vergelijkbaar met wat hier de dimensie 'agressie is een gewelddadige en bedreigende reactie' wordt genoemd. De dimensie 'agressie is een functionele reactie' kan ook gezien worden als, wat in de literatuur beschreven wordt, 'instrumentele agressie'. De dimensie 'agressie is een normale reactie' is vergelijkbaar met wat in de literatuur 'reactieve agressie' wordt genoemd. In de discussie wordt het standpunt verdedigd dat de meest dominante dimensie die met de ATAS op een afdeling wordt gemeten een weerspiegeling moet zijn van het type agressie dat het meest op die afdeling voorkomt.

Hoofdstuk 5

HOOFDSTUK 5 wordt verslag gedaan van een onderzoek waarin de construct validiteit van de ATAS beproefd werd in een internationale steekproef. De steekproef bestond uit verpleegkundigen uit vijf Europese landen (Nederland, Duitsland, Engeland, Noorwegen en Zwitserland). In dit onderzoek werden niet drie maar vijf componenten geïdentificeerd om de houding van verpleegkundigen ten opzichte van agressie van patiënten in de psychiatrische zorg te beschrijven.

Deze componenten konden worden samengesteld in alle vijf de landen. Deze componenten of dimensies zijn:

- agressie is kwetsend; in die zin dat agressie beledigend, grievend, onaangenaam en onacceptabel gedrag is (7 items);
- agressie is een vorm van communicatie; in de betekenis dat agressie een signaal van machteloosheid is (3 items);
- agressie is destructief; in de betekenis dat agressie een dreiging met of een feitelijke gewelddadige handeling is 3 items);
- agressie is een vorm van (zelf)bescherming; in die zin dat agressie een vorm van bescherming of verdediging van de fysieke en emotionele ruimte is (2 items);
- agressie is inbreuk makend; in de zin dat agressie de intentie heeft schade of leed te bezorgen aan de ander (3 items).

De psychometrische kwaliteiten van de ATAS bleken voldoende te zijn. De geconstateerde geringe verschillen in variantie per land gaven aan dat dezelfde lineaire combinatie van variabelen aangewend kon worden om de data in alle populaties adequaat te beschrijven. De interne consistentie (Cronbach's α) van de vijf subschalen bleek voldoende te zijn. De betrouwbaarheidscoëfficiënten op de schaal 'agressie is kwetsend' kan als goed beschouwd worden (0,86) en als iets minder goed op de overige schalen (gemiddeld 0,60). Het onderlinge correlatiepatroon van de schalen wijst in de richting van het bestaan van twee divergente onderliggende basale structuren. Aan de ene kant de schaalcomponenten 'agressie is een vorm van communicatie' en 'agressie is een vorm van (zelf)bescherming' en aan de andere kant de dimensies 'agressie is kwetsend', 'agressie is destructief' en 'agressie is inbreuk makend'. De dimensies kunnen als divergent worden beschouwd. De convergente combinatie 'agressie is een vorm van communicatie' en 'agressie is een vorm van (zelf)bescherming' kan getypeerd worden als de positieve menselijke energie of gedragingen, in tegenstelling tot de houding die met kwetsend, destructief en inbreuk makend aangeduid zijn, welke beschouwd kunnen worden als de gewelddadige en negatieve dimensie van de houding ten opzichte van agressie.
In de eerste studie (HOOFDSTUK 3) werden drie schalen geconstrueerd, aangeduid als 'agressie is een normale reactie', 'agressie is een gewelddadige en bedreigende reactie' en 'agressie is een functionele reactie'. De items die eerder deel uitmaakten van de schaal 'agressie is gewelddadig' werden in dit onderzoek verspreid aangetroffen in drie verschillende schalen, waarbij een onderscheid werd gemaakt tussen afkeuring van het gedrag (agressie is kwetsend), een lichamelijk gewelddadige handeling zonder daar een waarde aan toe te kennen (agressie is destructief) en agressie zien als bedoeld om te kwetsen of anderen te overheersen (agressie als inbreuk makend). De items die eerder deel uit maakten van de schalen 'agressie is een normale reac-

tie' en 'agressie is functioneel gedrag' werden in deze studie geherformuleerd in de dimensies 'agressie is (zelf)bescherming' en agressie is een vorm van communicatie'
De variantie-analyse toonde aan dat de gemiddelde scores op vier van de vijf schalen significant verschilden tussen de landen. Meer onderzoek is nodig om inzicht te krijgen in de oorzaken van deze verschillen. In aanvang werden 32 items in de analyse opgenomen. In dit onderzoek werden met de principale componenten analyse meerdere factoren geëxtraheerd dan in de eerdere studies en het totaal aantal items werd gereduceerd van 32 naar 18. Het gevolg hiervan is dat deze nieuwe versie van de ATAS gemakkelijker af te nemen is. De conclusie van dit onderzoek is dat de ATAS een valide instrument is om te gebruiken in internationaal onderzoek. Gesteld wordt dat, hoewel de steekproefpopulatie zich beperkte tot psychiatrisch verpleegkundigen en studenten verpleegkunde, agressie van patiënten niet een verschijnsel is dat exclusief is voor de psychiatrische zorgverlening of in de GGZ als zodanig voorkomt. Agressie tegen hulpverleners is een veel voorkomend probleem in de gezondheidszorg in het algemeen. De ATAS is daarom een instrument dat ook door andere hulpverleners in andere settings dan de intramurale geestelijke gezondheidszorg gebruikt kan worden.

Hoofdstuk 6

In HOOFDSTUK 6 worden de verschillen in de houding van verpleegkundigen, uit verschillende landen, ten opzichte van agressie beschreven. De vijf te onderscheiden houdingen, zoals die in het voorgaande hoofdstuk aan bod zijn gekomen, werden onderzocht. Eerst worden de regressie-modellen besproken die gebruikt zijn om vast te stellen door welke variabelen de houding voorspeld wordt in de gehele steekproef (alle landen bij elkaar genomen). Er werd een effect gevonden voor de variabele geslacht op de destructieve en de communicatieve houding schaal. Mannen scoorden lager dan vrouwen op de destructieve houding maar hoger op de houding die agressief gedrag als communicatief gedrag interpreteert. Ook werd aangetoond dat verpleegkundigen die parttime werken, in vergelijking met de fulltime werkenden, lager scoorden op de kwetsende, de destructieve, en de inbreuk makende houding. Het 'soort' afdeling waar verpleegkundigen werkten bleek de derde voorspeller te zijn. Verpleegkundigen van 'opname afdelingen' scoorden lager op de beschermende en de communicatieve houding dan de verpleegkundigen van de 'short stay' en 'long stay' afdelingen. Geconcludeerd wordt dat het percentage verklaarde variantie door de gevonden voorspellers in alle modellen zeer gering was.
Wat de verschillen in houding van verpleegkundigen tussen de landen betreft, bleek dat zij verschillenden in hun mening over vier van de vijf houdingen. Uit de berekening van de effectmaten bleek dat het

verschillen betrof die als 'groot' kon worden aangeduid. Er kon geen verschil van mening worden aangetoond over de communicatieve houding. De Engelse verpleegkundigen stemden meer dan de verpleegkundigen van de vier andere landen in met de destructieve houding. Ze waren het echter het minst van alle landen eens met de beschermende houding. De scores van de Zwitserse, Duitse en Nederlandse verpleegkundigen op de kwetsende en de beschermende houding schaal waren gelijk. De Noorse verpleegkundigen bleken, wat hun mening betreft over de houdingen ten aanzien van agressie, een soort tussenpositie in te nemen tussen de Engelse verpleegkundigen aan de ene kant en de Duitse, Zwitserse en Nederlandse verpleegkundigen aan de andere kant. De conclusie van het onderzoek is dat verpleegkundigen uit verschillende landen verschillen in hun houding tegenover agressie. Er kon echter niet vastgesteld worden waaraan deze verschillen toegeschreven moeten worden. In de discussie worden mogelijke verklaringen besproken.

Hoofdstuk 7

HOOFDSTUK 7 is een algemene discussie over het proefschrift. Nadat een samenvatting is gegeven van de belangrijkste resultaten betreffende de verschillende componenten van het instrument dat de houding van verpleegkundigen ten opzichte van agressie meet, en van de variabelen die als voorspellers werden gevonden van deze houding, wordt ingegaan op een aantal methodologische kwesties. Eén van de onderwerpen die in de discussie aan bod komt is de consistentie van de items in de verschillende versies van het instrument in het ontwikkelingsproces. Verschillende verklaringen hiervoor worden besproken. Het hoofdstuk wordt afgesloten met enkele aanbevelingen voor het gebruik van de Attitude Towards Aggression Scale (ATAS) in zowel de klinische praktijk als in onderzoek. Eén van de aanbevelingen voor toekomstig onderzoek betreft de componenten die de verschillende houding voorspellen. Met de beschreven studies in dit proefschrift is hier onvoldoende aandacht aan besteed. Aanbevolen wordt in toekomstig onderzoek andere variabelen op te nemen dan de hier gehanteerde subjectieve norm indicatoren en de gehanteerde aan de verpleegkundige gerelateerde factoren. Bij voorkeur moeten deze factoren betrekking hebben op concepten die te maken hebben met het ontwikkelingsproces van houding zoals het 'sociaal leren' in scholingsprogramma's of met leerprocessen op de werkvloer die tot stand komen onder invloed van intervisie en supervisie bijeenkomsten.

Het instrument dat ontwikkeld is in dit proefschrift laat zien dat psychiatrisch verpleegkundigen een gedifferentieerde houding hebben tegenover agressie van patiënten. De dimensies van de ATAS zijn in die zin een weergave van deze professionele houding.

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Curriculum Vitae

Gerard Jansen werd geboren op 25 januari 1951 te Heerlen. In 1967 behaalde hij het MULO diploma en in 1969 het HAVO diploma. In 1969 verhuisde hij van Geleen naar Groningen om daar Frans MO te studeren aan de Letteren Faculteit. In 1972 begon hij aan de inservice opleiding tot A-verpleegkundige in het Academsch Ziekenhuis te Groningen (AZG), gevolgd in 1975 tot 1977 door de inservice opleiding tot B-verpleegkundige in hetzelfde ziekenhuis. Vanaf 1977 was hij werkzaam op de afdeling Psychiatrie van het AZG eerst als verpleegkundige, daarna tot einde 2002 was hij part time aldaar aangesteld als stafmedewerker. In de periode 1978 tot 1980 volgde hij de middenmanagement opleiding aan de Academie voor Gezondheidszorg te Groningen. In 1992 voltooide hij de studie Gezondheidswetenschappen afstudeerrichting Verplegingswetenschappen aan de Universiteit van Maastricht. Vanaf 1993 is hij parttime verbonden als Universitair Docent aan de opleiding Zorgwetenschappen van de Rijksuniversiteit Groningen.

Appendix 1
The 60-item Attitude Questionnaire

Aggression ...

1 is a basic human feeling
2 is when a patient has feelings that result in physical harm of self and others*
3 will lead to a release of patient's emotions
4 is an expression of feelings just like laughing or crying
5 has a positive impact on the treatment
6 is a situation where someone's behaviour shows that there is intent to harm himself/herself or others*
7 is violent behaviour to others and self
8 is directed at objects or self
9 is destructive behaviour and therefore unwanted
10 is emotionally letting steam off
11 is to beat up another person by means words or actions
12 is threatening others*
13 offers new possibilities for the treatment
14 is energy people use to achieve a goal*
15 is any attempt to push the boundaries*
16 is much more threatening in some patients than others
17 is a powerful inappropriate nonadaptive verbal and/or physical action done out of self-interest*
18 is expressed deliberately with the exception of someone who is psychotic
19 an impulse to disturb and interfere in order to dominate or to harm others*
20 is unnecessary and unacceptable
21 is like a hidden threat; nothing happens, yet as a nurse you do not feel safe
22 is to hurt others mentally or physically
23 is any action of physical violence*
24 passive aggression is threatening to do something
25 aggression does not need to be accompanied by force*
26 active aggression is the actual performance of an act of violence
27 force is a negative way of expressing aggression*
28 is repulsive behaviour
29 is a normal reaction to feelings of anger
30 helps the nurse to see a patient from another point of view
31 aggression and constant threads lead to symptoms of burn out in nursing personnel
32 is behaviour the patient knows might cause injury to another person without his/her consent*
33 reaveals another problem the nurse can take up

34 in a response to aggression the victim tries to defend him/herself
35 is an example of a non–cooperative attitude
36 is non-directed expression of anger
37 poisons the atmosphere on the ward and obstructs the treatment
38 is a way to protect yourself*
39 in any form is always negative and unacceptable; feelings should be expressed in another way
40 is a tool patients use to exercise power over others
41 is a form of communication and as such not destructive*
42 is the protection of one owns territory and privacy*
43 is a healthy reaction to feelings of anger
44 is the start of a more positive nurse patient relationship
45 is any expression that makes someone else feel unsafe, threatened or hurt
46 is a signal asking for a reaction
47 is constructive behaviour
48 comes from feelings of powerlessness
49 will make the patient calmer
50 physical aggression is to be touched by someone when this is not wanted
51 aggression is always related to anger
52 can be managed as a nurse: you don't have to let it happen to you
53 verbal aggression is calling names resulting in hurting
54 by his/her aggression a nurse can assess how a patient reacts to stressors
55 reveals how vulnerable you are as a nurse
56 is an adaptive reaction to feelings of anger
57 cannot be tolerated
58 leads to the nurse withdrawing in state of anxiety and fear
59 has verbal and non verbal forms of expression
60 the measure of threat which accompanies aggression is dependent on the size of the patient

* statements that were derived from the literature

Appendix 2
The English, German, Dutch and Norwegian ATAS Versions

Attitudes Towards Aggression Scale (ATAS)

Instruction:

You are asked to rate how much you agree with each statement. Please base your opinion on your experience with aggressive patients of the ward you work on at the moment. You can give your opinion by circling the number that corresponds with your judgment.

		strongly agree	agree	uncertain	agree	strongly disagree
AGGRESSION ...						
1	is an example of a non-cooperative attitude	5	4	3	2	1
2	is the start of a more positive nurse patient relationship	5	4	3	2	1
3	Is unpleasant and repulsive behaviour	5	4	3	2	1
4	is an impulse to disturb and interfere in order to dominate or harm others	5	4	3	2	1
5	cannot be tolerated	5	4	3	2	1
6	offers new possibilities in nursing care	5	4	3	2	1
7	is a powerful, mistaken, non-adaptive, verbal and/or physical action done out of self-interest	5	4	3	2	1
8	is unnecessary and unacceptable behaviour	5	4	3	2	1
9	is when a patient has feelings that will result in physical harm to self or to others	5	4	3	2	1
10	is to protect oneself	5	4	3	2	1
11	in any form is always negative and unacceptable	5	4	3	2	1
12	is violent behaviour to others or self	5	4	3	2	1
13	is threatening to damage others or objects	5	4	3	2	1
14	is destructive behaviour and therefore unwanted	5	4	3	2	1
15	is expressed deliberately, with the exception of aggressive behaviour of someone who is psychotic	5	4	3	2	1
16	poisons the atmosphere on the ward and obstructs treatment	5	4	3	2	1
17	helps the nurse to see the patient from another point of view	5	4	3	2	1
18	is the protection of one's own territory and privacy	5	4	3	2	1

Fragebogen über die Auffassungen der Pflegepersonen von Aggression (ATAS)

Dieser Teil besteht aus 18 Aussagesätzen zum Thema Aggression. Zu diesen Aussagen sollen Sie Ihre Meinung bekunden, indem Sie ein Kreuz an der für Sie zutreffenden Stelle machen. Urteilen Sie bitte vor dem Hintergrund ihrer persönlichen Alltagserfahrung auf Ihrer jetzigen Station und zwar unabhängig davon, wie häufig sie solche Situationen erleben. Sie haben bei jeder Frage die Möglichkeit zu gewichten, wie stark Ihrer Meinung nach eine Aussage zutrifft. Bitte kennzeichnen Sie die für Sie zutreffende Antwort mit einem Kreuz in einem der fünf vorgegebenen Kästchen.

		stimme völlig zu	stimme zu	weiss nicht	stimme nicht zu	stimme überhaupt nicht zu
AGGRESSION ...						
1	ist ein Beispiel für eine unkooperative Haltung.	5	4	3	2	1
2	ist der Beginn einer positiveren Pflegeperson-Patienten-Beziehung.	5	4	3	2	1
3	ist ein widerwärtiges Verhalten.	5	4	3	2	1
4	ist ein Impuls, der zu einem bestimmten Verhaltenführt, mit dem Ziel andere zu beherrschen oder zu verletzen.	5	4	3	2	1
5	ist etwas, was nicht toleriert werden kann.	5	4	3	2	1
6	eröffnet neue pflegerische Behandlungsmöglichkeiten.	5	4	3	2	1
7	ist eine kraftvolle, unangemessene, unangepasste, verbale und/oder physische Handlung, um eigene Interessen zu verfolgen	5	4	3	2	1
8	ist unnötiges und nicht akzeptabeles Benehmen	5	4	3	2	1
9	ist, wenn ein Patient Gefühle hat, die ihn dazu veranlassen, sich selbst oder andere physisch zu verletzen	5	4	3	2	1
10	Aggression dient dem Selbstschutz	5	4	3	2	1
11	ist im Prinzip immer negativ und in keiner Form akzeptabel	5	4	3	2	1
12	ist ein gewalttätiges Verhalten, welches sich gegen die eigene Person oder andere richtet.	5	4	3	2	1
13	ist wenn man andere Personen oder Gegenstände droht zu verletzen bzw. zu beschädigen	5	4	3	2	1
14	ist destruktives Verhalten und deshalb unerwünscht.	5	4	3	2	1
15	wird bewusst verübt, ausser im Falle von aggressivem Verhalten eines Psychotikers.	5	4	3	2	1
16	vergiftet die Atmosphäre auf der Station und gefährdet die Behandlung	5	4	3	2	1
17	hilft der Pflegeperson den Patienten aus einem anderen Blickwinkel zu sehen.	5	4	3	2	1
18	ist Ausdruck des Schutzes seiner Privatsphäre.	5	4	3	2	1

Agressie Attitude Schaal (ATAS)

Instructie:

U wordt gevraagd aan te geven in welke mate u het eens bent met onderstaande uitspraken. Baseer uw mening op uw ervaringen met agressie van patiënten van de afdeling waar u momenteel werkzaam bent. U kunt uw mening kenbaar maken door het cijfer dat uw mening het beste weergeeft te omcirkelen.

		helemaal mee eens	mee eens	weet niet	mee oneens	helemaal mee oneens
AGGRESSIE ...						
1	is een voorbeeld van een niet-coöperative houding	5	4	3	2	1
2	is het begin van een positievere relatie van de hulpverlener met de patiënt	5	4	3	2	1
3	Is onplezierig en vervelend gedrag	5	4	3	2	1
4	is een impuls tot verstorend ingrijpen met als doel iemand of iets te overheersen en leed te bezorgen	5	4	3	2	1
5	kan niet worden getolereerd	5	4	3	2	1
6	biedt nieuwe mogelijkheden in de behandeling/ begeleiding	5	4	3	2	1
7	is een krachtige, misplaatste, onaangepaste, verbale of fysieke actie bedoeld om eigenbelang na te streven	5	4	3	2	1
8	is onnodig en niet acceptabel gedrag	5	4	3	2	1
9	is een toestand waarin een patiënt gevoelens heeft die leiden tot fysiek letsel van zichzelf of anderen	5	4	3	2	1
10	is jezelf beschermen	5	4	3	2	1
11	is altijd negatief en in geen enkele vorm toelaatbaar	5	4	3	2	1
12	is gewelddadig gedrag gericht op anderen of zichzelf	5	4	3	2	1
13	een toestand waarin een patiënt dreigend is tegen andere personen of voorwerpen	5	4	3	2	1
14	is destructief gedrag en daarom ongewenst	5	4	3	2	1
15	wordt bewust geuit, uitgezonderd agressie van een psychotische patiënt	5	4	3	2	1
16	verpest de sfeer op de afdeling en werkt belemmerend in de behandeling	5	4	3	2	1
17	helpt de hulpverlener om de patiënt vanuit een ander oogpunt te bekijken	5	4	3	2	1
18	is het verdedigen van het eigen territorium en de privacy	5	4	3	2	1

Norwegian version of the Attitudes towards Aggression Scale (ATAS)

Instruksjon for utfylling av skjemaet:

Du vil bli bedt om å å gradere i hvilken grad du er enig i i hvert enkelt utsagn. Vennligst legg til grunn *din* erfaring med aggressive pasienter på den avdelingen du jobber på nå. Angi *din* mening med å sette ring rundt det alternativet som svarer til din oppfatning av aggresjon.

		Svært Enig	Enig	Usikker	Uenig	Svært Uenig
AGGRESJON / AGGRESSIV ATFERD ...						
1	Et utrykk for en ikke-samarbeidende holdning	1	2	3	4	5
2	Er en begynnelse til et bedre pasient-pleierforhold	1	2	3	4	5
3	Er frastøtende atferd	1	2	3	4	5
4	Er påtrengende atferd for å kunne dominere andre	1	2	3	4	5
5	Kan ikke tolereres	1	2	3	4	5
6	En mulighet til ny behandling eller omsorg	1	2	3	4	5
7	En virkningsfullt men upassende verbal og/eller fysisk handling for å fremme egne interesser	1	2	3	4	5
8	Er unødvendig og uakseptabelt atferd	1	2	3	4	5
9	Er når pasienten har følelser som vil ende opp med fysisk skade på seg selv eller andre	1	2	3	4	5
10	Er en måte å beskytte seg selv på	1	2	3	4	5
11	Er alltid negativ og uakseptabel; følelser skal utrykkes på en annen måte	1	2	3	4	5
12	Er voldelig atferd rettet mot seg selv og andre	1	2	3	4	5
13	Er å true med å skade andre eller gjenstander	1	2	3	4	5
14	Er destruktiv atferd og derfor uønsket	1	2	3	4	5
15	Uttrykkes med vilje, med unntak av de som er psykotiske	1	2	3	4	5
16	Forgifter stemningen i posten og ødelegger behandlingen	1	2	3	4	5
17	En mulighet til å lære å kjenne en pasient sin situasjon	1	2	3	4	5
18	En måte å beskytte sitt eget territorium	1	2	3	4	5

Appendix 3
Northern Centre for Healthcare Research (NCH) and Previous Dissertations

This thesis is published within the research program Public Health and Public Health Services Research of the Northern Centre for Healthcare Research. More information regarding the institute and its research can be obtained from our internet site: www.med.rug.nl/nch

Previous dissertations from the program Public Health and Public Health Services Research

Landsman, J. (2005). *Building an effective short health promotion intervention: theory driven development, implementation and evaluation of a body awareness program for chronic a-specific psychosomatic symptons.*
PROMOTOR: prof. dr. J.W. Groothoff
CO-PROMOTOR: dr. R. van Wijck

Bakker, R. (2005). *De samenwerking tussen huisarts en bedrijfsarts.*
PROMOTOR: prof. dr. J.W. Groothoff
CO-PROMOTORES: dr. B. Krol, dr. J.W.J. van der Gulden

Nagyová, I. (2005). *Self-rated health and quality of life in Slovak rheumatoid arthritis patients.*
PROMOTOR: prof. dr. W.J.A. van den Heuvel
CO-PROMOTOR: dr. J.P. van Dijk

Gerritsma-Bleeker, C.L.E. (2005) *Long-term follow-up of the ski knee prosthesis.*
PROMOTORES: prof. dr. J.R. van Horn, prof. dr. R.L. Diercks
CO-PROMOTOR: dr. N.J.A. Tulp

Vries, M. de (2005) *Evaluatie Zuidoost-Drenthe hart stikke goed!; Mogelijkheden van community-based preventie van hart- en vaatziekten in Nederland.*
PROMOTORES: prof. dr. D. Post, prof. dr. J.W. Groothoff
CO-PROMOTOR: dr. J.P. van Dijk

Jungbauer, F.H.W. (2004) *Wet work in relation to occupational dermatitis.*
PROMOTORES: prof. dr. P.J. Coenraads, prof. dr. J.W. Groothoff

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PROMOTORES: prof. dr. J.W. Groothoff, prof. dr. J.H.B. Geertzen
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Bâra-Ionilã, C-A. (2003) *The Romanian health care system in transition from the users' perspective.*
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PROMOTORES: prof. dr. J.W. Groothoff, prof. dr. K. Sanders, prof. dr. W.J.A. van den Heuvel, prof. dr. D. Post

Enk, J.G. van (2002) *Determinants of use of healthcare services in childhood.*
PROMOTORES: prof. dr. D. Post, prof. dr. A.J.P. Veerman, prof. dr. W.J.A. van den Heuvel

Gecková, A. (2002) *Inequality in health among Slovak adolescents.*
PROMOTORES: prof. dr. D. Post, prof. dr. J.W. Groothoff,
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Middel, L.J. (2001) *Assessment of change in clinical evaluation.*
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Pal, T.M. (2001) *Humidifiers disease in synthetic fiber plants: an occupational health study.*
PROMOTORES: prof. dr. J.G.R. de Monchy, prof. dr. D. Post, prof. dr. J.W. Groothoff

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Hospers, J.J. (1999) *Allergy and airway hyperresponsiveness: risk factors for mortality.*
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Mulder, H.C. (1996) *Het medisch kunnen: technieken, keuze en zeggenschap in de moderne geneeskunde.*
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