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VIOLENCE PREVENTION AND MANAGEMENT IN ACUTE PSYCHIATRIC CARE

Aspects of nursing practice

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Front page cover: Sven Björnekull and Teo Enlund. 'The bulldozer and the ballet dancer'

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ABSTRACT

Aim: The general aim of this thesis was to explore and evaluate different aspects of nursing practice in relation to prediction, prevention and management of patient violence in acute psychiatric care. The specific aims were: to evaluate the short-term predictive capacity of the violence risk assessment instrument Brøset Violence Checklist (BVC) when used by nurses in a psychiatric intensive care unit (study I), to compare the occurrences of coercive interventions and violence-related staff injuries before and after a two-year nursing development and violence prevention intervention (study II), to describe aspects of the caring approaches used by nurses in acute psychiatric intensive care units (study III) and finally (in study IV) to test the hypothesis that staff training according to the 'Bergen model' has a significant positive influence on the violence prevention and management climate in psychiatric inpatient wards, as perceived by patients and staff.

Methods: Both quantitative and qualitative methods were used. In study I, data from the BVC and the Staff Observation Aggression Scale were retrospectively collected from a psychiatric intensive care unit (PICU) and analysed in an extended Cox proportional hazards model. In study II, register-based rates of coercive interventions and violence-related staff injuries were retrospectively collected from the same unit as in study I, and subsequently analysed through Chi-square tests. In study III, qualitative data were collected from 19 individual interviews with nurses working on four PICUs in different parts of Sweden. The data analysis was guided by the interpretive description approach. In study IV, a 13 item question-naire was developed (called the E13). Each item was related to the violence prevention and management climate on inpatient units. The E13 was distributed to patients and staff on 41 psychiatric wards before the staff had been trained according to the Bergen model and subsequently to patients and staff on 19 wards where the staff had been trained. Data analysis included factor analysis, Fisher's exact test, Cronbach's alpha and Mann-Whitney U-test.

Findings: A positive scoring by the nurses on any of the six BVC items resulted in a six-fold increase in the risk for short-term severe violence on the PICU. A negative scoring on all items correctly predicted no risk for severe violence in 99% of all assessments (study I). In study II, an increase in the total rate of coercive interventions was found on the PICU one year after the intervention, while the rate of violence related staff injury remained unchanged. However, during the study period, an unplanned re-organisation of the PICU, including a substantial reduction of beds, meant that the PICU from then on could only admit the most acutely ill patients. In study III, interviews with nurses working on four different PICUs revealed two caring approaches which were metaphorically named *the bulldozer* and *the ballet dancer*. The *bulldozer* approach functioned as a shield of power that protected the ward from chaos, but at the same time involved the risk for engaging in uncaring actions. The *ballet dancer* approach functioned as a means of initiating relationships with patients and appeared strongly related to caring actions. In study IV, four items of the E13 questionnaire were rated significantly more positive by staff on trained wards. These four items concerned good rules on the ward, the ability of staff to stay calm when approaching aggressive patients, the staff's interest in understanding why a patient is acting aggressively and the ability of staff to approach aggressive patients at an early stage. One item was rated significantly more positive by patients on trained wards which was the item relating to the interest of staff in understanding why a patient is aggressive. No item was rated more negatively on trained wards.

Conclusions: Violence prevention and management in nursing practice involves a caring approach in all levels of prevention; in the everyday care as well as in coercive situations. It involves protection of the dignity of the patient and the nurse-patient relationship. The BVC has a good predictive capacity but should primarily be used to initiate early preventive interventions. In evaluation studies of violence prevention and management interventions, a mixed methods design should be considered, including the perspective of patients.

LIST OF PUBLICATIONS

I. Björkdahl, A., Olsson, D., Palmstierna, T. (2006) Nurses' short-term prediction of violence in acute psychiatric intensive care. *Acta Psychiatrica Scandinavica*. 113: 224-229.

II. Björkdahl, A., Heilig, M., Palmstierna, T., Hansebo, G. (2007) Changes in the occurrences of coercive interventions and staff injuries on a psychiatric intensive care unit. *Archives of Psychiatric Nursing*. Vol. 21 (5), 270-277.

III. Björkdahl, A., Palmstierna, T., Hansebo, G. (2010) The bulldozer and the ballet dancer: aspects of nurses' caring approaches in acute psychiatric intensive care. *Journal of Psychiatric and Mental Health Nursing*. Vol. 17 (6), 510-518.

IV. Björkdahl, A., Hansebo, G., Palmstierna, T. The influence of staff training on the violence prevention and management climate in psychiatric inpatient units: the perceptions of patients and staff. *Manuscript*

CONTENTS

LIST OF ABBREVIATIONS AND TERMS USED

BVC	Brøset Violence Checklist
PICU	Psychiatric Intensive Care Unit
SOAS-R	Staff Observation Aggression Scale – Revised version
Patient	Person who is admitted to a psychiatric inpatient setting for care and treatment.
Nurse	Registered nurse or nursing assistant.
Staff	All members of staff included in the multidisciplinary ward team.
Nursing staff	The group of registered nurses and nursing assistants on a ward.
Registered nurse	Nurse who has qualified for professional registration, usually by a three year university course.
Nursing assistant	Nurse who often but not always has a health care related training on a level below university.
Psychiatric nurse	Registered nurse who in addition has a specialist training in psychiatric nursing, usually through a one year university course.

1 INTRODUCTION

Violent and aggressive behaviour represents one of the most challenging phenomena in psychiatric inpatient care. In its footsteps follow injuries, fear, distrust, anger, desillusion and power struggles. Due to the suffering involved for both patients and staff, this phenomenon continually calls for prompt attention. In the scientific literature, focus has historically been based on the assumption that the cause for violent patient behaviour lies in factors connected to the individual patient. However, during the past decades, this one-sided focus on the patient has been increasingly questioned and a more complex view on the causes for violence on psychiatric wards has begun to take form. In today's literature, causal factors have gradually come to include the interplay between patient related factors, environmental factors and the interaction between the patient and the staff.

I became a registered psychiatric nurse in 1991 and have worked in different types of psychiatric inpatient settings. At the beginning of the year 2000, I accepted an offer to participate as a nursing consultant in a two-year nursing development project involving two psychiatric intensive care units in a general hospital in Stockholm (the PICU-project). In close cooperation with the nursing staff, the nurse managers and the psychiatrists and with the support of the department organisation, this project made available the time and resources necessary to explore new ways of improving nursing practice as well as trying out nursing related methods suggested in current scientific literature. The focus was often violence prevention and management. It was very inspiring to meet the patients and witness and embrace the enthusiasm and constructive criticism from the staff members that influenced the different stages of the development of the project. My interest in and optimistic view of the powerful impact of nursing practice in violence prevention and management is a direct result of what I experienced during those two years.

The more complex view of the causes for inpatient violent and aggressive behaviour which is described in today's literature has opened up for the possibility of a more active and preventive approach in nursing practice. Such an approach requires the development and evaluation of strategies that can demonstrate a marked impact on violence and aggression related incidents as well as on patients' and staff's subjective perceptions of safety and security. This thesis is a contribution to the knowledge of nursing practice in the field of violence prevention and management in acute psychiatric inpatient care.

2 BACKGROUND

Preventing and managing violent and aggressive patient behaviour has been an issue in psychiatric care since the establishment of psychiatric institutions. A Swedish instruction leaflet for nursing staff at Lund's hospital and asylum from 1896 instructs the nurses to speak and act in a way that 'calms the worried and slows down the rebellious and violent'. Should the doctor find it necessary to 'punish' a patient or use force as part of the treatment, the leaflet recommends that the mildest form should be used, which must never be carried out in a way that might cause physical harm or moral humiliation to the patient (Lunds hospital och asyl 1896). In retrospect, we know that the asylums did not always live up to these ambitions and we also know that in today's inpatient psychiatry, the issue of aggressive and violent patient behaviour remains high on the agenda.

2.1 NURSING, CARING AND NURSING PRACTICE

This thesis is based on a context of nursing science that has a holistic view of humans: a biological-, psychological-, social-, cultural- and spiritual being. Within this context, the human being can be understood by studying the parts, even though the whole is seen as more than the sum of parts (Barrett 2002). Furthermore, this thesis is inspired by the following basic assumptions of both nursing interaction theories and caring theories (Meleis 2007):

- Nurse-patient interaction is fundamental to providing care.
- Caring is central to the discipline of nursing and may affect both patients and nurses profoundly.
- Choices, values, interpretations and meanings are rights of both patients and nurses.
- Nurses have a moral commitment to protect and enhance human dignity.

Definitions:
The term *'nursing'* can be defined as "The practical promotion and optimization of health and abilities, prevention of illness and injury, alleviation of suffering through the diagnosis and treatment of human response, and advocacy in the care of individuals, families, communities and populations" (American Nurses Association 2003). *'Nursing'* can also be defined as a noun and refer to nursing as a discipline (Barrett 2002). The term *'caring'* will primarily be used to describe the essence of nursing, grounded in fundamental humanistic values necessary to morally conduct nursing practice. Caring is regarded context specific and including an interpersonal sensitivity to the patient's situation (Finfgeld-Connett 2008). The term *'nursing practice'* will be used to represent the actual provision of nursing, which should be based on both nursing theory and practice derived from nursing research (Barrett 2002).

2.2 AGGRESSION AND VIOLENCE

Aggression and violence are complex human behaviours that for thousands of years of human evolution have been essential components in promoting the survival, safety and progress of the individual and the group. At the same time, mankind's history of violence includes the assault, terror and murder of individuals as well as groups and an endless number of wars leading to suffering and mass destruction. It is clear that the human capacity for aggression and violence is not easily controlled and will always be a part of our behavioural repertoire. In most societies today, human aggression is not uncommon, whether at home, at school, on the street or in the workplace. We may be the perpetrator ourselves, we could be the target of someone else's aggression or we may be witnesses.

Aggression and violence can be understood from different theoretical angles. In ethology, aggression is seen as the instinct to fight in order to reproduce and to gain or protect territory, resources and food. However, to be of value, aggressive behaviour within a group needs to be controlled by different social mechanisms, such as hierarchical systems (Tinbergen 1964). In psychoanalytic theory, aggression may be seen as a natural drive, as a consequence of narcissistic injury or as a reaction to frustration due to external stimuli. Humans express aggression in many ways, ranging from sublimated acts to violent behaviour. In addition, attachment theory is based on psychoanalytic theory. The focus of this theory is the human as a social animal, who is dependent on relationships with others. Cognitive strategies to regulate aggression are developed through the child's early experiences of relationships and will influence the way in which the adult responds to the need for comfort and security in stressful situations (Bjørkly 2006). From the perspective of social learning theories, aggression is not an instinct, but has to be learned by experience or observation and is also promoted by the expectation of a positive consequence (Banduras 1973). In neurophysiology, aggression is related to the involvement of different parts of the central nervous system including the hypothalamus, the amygdala and the prefrontal cortex (Niehoff 1998). The prevention and management of inpatient violence in nursing practice, which is the focus of this thesis, is based on nursing science but may be influenced by all these different theoretical aspects.

In this thesis, a problem-oriented definition of violence will be used, based on the definition of the World Health Organisation (WHO), which states that violence is "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation" (World Health Organisation 1996). In this thesis the word 'aggression' will be used interchangeably with 'violence' if not stated otherwise (Whittington 1997). If the wording 'aggression *or* violence' is used, aggression refers to non-physical aggressive behaviour that does not include the threat of physical force. Aggression and violence among patients or among staff will not be specifically addressed in this thesis.

2.3   FACTORS CONTRIBUTING TO INPATIENT VIOLENCE

The causes for violence in psychiatric inpatient care have been examined and explored from various perspectives. However, for many years the predominant focus of research literature has been the study of patient-related variables, often referred to as 'internal factors', and their association with increased risks for violent behaviour, (Johnson 2004). At the same time, there is general consensus in the literature that inpatient violence is often the result of a progressive process involving several factors. These factors can be grouped into three domains: internal factors, external factors and situational-interactional factors (Duxbury & Whittington 2005; Nijman *et al.* 1999b).

2.3.1   Internal, external and situational/interactional factors

Internal factors:
In research which focuses on patient-related risk variables, pathology such as schizophrenia, mania, psychosis and certain organic syndromes, different forms of brain damage and alterations in the neurochemical brain functioning have been found significant (Liu & Wuerker 2005; Johnson 2004). However, this type of risk factor becomes more considerable when it is combined with one or several other risk factors (Steinert 2002). Internal risk factors also comprise psychosocial factors in the patient's background, such as exposure to child abuse, domestic violence and social learning of aggression and violence as an accepted and successful type of behaviour within the community (Liu & Wuerker 2005). Previous violence directed at another person is considered one of the strongest risk factors (Steinert 2002).

The internal factors are generally factors that are already a part of the patient's long-term or short-term history at the time of the patient's admittance to an acute psychiatric ward. Most of the historical risk factors may be of a relatively stable nature and are not the primary target of care and treatment in acute psychiatry. Therefore, Johnson (2004) suggests that although internal patient-related factors have been found to represent important risk factors, they may have limited utility for nursing staff since they are not amenable to specific nursing interventions. However, an awareness of internal risk factors of patients is important in order for nursing staff to be able to conduct individualized violence prevention strategies.

External factors:
The occurrence of aggressive incidents may be influenced by characteristics of the physical ward environment, e.g. overcrowding, lack of privacy and uncomfortable temperature (Jansen *et al.* 2005; Nijman *et al.* 1999b). The environment therefore needs to especially address safety, comfort and homeliness (Royal College of Psychiatrists 2000). The association between inpatient violence and staff characteristics such as staff gender, age, use of temporary staff and staff-patient ratio is inconclusive. However, it appears as though experienced staff with appropriate training is less assaulted (Johnson 2004). In Sweden, approximately 75% of all psychiatric inpatient wards are locked and patients have expressed that although they appreciated the locked door functioning of security, the main experience was that of confinement, dependence on staff and a non-

caring environment. Moreover, this experience was to a high degree shared by the staff (Haglund 2005).

Situational-interactional factors:
In psychiatric inpatient settings, the patients' liberty and freedom of choice are frequently compromised in a way that may lead to a sense of powerlessness and frustration. As a result, the power imbalance between staff and patients has been recognized as a significantly contributing factor to patient aggression and violence (Shepherd & Lavender 1999). Irwin suggested (2006) that the context of aggression could be explained as a response to what the individual in question perceives as unacceptable circumstances, environments or situations. The power imbalance between staff and patients may be especially apparent in limit-setting situations which represent a commonly occurring type of intervention in most wards (Lancee *et al.* 1995). Duxbury (2002) showed that wards with more aggression tended to have nurses who used a more restrictive and controlling style when interacting with patients. Furthermore, many rules and routines on psychiatric wards have been found to be perceived by patients as frustrating and humiliating (Alexander 2006). According to Bowers (2009), some proportion of all conflict situations involving patients and staff appear to be reactive to the containment and the controlling actions of the staff.

2.3.2 The nurse-patient relationship

The quality of the relationships between staff and patients has been found to be an important situational-interactional factor related to inpatient aggression and violence (Johnson 2004; Duxbury 2002; Lancee *et al.* 1995). The nurse-patient relationship has often been described as the core of psychiatric nursing (Barker & Buchanan-Barker 2010; Peplau 1997) and the building of a caring relationship has been likened to the building of a bridge between the nurse and the patient (Halldorsdottir 2008, 1996). This includes the nurse and the patient getting to know each other as subjective persons rather than objective roles and may develop into mutual feelings of trust and reassurance. The metaphor of the bridge is used to illustrate not only the closeness between the nurse and the patient but also to emphasize the importance of keeping a comfortable distance for both parties within the relationship. This distance differentiates the professional nurse-patient relationship from the patient's private relationships with family and friends (Halldorsdottir 2008). However, Bowers and colleagues (2009) found that nurses who were often engaged in close patient interaction were more likely to be the target of patient aggression than those who were less involved. It was concluded that there may be several explanations for this finding. Nevertheless, it could be an indication of the importance of keeping a respectful distance to patients who show signs of distress and aggression rather than routinely getting closely engaged and act in what the patient may perceive as an intrusive or confronting manner (Bowers *et al.* 2009).

According to Rask & Brunt (2007), a caring nurse-patient relationship is based upon honesty, respect and trust and it is the responsibility of the nurse to initiate these qualities into the relationship. Oppressive and harsh actions by the nurse towards the patient must therefore be avoided. Lelliott and Quirk (2004) found however, that due to

the typically short duration of patient stays in acute psychiatric wards and the often unpredictable and stressful ward environment, the establishment of mutually trusting relationships with patients may prove difficult for the ward staff. Moreover, staff may withdraw from patients when they experience the relationship as problematic (Smith & Hart 1994) or because of previous assaults from patients (Whittington & Wykes 1994). In a British study, patients described how poor communication between nursing staff and patients, including a lack of negotiation- and de-escalation skills on the part of the staff, contributed to inpatient violence (Duxbury & Whittington 2005). Similarly, Carlsson *et al.* (2006) found in a Swedish study that arrogant and nonchalant behaviour on behalf of the staff was closely related to patients' feelings of worthlessness and helplessness which in turn might give rise to anger and rage.

2.3.3 Ward climate

In scientific literature it has been acknowledged for some time that the ward atmosphere may have an influence on the incidence rates of patient aggression (Duxbury *et al.* 2006). According to Edvardsson (2005), the terms 'ward climate' and 'ward atmosphere' may be used as interchangeable metaphors to describe psychological conditions of a social region, including the understanding of a tone or what is contained 'within the walls' of a care setting. Schein (1992) suggested the following definition for the closely related term 'culture': "A pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think and feel in relation to those problems." Furthermore, care culture has been described as creating a frame of action for the staff, including shared ideas on rules and thinking patterns that affect the attitudes and performance of staff in the daily care (Enarsson *et al.* 2007).

Staff attitudes and behaviour have therefore been suggested as essential to the formation of a core part of a ward culture that may influence the direction of escalating aggressive situations (Abderhalden *et al.* 2002). In particular, the presence of an authoritarian culture in acute psychiatric wards has been considered an important risk factor for patient aggression (Mellesdal 2003; Duxbury 2002). Experiences from negative ward climates in psychiatric settings have been described by both patients and staff as intimidating and punitive (Shattell *et al.* 2008) and by former patients in Swedish inpatient psychiatry as mainly frightening, alienating and repressive (Lilja & Hellzen 2008). At the same time, it is not fully known whether rigid or flexible environments are the best way of managing psychiatric wards (Alexander & Bowers 2004).

Several studies show that patients and staff tend to have different perceptions of the causes of inpatient aggression and violence. While patients tend to perceive environmental factors and nurses' controlling styles as the most important contributing factors to patient aggression, staff to a higher degree attribute violent incidents to internal factors concerning the patient, such as the patient's mental illness (Nolan *et al.* 2009, Duxbury & Whittington 2005). Nevertheless, despite these differences, dissatisfaction with the present approach to patient aggression on mental health units

has been expressed by both staff and patients and it appears that both parties welcome the development of a more proactive approach (Duxbury 2002). An example of a well known instrument to assess ward atmosphere from the perspectives of both patients and staff is the Ward Atmosphere Scale (WAS) (Moos 1974). This 100 item comprehensive scale includes 10 subscales, of which anger and aggression is one and three dimensions covering relationships, personal growth and system maintenance.

2.4   THE INCIDENCE OF INPATIENT VIOLENCE

The prevalence of violence in psychiatric inpatient care is difficult or even impossible to estimate on a general basis (Irwin 2006). However, it is important to remember that most patients in psychiatric wards will never become violent. In the literature, the problem concerning the estimation of prevalence is due to the inconsistencies and variability of the definitions of violence, severity rating and reporting procedures as well as the varying selections of wards and patients studied (Bowers 2000). Nijman *et al.* (2005) conducted a review study based on violence prevalence as measured by one single aggression observation instrument (the Staff Observation Aggression Scale) on 38 acute admission wards in various countries. The study showed that the prevalence varied considerably between the wards, ranging from 0.4 to 33.2 incidents per patient per year. Another problem in estimating the prevalence of violence in psychiatric inpatient care is that the staff tend to underreport incidents and it has been suggested that only about 20% of the actual incidents are reported. This may be due to the organizational culture including the lack of attention towards incident reports on behalf of the management, staff members blaming themselves for causing the incident or the staff making excuses for the behaviour of the ill patient (Farrell & Cubit 2005).

The Swedish Work Environment Authority (2006) found that between the years 2002-2004, a total of 874 violence related injuries involving health care personnel were reported. Of these reports, 45% included nursing assistants and 6% registered nurses in psychiatric care. In the Stockholm County Council in Sweden, 42.8% of the nursing assistants working in psychiatric care reported that they had been exposed to violence by patients or patients' relatives ('external violence') during the past 12 months. A larger proportion of the male nursing assistants (53.2%) reported having been exposed than did the females (35.1%). Among registered nurses in psychiatric care, 33.7% reported that they had been exposed to external violence during the past 12 months and for physicians in psychiatric care, the proportion was 28.2% (Stockholm County Council, 2010).

2.5   CONSEQUENCES OF INPATIENT VIOLENCE

The feeling of safety and security on the ward is imperative for both patients and staff (Delaney & Johnson 2008) and patients who have witnessed violence on the ward or been the victim of violence have expressed psychological stress. In a study on patients' self-reported life-time trauma within psychiatric settings, Frueh *et al*. (2005) found that 63% had witnessed traumatic events, 54% had been around frightening or violent patients and 31% had been physically assaulted. In an observation study, Quirk *et al*. (2005) found that patients on acute psychiatric admission wards seem to develop

several strategies to manage risk arising from their interaction with other patients on the ward.

Many studies have described the consequences of inpatient violence from the perspective of how the work environment affects the staff. Violent inpatient behaviour may lead to physical injuries. In a review, it was found that the rates of physical injuries on staff range from 2% to 16%. However, about 2% of the assaults referred to serious physical injury while 59% included no detectable physical injury, but rather psychological and emotional wounds. Even though psychological effects of inpatient violence are more common among staff than physical injury, the review also found that organisational responses to staff injury tend to relate mainly to physical injury rather than psychological suffering (Needham 2006).

 Lanza (1992) suggested that there are four types of psychological responses for staff members who have been exposed to inpatient violence: biophysiological responses, cognitive effects including self perception and belief systems, effects on social interaction and effects on emotional reactions. These responses may for a long time influence the way staff members work with violence prevention and management. This was shown by Arnetz & Arnetz (2001) who found an association between staff experiences of violence and patient-rated quality of care. Beech and Leather (2006) reported that healthcare staff that have been exposed to violence in their work environment may develop decreased work morale and job satisfaction. Furthermore, there may be high levels of sick-leave, anxiety, depression and decreased self-esteem among the staff. That in turn may be followed by difficulties for the ward and the organisation to keep valuable staff members on board as well as difficulties in recruiting new qualified staff (Beech & Leather 2006).

When describing consequences of violence from the perspective of staff as victims, it is important to note that experiences of violence appear somewhat different from the patient's perspective than from the perspective of the staff. When patients and staff retrospectively described violent encounters on the wards, it became clear that both parts saw their own aggressive or violent behaviour as a necessary protective response to the other party's aggression (Benson *et al.* 2003).

2.6   VIOLENCE PREVENTION AND MANAGEMENT

Even if preventive strategies are implemented, aggressive and violent incidents will still occur in most acute psychiatric wards (Winship 2006). The complexity of causes for inpatient violence suggests that management responses should be based on a comprehensive approach, including prevention, de-escalation and physical responses (Irwin 2006). Although medication is an important part of this comprehensive approach, this will not be further explored in this thesis due to its focus on nursing rather than medical practice. Furthermore, the issue of violence prevention and management on psychiatric wards should not be left to individual staff members to resolve but needs to be addressed by head managers on an organisational level as well as by middle level managers (Farrell & Cubit 2005; Paterson *et al.* 2005).

2.6.1 Systematic violence risk assessment

During the last decade, violence risk assessment in psychiatric settings has been described internationally as an often necessary and important part of violence prevention and management (Abderhalden 2008). There are basically two categories of violence prediction: clinical prediction models and actuarial methods. A clinical prediction is performed by the clinician, based on his or her training, experience and knowledge about the individual patient. This model was common in the 1960-70s but became criticized for its low accuracy (SBU 2005). The actuarial prediction approach was developed in the 1980-90s and is based strictly on empirical data and statistically validated risk factors. The assessment is often presented in terms of a risk figure (SBU 2005). However, also the actuarial prediction approach became criticized for its focus on predicting risk for violence without including clinical knowledge of the individual patient and without any reference to preventive aspects. As a response, new assessment instruments were introduced that combine actuarial data with clinical judgement. A well known example is the HCR-20, a 20 item assessment based on historical, clinical and risk management factors (Webster *et al.* 1997). However, most of these instruments were developed to predict long-term risk for violence by out-patients or former patients in the society, often from the perspective of forensic psychiatry (SBU 2005). Abderhalden (2008) found that there is a need for further scientific evidence on the efficacy of systematic risk assessment, especially regarding short-term risk assessment within acute psychiatric settings. In short-term prediction of in-patient violence, the risk data used for long-term predictions is often not available in acute settings and have also been found to have lower predictive capacity (Palmstierna *et al.* 1989).

2.6.2 De-escalation

Aggression often occurs as part of a progressive process and may be possible to prevent by de-escalation techniques before it progresses into actual violence (Paterson & Leadbetter 1999). Early de-escalation includes reacting and responding to patients manifesting even minor signs of irritability and uneasiness by carefully listening to what the patient is experiencing. By showing empathy and respect it may be possible to find out what has triggered the patient's emotional response and what may help the patient to calm down. Distracting activities may also help defusing the situation, such as taking a walk with the patient or engaging the patient in some kind of social activity (Paterson & Leadbetter 1999). If the patient already shows signs of becoming increasingly agitated, de-escalation may include removing the patient from the conflict situation, using a calm voice when listening and 'talking down' the patient, setting limits to unacceptable behaviour and using negotiation techniques that may prevent the aggression process to further escalate (Lowe *et al.* 2003). The success of de-escalation techniques has been suggested to be closely related to the quality of the relationship between the patient and the staff involved (Gournay 2000), but also to the staff attitudes towards patient aggression in general and the extent to which the staff have previously been exposed to patient violence (Johnson & Hauser 2001).

2.6.3 Coercive interventions

In order to manage serious and severe aggressive and violent patient behaviour, as a last resort coercive interventions are sometimes used to keep the patient and those around them safe from harm. It has been found that the practice of coercive interventions varies between different countries (Whittington *et al.* 2006). In Sweden, the use of coercive interventions is strictly regulated by law and requires a physician's order. It may include the use of mechanical restraint (the patient's waist, wrists and ankles are secured to a bed by belts, usually for less than four hours), seclusion (the patient is not allowed to leave a defined area) or forced injection (the patient is injected against his or her will) (SFS 1991). Furthermore, manual restraint (the patient is taken down to the floor and held) is a measure that may precede these interventions. However, there are also many other behaviours that staff use to coerce patients that are less well-defined and seldom recorded, such as "body blocking", imposing, demonstration of force, persuasion and manipulation. Although these behaviours may appear to be problematic, it is possible that they in some cases prevent full-blown conflicts and restraint situations (Szmukler & Appelbaum 2008; Ryan & Bowers 2005).

The use of coercive interventions often includes ethical and sometimes legal dilemmas and is a common cause of physical injury and psychological harm to both patients and staff (Whittington *et al.* 2006). The literature also describes restraint situations that have lead to patients dying (Paterson *et al.* 2003). Even if patients are not physically injured, many feel psychologically violated and that their integrity has been compromised, which leads to feelings of fear, anxiety, humiliation and disrespect (Olofsson & Jacobsson 2001). Furthermore, patients may feel that the use of coercion was unnecessary and that they had wished to discuss alternatives with the staff (Haglund 2005). Staff often describe participating in coercive interventions as emotionally challenging, both as it may involve the risk of injury but also because it goes against many staff members' humanistic ideals of working with caring rather than controlling interventions for vulnerable patients (Moran *et al.* 2009).

The use of coercive interventions is controversial. Many argue that seclusion and restraint should be viewed as treatment failures and therefore put to a minimum or possibly even be abandoned completely (Whittington *et al.* 2006). Others believe that coercion will always be used in psychiatry but emphasize that reforms are necessary in order to minimize the use, and when it cannot be avoided, it should be used with a maximum level of skill and humanitarianism (National Institute for Clinical Excellence 2006). This includes the belief that it is possible to assume a humanistic and realistic approach, well aligned with basic nursing values, in the use of restraints in acute psychiatry (Moylan 2009; Vuckovich & Artinian 2005). As an example, patients have described that being restrained becomes less negative and may involve feeling safe and trust when the staff express care and concern and show the patient respect (Chien *et al.* 2005).

2.6.4 Violence prevention and management staff training

In the 1970s and 1980s many staff training programs were based on the programs used by the police force (Farrell & Cubit 2005) or by staff in the correctional system (Paterson *et al.* 2009). The influence on the training of psychiatric staff was that the focus lay mainly on reactive management of inpatient violence by the use of physical restraint and self-defence. Therefore, in English speaking countries, the term 'control and restraint' (C&R) training has for many years been the established term for this type of staff training (Paterson *et al.* 2009). However, this term has become increasingly criticized for representing a culture of coercion in psychiatric care that is considered outdated. Instead, the term 'violence prevention and management training' has been suggested, reflecting a more proactive approach (Paterson *et al.* 2009). This is in line with international recommendations regarding staff training that state that due to the complex factors involved in psychiatric inpatient violence, training should be dominated by a proactive rather than reactive approach (International Council of Nurses *et al.* 2005; Council of Europe 2004; Krug 2002). In Sweden, employees who work in places where aggression and violence may be expected, have a legislated right to appropriate training, provisioned by their employer (Swedish Work Environment Authority 1993). Within Swedish psychiatry, it appears as though the arrangements have been mostly a matter for local psychiatric clinics which have turned to private training companies, self-defence classes, martial arts sports clubs or in some cases to individual dedicated members of staff in order to organize staff training. Therefore, little is known about the extent, content and quality of training programmes in Sweden.

A recent international literature review by Johnson (2010) showed that many violence prevention and management training programmes have led to a reduction of violence and restraint incidents. At the same time, there are other studies that have not been able to show that training is correlated with a reduction of violence and aggression and have in some cases even found an increase in violent incidents or use of coercion after staff training (Bowers *et al.* 2006b). Moreover, there is generally a lack of evidence regarding the ability of violence prevention and management staff training to change and maintain staff behaviour both the short term as well as in longer periods of time (Beech & Leather 2006). It has also been found that the varying quality and heterogeneity of research designs, including the numerous ways of defining and registering aggressive incidents make any evaluation of the effects difficult (Johnson 2010; Richter 2006). In order to add further depth and knowledge about the effects of staff training, it has been suggested that qualitative variables such as ward climate and aspects of preventive psychiatric nursing should be taken into account, along with the perspectives of both patients and staff (Abderhalden 2008; Steinert 2002).

2.7   THEORETICAL FRAMEWORK

2.7.1 The Public health approach

In order to address the issue of prevention in nursing practice, this thesis has been influenced by the theoretical framework of the Public health approach. This approach was grounded in the science of epidemiology but draws upon knowledge from medicine, psychology, sociology and other disciplines (Krug 2002). Public health is concerned with preventive rather than curative aspects of health and deals with health issues on a population-level (Gullotta & Bloom 2003). In 1953, 'public health' was defined as including health promotion, specific protections, early recognition and prompt treatment, disability limitations and rehabilitation. A decade later, concepts from the fields of epidemiology and psychiatry were combined and suggested that the levels of prevention of public health could be divided into 'primary prevention', 'secondary prevention' and 'tertiary prevention' (figure 1) (Gullotta & Bloom 2003). Primary prevention aimed at reducing the disorder or dysfunction by reducing the number of new cases in a population. Secondary prevention was described as reducing the prevalence by reducing the duration of a disorder or dysfunction in individuals who expressed signs and symptoms of that disorder. Tertiary prevention included reduction of prevalence by reducing reoccurrence. In the late 1970s, an American commission on mental health further emphasized that primary prevention should be seen as a proactive approach that builds adaptive strengths and coping resources in people and that the best way to prevent behavioural problems in a population is to equip people with personal and environmental resources for coping (Gullotta & Bloom 2003).

In the 1990s, an internationally growing concern with violence as a general global public health problem led the World Health Organisation (WHO) to publish the World Report on Violence and Health (Krug 2002). This document stated that a comprehensive preventive approach based on the strategies of public health interventions should be used in order to reduce the prevalence of violence. Primary prevention would then refer to actions taken to prevent violence before it occurs, secondary prevention would refer to preventive actions taken when violence is perceived to be imminent and tertiary prevention would refer to actions taken when and after violence occurs and has occurred (Sethi *et al.* 2004).

Subsequently, based on the WHO recommendations, the issue of workplace violence in the health sector was addressed in general guidelines (International Labor Office *et al.* 2002) and in a staff training manual (International Council of Nurses *et al.* 2005), put together in a joint effort of several international organisations. In the last decade, the Public health approach to violence prevention has gained increased interest within psychiatric services. In order to be successful however, it has been emphasized that a commitment to this approach in psychiatric care must include action at the level of the organisation, the staff team, the individual worker and the service user (Paterson *et al.* 2005).

Figure 1. *The Public health approach to violence prevention.*
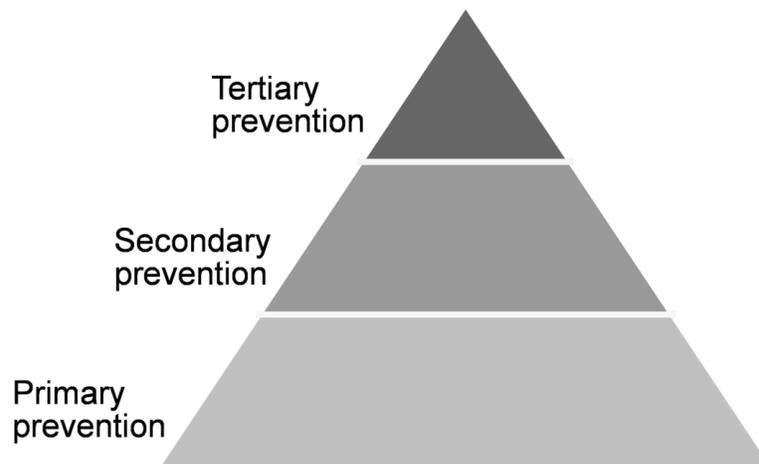
2.7.2 The Working model

In this thesis, the 'Working model'[1] has been used as an inspiration and as a reference for thought, especially regarding the incorporation of caring issues with matters on effective structure in the same model. The 'Working model' was originally developed as a result of a research study that aimed to identify factors underlying and maintaining nurses' positive attitudes to patients with severe personality disorder in three English high security hospitals (Bowers 2002). The reason for this group of patients to be detained in such institutions was acts of serious violence against others. Previous literature had shown that nurses often experienced these patients' behaviour as continuously demanding, challenging, hostile and violent, making it hard to maintain a positive and caring attitude. The 'Working model' (figure 2) is based on systematic interviews with large populations of staff and patients in these security hospitals, surveys of staff attitudes and investigations of staff practices.

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[1] Through personal communication with professor Bowers in 2010, I have been informed that the 'Working model' will shortly be renamed to the 'City model'.

Figure 2. *The 'Working model'*[2]
The model shows the foundations for positive attitudes (left-hand column), the staff factors accomplished via those foundations (centre column) and the presumed outcomes of those staff factors (right-hand column).
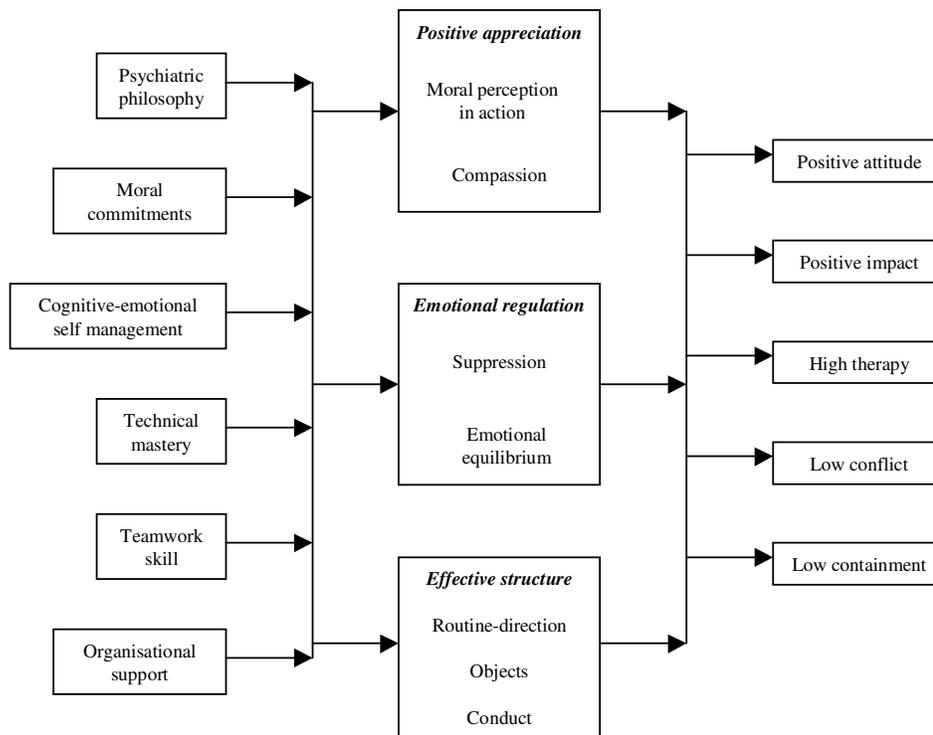
Through the research, Bowers (2002) found that it was imperative to integrate an understanding of the nurse-patient relationship with skills needed to intervene appropriately with the patients, based on behavioural approaches. In addition, the research showed that there should be no dichotomy between the emphasis of care and that of control, and that nurses who were often engaged in caring nurse-patient relationships were equally concerned about maintaining order and control as were nurses who were less engaged in patient interaction. Thus, the 'Working model' suggests that there are three central staff factors that underlie and maintain nurses' positive and caring attitudes to patients: positive appreciation, emotional regulation and effective structure[3] (table 1).

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[2] From: L. Bowers, *Dangerous and severe personality disorders: reaction and role of the psychiatric team* (p. 144, fig. 7.1). London: Routledge. Reprinted with permission.

[3] In Swedish, I suggest the following terms: positiv inställning, känslomässig balans och fungerande ordning.

Table 1. *Summary of the 'Working model' as shown in figure 2.*

Foundations for positive attitudes	Psychiatric philosophy	A set of beliefs and conceptions about psychiatry and the work of psychiatric nurses, based on a commitment and willingness to build a relationship with the patient and try to understand his or her behaviours.
	Moral commitments	A set of moral choices, including honesty, bravery, equality and non-judgementalism. Giving individual value to people despite their diversity.
	Cognitive-emotional self-management	An inner dialogue and way of thinking to manage the emotional reactions to patients, based on the philosophy and moral choices described above.
	Technical mastery	Skills in interpersonal confrontation, including staying calm, giving constructive feedback to patients in conflict situations and provide de-escalation via verbal interaction.
	Teamwork skill	Sustaining positive attitudes through the work that the nursing- and multidisciplinary team do together. Sharing the burden of care and consistency in relation to rules and routines.
	Organisational support	Organisational policy and clarity around rules for patients. Provision of specialist training and clinical supervision. Management representatives with presence on the wards and engagement in the clinical care.
Staff factors	Positive appreciation	The ability to positively appreciate, value and feel compassion for the patients.
	Emotional regulation	The ability to set own emotional responses to one side in order to deal with difficult situations with patients in a calm and effective manner.
	Effective structure	The creation of an effective structure for ward life based on ethical standpoints. Including consistently applied rules and routines for patients.
Outcomes of the staff factors	Positive attitudes	Staff enjoy their work and feel reasonably safe and secure
	Positive impact	Positive confidence and self-awareness in the group of staff.
	High therapy	Staff members spend more time in the company of patients and interact more.
	Low conflict	A stable ward environment with low levels of conflict, aggression and violence.
	Low containment	Less need to use coercive interventions such as seclusion, forced medication and restraints.

According to Bowers (2002), the 'Working model' may well be used in settings outside forensic psychiatric services and personality disorder specialist services such as in inpatient general psychiatric settings. During the last decade, several research studies have been conducted by Bowers and colleagues in order to test the applicability of the 'Working model' to the levels of conflict and containment in different types of psychiatric settings (Bowers 2009; Bowers *et al.* 2009; Bowers *et al.* 2008a; Bowers *et al.* 2007; Brennan *et al.* 2006; Bowers *et al.* 2006a; Flood *et al.* 2006). The findings generally confirm the association between the staff factors of the 'Working model' and conflict and containment rates. However, recent research results indicate that the factor of effective structure has a stronger influence on the incident rates than the two other staff factors (Bowers 2009).

2.8 RATIONALE OF THE THESIS

An acute psychiatric inpatient ward should be a place where patients as well as staff feel safe and secure. The literature shows, however, that inpatient aggression and violence in psychiatric care continues to cause severe physical and psychological harm to patients and staff members alike. The prevention and management of violence presents a major challenge to nursing practice, one to which there is no quick solution. However, there is currently a general consensus that inpatient violence in psychiatric settings is the result of a complex interplay between factors related to the individual patient, environmental factors and situational/interactional factors. Moreover, these factors should be addressed on a primary, secondary and tertiary level of prevention. There is a growing need for knowledge and evaluation of this comprehensive and proactive view on violence prevention and management from the perspective of nursing practice.

3 AIM

The general aim of this thesis was to explore and evaluate different aspects of nursing practice in relation to prediction, prevention and management of inpatient violence in acute psychiatric care.

The aim of each paper is:

Paper I: To evaluate the short-term predictive capacity of the Brøset Violence Checklist (BVC) when used by nurses in a psychiatric intensive care unit.

Paper II: To compare the occurrences of coercive interventions and violence-related staff injuries before and after a two-year violence prevention intervention.

Paper III: To describe aspects of nurses' caring approaches in acute psychiatric intensive care units.

Paper IV: To test the hypothesis that the Bergen model training programme has a significant positive influence on the violence prevention and management climate in psychiatric inpatient wards, as perceived by patients and staff.

4 MATERIAL AND METHODS

4.1 OVERVIEW OF THE STUDIES OF THE THESIS

Table 2. *Overview of the studies of the thesis*

Article title	Setting	Sample	Data collection	Data analysis
I Nurses' short-term prediction of violence in acute psychiatric intensive care.	A psychiatric intensive care unit in Stockholm	73 patients	Data from the Brøset Violence Checklist and the Staff Observation Aggression Scale Revised, were collected retrospectively from patient records.	Extended Cox proportional hazards model
II Changes in the occurrences of coercive interventions and staff injuries on a psychiatric intensive care unit.	A psychiatric intensive care unit in Stockholm	n.a.	Incident reports on seclusion, forced injection, mechanical restraint and violence related staff injuries were retrospectively collected from local registers at the clinic.	Chi-square test
III The bulldozer and the ballet dancer: aspects of nurses' approaches to care in acute psychiatric intensive care.	Four psychiatric intensive care units in different parts of Sweden	19 nurses	Individual interviews	Qualitative analysis: Interpretive description
IV The influence of staff training on the violence prevention and management climate in psychiatric inpatient units: the perceptions of patients and staff.	Before intervention: 41 psychiatric inpatient wards in Stockholm After intervention: 19 psychiatric inpatient wards in Stockholm	Responding: Before interv: Staff: 854 Patients: 297 After interv: Staff: 260 Patients: 156	A 13-item questionnaire (E13)	Factor analysis Cronbach's alpha Fisher's exact test Mann-Whitney U-test

4.2   STUDY SETTINGS, CONTEXTS, SAMPLES AND PARTICIPANTS

Psychiatric Intensive Care Units (PICU):

Three of the studies were conducted in Stockholm (studies **I**, **II** and **IV**) and one (study **III**) in four different areas of Sweden. In three of the four studies (studies **I**, **II** and **III**) of this thesis, the study settings of the research were psychiatric intensive care units (PICUs). This type of unit exists in most western countries; however, the specific term 'psychiatric intensive care unit' may not always be used. The purpose of PICUs is to provide intense levels of care and treatment for patients who for the most part are admitted due to an acute risk of aggressive and violent behaviour directed at themselves or others (Bowers *et al.* 2008b). The emphasis is on medication, risk assessment, violence prevention and management, close observation, and an immediate response to critical situations (Beer *et al.* 2001). Most patients on PICUs are involuntarily admitted for a stay of one to two weeks or less and schizophrenia and mania appear to be the most common psychiatric diagnoses (Bowers *et al.* 2008b). The characteristics of a Swedish PICU were described by Salzmann-Erikson (2008) as involving dramatic admissions, protests and refusal of treatment, escalating patient behaviours and temporary coercive measures.

4.2.1   One psychiatric intensive care unit (studies I and II)

Study setting:

Data for study **I** and **II** were collected from a two ward PICU that was part of a large psychiatric department situated in a suburban area of Stockholm. Each ward had one manager, about seven registered nurses, 15-18 nursing assistants, one psychiatrist, one assistant physician, one psychologist, one social worker, and one occupational therapist. The wards consisted of 12-14 beds respectively, with a median length of stay of about 12 days. Over 90% of admittances were involuntary. Schizophrenia, other psychosis and affective disorders corresponded to 80% of the diagnostic groups.

Context:

Between the year 2000 and 2002, the unit was involved in a nursing development project called the 'PICU project' in which the author of this thesis was engaged as a nursing consultant. The aim of the project was to improve the overall quality of nursing practice in everyday care as well as in more challenging situations, including violence prevention and management. The project was conducted in close collaboration between the nursing consultant, the ward managers and the members of staff. The project comprised several areas of nursing practice such as organisation of nursing care (inspired by the principles of primary nursing), individual nursing care planning, the use of standardized care plans for early preventive interventions in especially acute circumstances, daily supportive interactions one-on-one with each patient planned daily, risk assessment concerning violence according to the Brøset Violence Checklist, and finally the implementation of nursing guidelines in relation to forced injection and mechanical restraint.

In the middle of the PICU project, due to political and financial directives, the unit underwent structural reorganisation that was outside the scope of the PICU project.

This changed the PICU from a unit consisting of two separate wards into one ward, resulting in fewer beds, shorter stays and higher levels of patient acuity.

Sample:
The sample in study **I** included all patients (n = 73) admitted to the PICU for more than 24 h during a three-month period. Of these patients, 36 were female and 37 male with a mean age of 40 years and an average length of stay of 13.6 days (median 9). The most frequent ICD-10 diagnosis were schizophrenia (20.5%) followed by personality disorder (12.3%) and bipolar disorder, depressive phase (12.3%).

4.2.2 Four psychiatric intensive care units (study III)

Study setting:
In study **III**, data was collected from nursing staff working in four psychiatric intensive care units in four hospitals in different parts of Sweden. In order to promote variety in the data collection, the PICUs that the nurses worked in were purposefully selected to represent the south, middle and north of Sweden. The municipal population of the location of the units ranged from 25 000 to more than 800 000.

Participants:
All the registered nurses and nursing assistants of the four PICUs were sent a written invitation to participate in interviews about their experiences of nursing practice. It was initially estimated that interviews would be conducted with approximately five nurses per unit. On one of the four units only three nurses were interested in participating. On the other three units there were eight or more. Finally, three to six participants from each unit were selected for the study. The selection of participants from these three units was made attempting to achieve variation in sex, age, profession and work experience (Patton 2002). A total of 19 nurses participated; of these, ten were registered nurses and nine were nursing assistants. There were nine men and ten women with a median age of 50 years (range 25–65). The median work experience in psychiatric care was 14 years (ranging from two weeks to 33 years).

4.2.3 Forty-one psychiatric inpatient wards (study IV)

Study setting:
In study **IV** data was collected from staff and patients in forty-one psychiatric inpatient wards located in eight hospitals within the area of Stockholm County. The wards included emergency- and admission wards for general psychiatry as well as for drug- and dependency, general psychiatric wards including admittances due to psychotic and affective disorders, psychiatric intensive care units, drug and alcohol dependency wards and forensic wards. Most wards consisted of 12-18 beds with a total of 30-35 nursing staff members and one or several physicians/psychiatrists and paramedical staff employed. Due to the variation in the types of wards investigated, the patients' lengths of stay could range from a few hours (on the emergency wards) to several years (on some of the forensic wards).

Context:

In 2006 the Stockholm County Council Health Care Provision (SLSO) had decided to let the staff of all these wards undergo a staff training programme in violence prevention and management, called the Bergen model. The author of this thesis was appointed senior manager of this project. The Bergen model training programme comes from the TERMA model, developed at the forensic psychiatric department at Haukeland University Hospital in Norway. The model is based on current research, especially within nursing science, and influenced by the three levels of prevention of the 'Public health approach' (Krug 2002) as well as by the three staff factors of the 'Working model' (Bowers 2002). It is taught in a four day course that includes aggression theory, ethics in care, staff attitudes and emotions, caring approaches, ward environment and organisation, risk assessment, communication, patient experiences of psychiatric care, limit-setting approaches, self defence, physical and mechanical restraint techniques. The trainers are recruited among clinically active staff within the clinics and educated to become trainers by Bergen model representatives. The model requires regular refresher classes to be arranged in order to further develop the participants' violence prevention and management skills.

4.3 DATA COLLECTION

4.3.1 The Brøset Violence Checklist (BVC)

The Brøset Violence Checklist (BVC) (Almvik *et al.* 2000) covers six patient behaviours: confusion, irritability, boisterousness, verbal threats, physical threats and attacking objects. These behaviours are rated once on each shift by the nurses as being present (=1) or absent (=0). Thus, the total BVC sum ranges from 0-6 for each rated patient. The risk level is represented by the highest sum rated in the last 24 h. According to the BVC, a sum of zero indicates a low risk for violence in the next 24 h, a sum of 1-2 a moderate risk and a risk of >2 equals a high risk. Evaluation of the instrument in acute psychiatric wards has shown a sensitivity of 63-64%, a specificity of 92-92%, an area under the curve (AUC) of 0.83-0.88 and a total Kappa value of 0.44 (Abderhalden *et al.* 2004; Almvik *et al.* 2000). The BVC has previously been translated from Norwegian to Swedish and from Norwegian to English in a translate-counter translate process.

Data collection procedure:

In study **I**, the continuous BVC ratings were retrospectively collected from patient records. The patients had been assessed during their whole stay according to the BVC, three times daily by an assigned nurse.

4.3.2 The Staff Observation Aggression Scale (SOAS-R)

The Staff Observation Aggression Scale – Revised (SOAS-R) (Nijman *et al.* 1999a; Palmstierna & Wistedt 1987) is a registration form based on five columns that covers the event of a violent incident. The staff member who observes an aggressive or violent incident uses the SOAS-R to describe the observed provocations preceding

the incident, means used by the patient, aim of aggression, consequences and immediate measures taken by the staff. Each of the five columns includes a number of pre-determined options for the staff member to mark that specifies what was observed. After the SOAS-R is filled in, the severity of an incident is rated from 0 to 22 points based on what specific observations the staff member has marked in the form.

Data collection procedure:
In study **I**, the continuous SOAS-R reports were retrospectively collected from the same patient records as the BVC data. Only SOAS-R reports of at least nine severity points were used. The reason for this was that more severe incidents are assumed to be more consistently reported and the risk of underreporting smaller (Abderhalden 2008; Nijman *et al.* 1999a).

4.3.3 Register data

Data collection procedure:
In study **II**, rates of coercive interventions including seclusion, forced injections and mechanical restraint were collected from the quarterly reports made by the head psychiatrist of the PICU and forwarded to the National Board of Health and Welfare as a statutory obligation. Rates on violence-related staff injuries were collected from the mandated occupational injury reports that were submitted by the victimized staff member and sent to the department management as well as the regional social insurance office. All reported injuries related to any form of patient aggression whether physical or psychological, were included. All data was collected retrospectively from one year before (1999) and one year after (2003) the PICU project.

4.3.4 Individual interviews

Data collection procedure:
The data for study **III** was collected through individual interviews with 19 nurses. The interviews were conducted in rooms in close connection to the wards where the nurses worked. An interview guide (Patton 2002) was used from which the participants were asked to narrate experiences of working in acute psychiatric care. More general questions like 'Please, tell me what it is like to work in this ward?' or 'Tell me what you do?' were subsequently followed up by focused questions concerning the experience of caring approaches, for example, 'Could you please tell me about your thoughts and your emotional reactions when you chose to approach the patient in that particular way?'. A laddered question method was used (Price 2002) that helped the interviewer to adjust the different levels of invasiveness of the questions asked. The participants were encouraged to provide examples from actual situations on the wards. The taped interviews lasted 45–80 min after which they were transcribed verbatim.

4.3.5 The E13 questionnaire

A questionnaire called the E13 ('E' being the first letter in the Swedish word for questionnaire and 13 being the number of items) was developed. The development followed these premises: (i) each item would relate to one or more of the three 'Working model' staff factors, (ii) each item would be congruent to the content of the Bergen model training programme and to the Public health approach, (iii) items should be observable by both staff and patients, (iv) the number of items should be restricted, making the questionnaire easy to use and possible to fit into a single page, and (v) the items should be relevant to any type of psychiatric inpatient ward. The development was guided by current literature on violence prevention and management in psychiatric nursing and resulted in a thirteen item questionnaire formulated as statements. Of these, three were negative statements (DeVellis 2003) (table 3). The response options included four levels of agreement from 'not at all' to 'totally'. A fifth option, 'do not know', was also available. Descriptive data included in the questionnaire were for staff: sex, age category, and occupation and for patients: sex and age category. Two professional translators conducted a translation-counter translation process of the E13 from Swedish to English.

Data collection procedure:
Starting in 2007, the E13 was sent out to all the participating wards (n=41) three months before the first wards were scheduled to start the Bergen model training programme. The questionnaire was distributed to all employed medical, paramedical and nursing staff and was offered by the staff to all patients meeting the inclusion criteria. The criteria included the ability to read and speak Swedish and the ability to understand the meaning of informed consent. If a patient was deemed too ill by the physician in charge, due to his or her present health situation, the patient was not asked about interest in participation. If possible, the E13 questionnaire was offered to the patients near discharge. An enclosed letter described the purpose of the study and the voluntary and anonymous nature of participation. The data collection continued for one month on each ward. Three to six months after the staff of a ward had been trained, the same E13 questionnaire was sent out again following the same procedures. The data collection terminated in December 2008. By then, 19 wards on six hospitals had finished their training and completed the second round of the questionnaire.

Table 3. *The items of the E13 questionnaire.*

No	Item
1	The staff are often out on the ward with patients
2	The relationship between staff and patients is good
3	The staff co-operate when approaching aggressive patients
4	Patients are often scared of other patients
5	The staff manage to calm aggressive patients down
6	The rules for patients on the ward are good
7	Being on the ward feels safe and secure
8	Only certain members of staff are capable of approaching aggressive patients
9	The staff are calm when approaching aggressive patients
10	The staff try to understand why a patient is acting aggressively
11	The staff approach patients already at the first signs of aggression
12	The staff are harsh with aggressive patients
13	Both female and male staff are involved in approaching aggressive patients

4.4 DATA ANALYSIS

4.4.1 The relation of the BVC to the risk of violence

In study **I**, the BVC sums were compared to the aggressive or violent incidents reported by staff in the SOAS-R. An extended Cox proportional hazards model with multiple events and time-dependent covariates was used (Therneau 2000). First, two models were calculated: one with the BVC sum of ≥ 1 as time-dependent co-variate and one with the BVC sum of ≥ 2. Next, in order to evaluate the risk increase for each of the six BVC items, six separate models were calculated, using each BVC item as time-dependent co-variate. The statistical analysis was made within the statistical language and computing environment "R" version 2.17. The extended Cox regression model was fitted using the 'coxph' function in the package survival in "R".

4.4.2 Comparisons of non-parametric data

In study **II**, differences between incidence rates of coercive interventions and violence related staff injuries one year before and one year after the PICU project were calculated using chi-square tests. Incidence rates were expressed as incidents per occupied bed day (Bowers 2000). The statistical significance level was set at $P = <0.05$. Analyses were performed using the Statistica software package, version 7.1.

In study **IV**, the differences in perception of the violence prevention and management climate between wards that had been trained according to the Bergen model and wards that had not, were first calculated for each separate E13 statement using Fisher's exact

test. A dichotomization was made by sorting agreement options one and two as a disagreement (no) and options three and four as an agreement (yes) (DeVellis 2003). All questionnaires that included any of the four agreement options for the particular item were considered valid, excluding the response option 'do not know'.

As a second step in study **IV**, the difference between trained and untrained wards was calculated for the E13 questionnaire as a whole using Mann-Whitney U-test. For this purpose, a sum score model was calculated that gave value '1' to statement options three and four on all items except for the three 'negative items' (item 4, 8 and 12) where the value '1' was given to the statement options one or two. All other options were given the value '0'. Thus, a sum score range for each questionnaire of 0-13 was obtained. All questionnaires that included any of the four agreement options on all 13 items were considered valid. All data in study **IV** were calculated separately for patients and staff. P-values of <0.05 were considered significant. All analyses in study **IV** were performed using the software package SPSS version 16.0.

4.4.3 The interrelationship among the questionnaire items

The interrelationship among the E13 questionnaire items in study **IV** was analysed using an exploratory principal component analysis, including varimax rotation and allowing for factors with an eigenvalue of > 1.0 to emerge (DeVellis 2003). This analysis resulted in a three-factor solution. However, the three factors appeared weak with a substantial cross-loading of >0.25 between all factors on several items (Raubenheimer 2004). Furthermore, the second and third factor showed unsatisfactory internal consistency. In the light of these psychometrical findings and based on the theoretical framework of the questionnaire, it was decided that the most meaningful solution was to assume that the thirteen items may be viewed as measuring one dimension with no further underlying components. This assumption was further strengthened as the one-factor solution showed a satisfactory internal consistency, Cronbach's $\alpha = .83$.

4.4.4 Qualitative analysis – Interpretive description

In study **III**, in order to explore and gain a deeper understanding of nurses' caring approaches in the context of nursing practice in acute psychiatric intensive care units, a qualitative analysis of individual interviews was performed. The analysis was guided by interpretive description methodology (Thorne 2008; Thorne *et al.* 2004; Thorne *et al.* 1997). This methodology was developed to provide a structure for qualitative studies of clinical phenomena of interest for the applied practice of nursing and other health professions. Interpretive description is inspired by more established qualitative methods such as grounded theory, phenomenology and ethnography. However, these methods were all originally founded outside the realm of nursing science which could sometimes involve a limitation to nursing research (Thorne 2008). Interpretive description therefore advocates a pragmatic approach in the design, analysis and interpretation of data that recommends the researcher to be inspired but not strictly controlled by the systematic ideas of the traditionally used qualitative methods. The philosophical underpinnings of interpretive description come from

those of 'naturalistic inquiry' that describes reality as complex, contextual, constructed and subjective. In interpretive description, the research design should build upon existing disciplinary knowledge and the results should have the potential to guide disciplinary thought and be relevant to the applied nursing practice context. The quality of research based on interpretive description is based on a set of evaluation criteria and context evaluation (Thorne 2008).

The analysis of the interview text was carried out in the following steps: The interview texts were read through several times. First, this was done in order to acquire an overall picture of all interview texts as a whole and subsequently to obtain an impression of each separate interview. The texts were then sorted into meaning units consisting of a sentence or paragraph that were related to the participant's experience of different caring approaches. Each meaning unit was then further condensed and combined with other meaning units in a process that was guided by the research question and by what was interpreted as commonalities and differences among and between the individual experiences of the participants. NVivo7® software (QSR International) facilitated a system for the organisation of this data. In a last step, main themes and sub-themes were formulated by interpreting and abstracting the overall meaning of the text content in a way that were judged to be in line with the context of nursing practice in psychiatric intensive care. The whole analysis process included a continuous movement back and forth between the original texts, the condensed meaning units and possible interpretive descriptions. Preliminary findings were also reviewed, analysed and discussed on several occasions in nursing research seminars and with a group of external senior psychiatric nursing researchers.

4.5   ETHICAL CONSIDERATIONS

The local research ethics committee approval was obtained for all four (**I-IV**) studies of this thesis.

In study **I**, the interventions of the PICU-project including risk assessment according to the BVC and violence incident reports according to the SOAS-R, were all initiated and conducted by the clinical department. The author of this thesis was employed by the clinical department as a nursing consultant and spent a lot of time on the psychiatric intensive care unit. The decision to use some of the data collected during the project was not made until after the PICU project was finished. Relevant data from the patient records was retrospectively collected by the medical secretary of the unit and registered in a password protected data file only available to the two main researchers of the study. In study **II**, data on the use of coercive interventions was collected from report forms compiled by a medical secretary of the psychiatric department. The data only included the actual number of events during the study period and no information regarding the patients. Similarly, data about violence related staff injuries on the unit under study was collected from the clinical department's register on staff injuries. This register only covered number of incidents.

In study **III**, the participants received written and oral information on the voluntary nature of the participation, the confidentiality of the data treatment and their right to withdraw at any time without further explanation. The participants were also asked if citations from the interviews could be used in the presentation of findings. Contact information for the interviewer was provided in case participants wished to further comment or withdraw any part of the interview.

In study **IV**, all staff members and patients who met the inclusion criteria received oral information and a letter that described the purpose of the questionnaire study and the voluntary and anonymous nature of their participation. Since patients were asked by members of staff about interest in participation, the information specifically stated the right to refuse participation and that this would in no way influence their future care and treatment on the ward (patients) or the work situation (staff). For further information, the letter included contact information to the research leader. In order to exclude as few patients as possible, the inclusion criteria (the ability to read and speak Swedish and understand the meaning of informed consent) were kept to a minimum. However, if the physician in charge judged that an individual patient may be harmed by participating due to ill health, this patient was excluded. The E13 questionnaire included no coding or any other possibilities of identifying individual patient or staff participants. Together with the questionnaire and the information, each participant received an unmarked sealable envelope. A sealed box for collecting the questionnaires was placed on each ward. The anonymity of the questionnaire responses were considered especially important in relation to the participating patients since their dependent situation on the wards otherwise could inhibit their freedom to voice any criticisms about the ward through the statements of the E13 questionnaire.

5 FINDINGS

5.1 THE PREDICTIVE CAPACITY OF THE BVC

In study **I**, the nurses of the psychiatric intensive care unit performed a total of 997 daily predictions according to the BVC during a 3-month period. Of the 73 patients admitted to the unit, 11 patients (15.1%) were reported severely violent (SOAS-R score at least 9) at least once, on a total of 18 occasions. Of the 997 predictions, 758 had a BVC sum of zero, i.e. the nurses assessed that the patient had not shown any of the risk behaviours of the BVC within the last 24 hours. This meant that the BVC predicted a very low risk that these patients would become violent within the next 24h. The analysis of the data showed that six severe incidents occurred within 24 h after the zero-scoring predictions, which meant that in 99.2% of zero-scoring predictions, no incident occurred.

Out of the total of 997 predictions, 239 resulted in a BVC sum of at least one, meaning that the nurses had assessed the patient as presenting with one or more of the risk behaviours during the last 24 hours. Twelve severe incidents followed after these predictions, representing two thirds of all severe incidents. 104 predictions presented a BVC sum of two or more. These predictions were followed by six severe incidents. According to the BVC, a sum of one or two corresponds to a moderate risk of violence and a sum of more than two means that there is a severe risk of violence within the next 24 hours. The analysis of data showed that both the BVC sums of one and two were significantly associated with increased risk for severe incidents of violence. However, even when the highest BVC sum assessed by the nurses during the last 24 h was only one, the analysis showed that this meant a dramatic increase in risk for violence compared to a BVC sum of zero, corresponding to a hazard ratio of 6.0. In conclusion, the BVC was found to be an easily introduced procedure for nurses to accurately assess increased risk for severe violence and a positive scoring on any BVC item resulted in a six-fold risk increase. Moreover, with a negative scoring on all items during the last 24 h, the BVC correctly predicted no risk for severe violence in the next 24 h. in 99.2% of all assessments.

5.2 CHANGES IN THE OCCURRENCES OF COERCION AND STAFF INJURIES

In study **II**, a comparison of the collected data before and after the PICU project showed that there was a significant increase in the total rates of coercive interventions (the occurrence of seclusion, forced injection, mechanical restraint put together) one year after the PICU project compared to one year before. The use of seclusion and mechanical restraint were both significantly increased while the rate of forced injection remained unchanged. The analysis also showed that there was no significant change in the rates of violence related staff injuries before and after the project (table 4).

Table 4. *Incidents per occupied bed day, the year before and after the PICU project.*

Variable	1999	2003	χ^2	P
Seclusion (n)	0.012 (113)	0.018 (65)	8.83	0.003
Forced injection (n)	0.023 (227)	0.027 (96)	1.52	0.218
Mechanical restraint (n)	0.009 (94)	0.025 (88)	44.08	<0.001
Total coercive interventions (n)	0.045 (434)	0.071 (249)	34.84	<0.001
Staff injury (n)	0.007 (68)	0.004 (16)	2.55	0.110

As previously described, the psychiatric intensive care unit in study **II** was subject to an organisational restructuring outside the scope of the PICU project that turned the two ward unit into one ward, going from 28 beds to 12 and shorter lengths of stay, while still serving the same population. Although not unusual in health care organisations, the reorganisation complicates a comparison of rates of coercion and staff injuries before and after the PICU project and the findings of the study should be viewed in the light of this.

5.3   THE BULLDOZER AND THE BALLET DANCER

In study **III**, the analysis of the interviews with nurses in psychiatric intensive care showed that their narrations included two main caring approaches towards the patients, which also became the two main themes of the findings. One of the approaches included the nurse attempting to generate trust, signalling a desire to provide care and building a relationship with the patient. This approach was in the study metaphorically labelled 'the ballet dancer', which was built on three sub-themes: signalling a caring approach, putting yourself in the patient's shoes and using yourself as a finely tuned instrument. The focus of the ballet dancer approach was in the one-on-one interaction between the nurse and the patient and there was a strong belief among the nurses that their efforts to establish caring relationships would help empower and heal the patients. The nurses described how patients were admitted to the wards in acute states of severe mental illness. Many showed behaviours of deep distress, often with distorted concepts of reality. In order to start building relationships with the patients, the nurses needed to be perceptive and use intuition and imagination to try to pick up and interpret signals of response from the patient. Often the nurses used consciously subtle signals and non-verbal communication towards the patients that would indicate their good intent. This could include offering drink and food or adjusting the physical and psychological closeness and distance towards the patient in accordance with signs of comfort and discomfort. The nurses also described that by trying to identify with the patients and imagine how they themselves would feel and act in a similar situation, they still felt compassion and empathy when patients rejected their efforts to initiate a relationship.

The other main approach, which was labelled 'the bulldozer', appeared in many ways to be the opposite to the approach of 'the ballet dancer'. The sub-themes were: guarding the ward from chaos, ensuring sufficient power, justifying the use of controlling actions, keeping a critical mind and allowing feelings in the cockpit. The nurses described that working in psychiatric intensive care units always included a high level of unpredictability and that if the ward was calm and quiet one minute, the next minute it could change into a chaotic place involving severely acute and sometimes

dangerous situations. Consequently, the bulldozer approach appeared to prioritize ensuring the safety and structure of the ward, sometimes by using force and coercive interventions. As part of this approach, the patients became more of an object to the nurses – an object that could be controlled by the bulldozer at any time. The nurses justified the need for using controlling actions by referring to the obligation to protect people from harm and by assuming a paternalistic reasoning. In contrast to the ballet dancer approach which focused on the nurse-patient relationship, the bulldozer approach was associated with the interaction, communication and trust between the nurses. The reason for this focus appeared to be the nurses needing to feel certain that they would always be able to physically overpower a patient, should it become necessary. Even though the approach of the bulldozer seemed to be used on an almost daily basis by many nurses, for example in limit setting situations, the nurses described how they often maintained a critical inner dialogue, thinking about whether they had made the right decisions and if their behaviour and that of their colleagues were justifiable. Moreover, the nurses also described how the approach of the bulldozer did not prevent them from getting emotionally affected by what was happening in controlling situations; to themselves, to the patient and to their colleagues. Despite the differences between the two main approaches, most of the interviewed nurses appeared to have incorporated into daily nursing practice a continuous motion between both approaches. A descriptive overview of the bulldozer and the ballet dancer is provided in table 5.

Table 5. *Sub-themes and description of the bulldozer and the ballet dancer*

The ballet dancer	Signalling a caring approach	Radiating unconditional feelings of warmth and consideration towards the patient. Fulfilling basic human needs: food, drink, touch, physical comfort.
	Putting yourself in the patient's shoes	Empathizing with the patient and showing a willingness to understand the patient's situation. Being open to feelings of compassion for the patient.
	Using yourself as a finely tuned instrument	Using imagination, patience and intuition in verbal and non-verbal communication with the patient. Interpreting the patient's signals and adjusting physical as well as psychological closeness and distance.
The bulldozer	Guarding the ward from chaos	Giving first priority to the safety and order on the ward rather than the individual patient. Preventing patients from harming themselves or others. Setting limits to unacceptable patient behaviour.
	Ensuring sufficient power	Nurses working together to be able to overpower the patient if necessary. Shifting the focus away from the patient and towards interaction, communication and trust among the nurses.
	Justifying the use of controlling actions	Protecting the patient and others from harm. Disqualifying the patients' ability to make decisions. Nurses objectifying patients by considering them as being different from themselves. Discouraging patients from unacceptable behaviour.
	Keeping a critical mind	Keeping an inner reasoning dialogue on the use of controlling actions and addressing the ethical dilemmas involved.
	Allowing feelings in the cockpit	Including emotional experiences of vulnerability, fear, excitement and anger as well as compassion and concern for patients and colleagues, in relation to the use of controlling actions.

5.4 THE INFLUENCE OF STAFF TRAINING ON THE WARD CLIMATE

In study **IV**, a total of 854 staff questionnaires and 297 patient questionnaires were collected from 41 psychiatric wards before the staff of these wards had begun their training according to the Bergen model. The collecting of questionnaires after the training intervention resulted in 260 staff questionnaires and 156 patient questionnaires from a total of 19 wards. The mean number of staff responses per ward was 21 on untrained wards and 14 on trained wards. The corresponding mean number of patient responses was 8 on both untrained and trained wards. Both on untrained and trained wards, over 60% of the staff respondents were nursing assistants, almost 30% were registered nurses and less than 10% were physicians, psychologists, social workers or other types of health care workers.

The analysis of staff perceptions in relation to each separate item of the E13 questionnaire showed that staff working on trained wards had a significantly more positive perception of the violence prevention and management climate regarding four of the thirteen statements compared to staff working on the wards that had not yet been trained. For the remaining nine items, their perception did not differ from the untrained wards. The four items showed that staff on trained wards to a higher degree perceived i) the rules for the patients on the wards to be good, ii) that the staff was acting in a calm manner when they approached aggressive patients, iii) that the staff was interested in trying to understand why a patient was acting aggressively and iv) that the staff was approaching aggressive patients already at the first signs of aggression. Two additional items were close to the significance level. These were related to the perception that the staff was co-operating when they were approaching aggressive patients (p=0.058) and that there were good relationships between patients and staff (p=0.06). When the differences in sum scores of all staff questionnaires (on untrained as well as trained wards) were analyzed, the findings showed that the perception was significantly more positive on the trained wards, Mann-Whitney P = 0.045.

A separate item analysis was also conducted to examine the differences in the patients' perceptions of the violence prevention and management climate on untrained and trained wards. The findings showed that the patients staying on trained wards as compared with those on the untrained wards only showed significantly more positive perception on one of the thirteen E13 items. On the trained wards, patients to a greater extent perceived that the staff tried to understand why a patient was acting aggressively. The item concerning the perception that the staff was acting in a calm manner when approaching aggressive patients also came close to showing a significant difference (p=0.09). No statement was rated significantly more negative on the trained wards. In the analysis of the differences in the total scores of the patient questionnaires, no significant improvement was found on the trained wards as compared to the untrained wards, Mann-Whitney P = 0.471.

6 DISCUSSION

6.1 A FUSION OF THE PUBLIC HEALTH APPROACH AND THE WORKING MODEL

The general aim of this thesis was to explore and evaluate different aspects of nursing practice in relation to the prediction, prevention and management of patient violence in acute psychiatric care. The aim is in concordance with the Swedish government that recommended as part of a national report (SOU 2006) that specific routines, including evidence based nursing care, should be developed and used in order to prevent patients with mental illness from harming themselves or others. It is also an aim that reflects the width of knowledge and skill that is required by nurses in this particular field of practice. The studies of this thesis cover some but certainly not all of these aspects.

In order to develop the content and quality of nursing practice in relation to violence prevention and management, it is important to be able to comprehend the whole as well as the parts. Therefore, I would like to suggest that one way of doing this would be to integrate the prevention triangle of public health (Krug 2002) with the staff factors of the 'Working model' (Bowers 2002) (figure 3). A fusion of these two previously separate frameworks would contribute to a clarification of how violence prevention and management might become related to nursing practice rather than simply related to guarding-, controlling-, organising- or assessment practice. Figure 3 also clarifies that nursing practice should have a preventive rather than reactive approach. This is the case, not only at the primary and secondary level where this is rather obvious but also in actual violent situations. This means that prevention in nursing practice does not only involve prevention of violence and possible injury, but also prevention of damage to the dignity and self-esteem of the patient and to the nurse-patient relationship.

The three horizontal prevention levels of the Public health approach triangle represent unequal proportions of the total area. This should be viewed from the perspective of the epidemiological and public health origins of the model in which the triangle as a whole represents for example a community population or all patients on a ward (Gullotta & Bloom 2003). Thus, in figure 3, the different proportions of the prevention levels reflect that most patients will never become violent on the ward, a few will become aggressive and only a small proportion will become violent during their stay. Furthermore, it illustrates the idea that by putting resources into the level of primary prevention, fewer incidents may occur at the tertiary level.

A strong point of this fusion is that each of the staff factors of the 'Working model' is brought into each preventive level. This opposes a split between viewing for example relation-building as solely an example of primary prevention that represents 'good' nursing practice and, on the other hand, viewing taking physical control of a violent patient as having nothing to do with relation-building and automatically something that represents 'bad' nursing practice. By showing that all three staff factors of the 'Working model' are important to consider on all preventive levels, nurses may be

encouraged to think about and discuss questions like: what does 'positive appreciation' mean at the tertiary level? What staff behaviour could communicate such an approach to the patient in a limit setting situation? Could the lack of effective structure in the primary prevention on the ward contribute to the anxiety level of the patients? However, these types of issues need to be addressed not only by the nurses and by the multidisciplinary team, but also on the level of clinical department organisation and ward management (Paterson *et al.* 2005).

Figure 3. *A fusion of the Public health approach and the 'Working model'.*
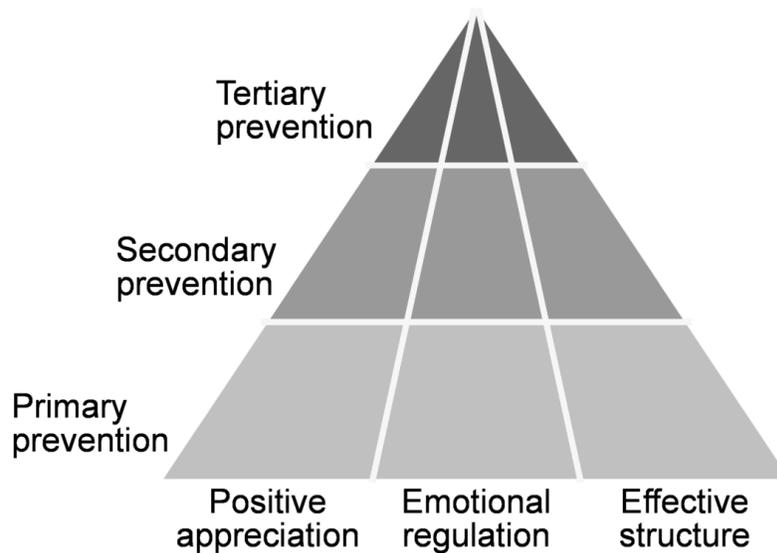
This figure of the fusion of the Public health approach and the 'Working model' is obviously a simplified version of reality. In reality, the three staff factors are not separated from each other but closely intertwined, e.g. feelings of compassion for the patients (positive appreciation) are related to the nurses' ability to keep an inner emotional balance (emotional regulation) which in turn is influenced by the order and predictability of the ward environment and organisation (effective structure) (Bowers 2002). All of the studies of this thesis (**I-IV**) relate to figure 3 in different ways, to parts of the figure or to the overall way of thinking. The findings of the studies will therefore be discussed in relation to this proposed fusion of the Public health approach and the 'Working model'.

6.2   SHORT-TERM RISK ASSESSMENT AND PREVENTIVE INTERVENTIONS

Looking into the future to predict which patient will become violent is very difficult, especially since there are often a number of influencing factors involved. The main motivation for predicting risks of violence as part of nursing practice should be based on a proactive approach and an assumption that a structured assessment may increase the staff's awareness of the need to initiate early preventive interventions in relation to an individual patient. In the often hectic environment of acute psychiatric wards, the use of structured instruments such as the BVC may provide a welcome scheme to nurses' risk assessments. Easy to learn and use, it provides a common language for different levels of risk that is easily communicated between different shifts and within the multidisciplinary team.

In study **II**, the Brøset Violence Checklist (BVC) was used as a part of the PICU-project. As shown in figure 3, the BVC is an instrument that would fall into the category 'Effective structure/Primary prevention', since it was used as part of a daily routine rather than as a reaction to patient behaviour. The recommendation to connect BVC sums of >2 with preventive interventions (Almvik *et al.* 2000) was also addressed in the PICU-project by the use of short-term nursing care plans. In study **I**, the extent to which the nurses had used preventive interventions as a response to the BVC ratings was not known. A BVC sum of >2 that lead to successful preventive interventions and no patient violence would be recorded in the study as a false positive rating, meaning that the BVC signalled a high risk of violence but no violence occurred. In a Swiss study, Abderhalden *et al.* (2008) extended the BVC form to also include a list of eighteen preventive interventions. The nurses could then mark both the BVC and subsequently what preventive nursing interventions that might have been used.

Although structured risk assessment may enhance the use of early preventive interventions and thereby decrease the rates of violence and coercive interventions, there is also a risk that the use of structured risk assessments such as the BVC could create new risks. One is the risk of an over-reliance on the instrument and a mechanical response, not only to the specific cut off levels of the BVC sums, but also to the patient as a human being. An example of this would be if a ward decides that if the risk level of any given patient is assessed as a BVC sum of two, the patient will automatically be denied the possibility of walks outside the ward without the company of a nurse. This oversimplification of the situation could easily give rise to frustration in the patient who, taking the whole patient situation into consideration, might have gained a lot by being able to go for a walk on his or her own. Instead, the frustration of the patient may become part of an increased risk of violence.

In study **I**, the findings showed that the BVC had a very high accuracy (>99%) in predicting no risk for severe violence in the next 24 hours. This precision not only demonstrates the high quality of the BVC but also reflects the fact that out of the 73 patients that were admitted to the psychiatric intensive care unit, only 11 were involved in violent situations. However, any estimation of risk levels will inevitably produce a rate of inaccurate risk assessments. In the case of false positive ratings, higher levels of

restriction and loss of freedom may unnecessarily compromise a patient's situation in a way that is ethically debatable (Crowe & Carlyle 2003).

Another potential problem is that since the BVC focuses only on manifest patient behaviour, it does not take into consideration the causes for the patient behaviour. Assuming that the patient's behaviour may be a reaction to something that is wrong, e.g in the environment or in their interaction with the staff, there is a risk that using the BVC will focus the attention on the behaviour of the patient rather than on the environment or the behaviour of the staff. If the patient behaviour according to the BVC represents a risk of violence, this risk should be communicated with the patient based on a wish to understand what may lie behind the behaviour and what the patient may need in order to feel safe and secure. If issues like this are not addressed in nursing practice, in reference to figure 3, there is a risk the BVC becomes a part of an ineffective rather than effective structure at the level of primary prevention. This illustrates the importance of using assessment instruments as tools in combination with the staff factors of positive appreciation and emotional regulation.

6.3 THE INFLUENCE OF NURSING DEVELOPMENT INTERVENTIONS

The PICU project described in study **II** included several interventions at the level of primary prevention such as daily one-to-one supportive interaction with each patient (positive appreciation) and risk assessment according to the BVC (effective structure). At the same time other interventions that were part of the PICU project, such as the introduction of standardized nursing care plans and nursing guidelines for the use of coercive interventions (both providing effective structure but also including content of positive appreciation and emotional regulation), were reactive and directed at the secondary and tertiary levels of prevention.

Although, as previously described, the conditions of the PICU changed considerably during the project in terms of patients' length of stay and level of acuity; it was worrying to find that the overall rate of coercive interventions had increased one year after the PICU-project. Seen from the perspective of figure 3, it could indicate that the PICU, despite the development project, was dysfunctional at the level of primary- and secondary prevention with an inadequate ability to prevent incidents at tertiary level. At the same time, considering the assumed increase in level of acuity of the patients' illness during the project, the findings of study **II** need to be interpreted with caution. It is possible for example that patients more often than previously were admitted already in a highly upset state and that reactive interventions on a tertiary level was initially necessary to secure the immediate safety of patients and staff on the ward. It was however positive to find that the rate of violence related staff injuries did not increase even though the rate of mechanical restraint did, indicating that staff managed these often physically demanding situations in a safer way.

There are other studies with somewhat similar findings. In an evaluation of a series of studies aimed at reducing the rates of conflict (e.g. violence) and containment (e.g. restraint) using interventions which resembled those of the PICU project, a reduction of rates of conflict was found, but not a corresponding reduction of containment rates

(Bowers *et al.* 2008a; Bowers *et al.* 2006a; Flood *et al.* 2006). In order evaluate the effects of a violence prevention and management course for staff on a Swedish psychiatric department, Sjöström *et al.* (2001) used the Staff Observation Aggression Scale (SOAS), the Social Dysfunction Aggression Scale (SDAS) and the number of staff on sick leave due to aggression related injury. Similar to studies **I** and **II**, the analyses included chi-square tests and a Cox proportional hazards model. Moreover, this study also coincided with a reduction of beds during the assessment period. The findings of the study (Sjöstrom *et al.* 2001) showed no significant reduction in the number of aggressive patients or in aggression related staff injury. Two items of the SDAS were strongly predictive of violence: directed verbal aggressiveness and violence towards things.

However, in a review of 36 interventions studies aiming to reduce mechanical restraint and seclusion in adult psychiatric inpatient settings, a majority of the studies reported findings of reduced levels (Stewart *et al.* 2010). Similarly to study **II**, most studies described implementation of a package of interventions including changes in national or local policy, structural changes to the organisation or revised nursing practice had been used. The authors concluded however that the use of a package of interventions made the demonstration of effectiveness inconclusive since the analysis of data was often based on simple counts of events before and after the interventions (Stewart *et al.* 2010).

6.4 BALANCING THE BULLDOZER AND THE BALLET DANCER

In study **III**, the metaphors of the bulldozer and the ballet dancer were used to capture the characteristics of two caring approaches found in the narrations of the interviewed nurses. Put in the perspective of figure 3, the ballet dancer appears strongly related to the area of positive appreciation on the level of primary prevention while the approach of the bulldozer seems to belong preferably to the area of effective structure on the secondary and tertiary levels of prevention. At the same time, the sub-themes of the bulldozer approach of 'keeping a critical mind' and 'allowing feelings in the cockpit' indicate that the approach also includes elements of positive appreciation and emotional regulation.

In her theory on caring and uncaring encounters in nursing, Halldorsdottir (2008, 1996) suggests that caring could be seen as a presence or absence of relationship formation, something that she likens to the building of a bridge. The bridge is built between the nurse and the patient by the use of verbal and non-verbal communication as well as by the identification and confirmation of each other as persons rather than as roles. Halldorsdottir's way of describing caring encounters is very similar to the way the nurses in study **III** described the ballet dancer approach. On the other hand, the bulldozer approach of keeping the order could in many ways be considered the opposite of the ballet dancer approach in many ways. For example, the bulldozer approach ensured sufficient power to manage situations and to overpower patients by connecting and communicating to colleagues rather than to the patient. Furthermore, the bulldozer approach justified the use of controlling actions by referring to patients as being different from the nurses. In the perspective of the caring theory of

36

Halldorsdottir's (2008) the bulldozer approach would represent uncaring encounters where the patient would be at risk of feeling dehumanised and losing trust for the nurse.

The caring approaches of the bulldozer and the ballet dancer appear to reflect similar findings in previous studies. Johansson *et al.* (2007) described comparable caring and uncaring relationships and encounters in a locked psychiatric ward. Carlsson *et al.* (2004) found that positive violent encounters in psychiatric care were characterised by an 'embodied adaptation' while encounters with negative outcomes had a 'forcing attitude'. Vatne & Holmes (2006) refer to as a double set of values in today's ideology of humane psychiatric care and treatment. On the one hand it involves basic humanistic values of equality and respect for the dignity of all human beings. At the same time, these values need to be protected by keeping the order and safety on the wards. A paradoxical situation arises, however, when the keeping of order in itself becomes a threat to the keeping of humanistic values. The choice between allowing patients to stay autonomous or to assume a paternalistic approach in difficult situations of nursing practice has been compared to balancing on a knife-edge (Birkler 2007) on which the nurse may be accused of either abuse or neglect. Deacon and colleagues (2006) argue that this balancing act becomes even more complicated for nurses because of a current nursing ideology which focuses on caring relationships and fails to include the nurses' obligation to control and contain disturbed patient behaviour. This may create an unfortunate situation in which actions at the level of tertiary prevention in particular, such as coercive interventions, are automatically seen as a failure on the part of the staff involved. In study **III**, it is therefore not surprising that the sub-themes of 'Keeping a critical mind' as well as 'Allowing feelings in the cockpit' appeared in the nurses' narrations related to the bulldozer approach and not to the ballet dancer approach.

However, several studies address the importance of finding more comprehensive perspectives in nursing practice that may support the inclusion of caring approaches in controlling interventions (Bigwood & Crowe 2008; Vatne & Fagermoen 2007; Winship 2006; Hellzen *et al.* 2004). It is interesting to consider that in caring theories, caring is generally described as something that evolves in the relationship between the nurse and the patient (Meleis 2007) and that it may affect both the nurse and the patient profoundly. In other words, it is not something that the nurse simply 'gives' to the patient. Somewhat simplified, this means that the relationship and trust built between the nurse and the patient at the level of primary prevention would serve a dual purpose in the context of violence prevention. It may prevent the patient from becoming violent but it may also prevent the nurse from using an uncaring and dehumanizing approach towards the patient in a controlling situation.

At the same time, it is reasonable to assume that the shield of power that the approach of the bulldozer provided for the nurses including several ways of distancing themselves from the patient, serves a purpose. Smith & Hart (1994) found that as long as nurses experience the aggressive behaviours of patients as a low or controllable threat it is usually managed by interacting with the patient. However, if nurses experience that the risk of harm to themselves is high, many react by psychologically distancing themselves from the aggressive patient. Carlsson *et al.* (2004) found that

when a violent patient encounter is ruled by fear, nurses 'withdraw into their shells' and are no longer able to approach the patient in a caring manner. Moran and colleagues (2009) described this reaction as a defence mechanism against overwhelming feelings of uneasiness, anxiety and fear both during and after these incidents. Moreover, an emotional suppression was described as an almost necessary self-preserving strategy in order for the nurses to function in the team and to be able to focus on completing physical tasks.

However, Moran's *et al.* (2009) description of emotional suppression should not be confused with the staff factor of emotional regulation at the level of tertiary prevention as seen in figure 3. Instead, emotional regulation is supported by the context of the staff factors of positive appreciation and effective structure which helps the nurse to balance rather than suppress his or her emotional responses. Based on the knowledge of the obvious risk of engaging in uncaring and harmful actions associated with the approach of the bulldozer, nurses should be encouraged to explore its caring potentials and discuss how a caring approach especially at the tertiary level could be positively affected by the functioning of emotional regulation and effective structure.

6.5   VIOLENCE PREVENTION AND MANAGEMENT CLIMATE

In study **IV**, an attempt was made to evaluate how the violence prevention and management climate on psychiatric wards may be influenced by the Bergen model staff training. Since the term 'violence prevention and management climate' was not found in the existing literature, a suggestion was made for a definition of the term. The definition included four basic components: i) climate is the subjective perception of patients and staff members on the ward, ii) it focuses on the staff factors of positive appreciation, emotional regulation and effective structure (the 'Working model'), iii) it covers the primary, secondary and tertiary level of prevention and, iv) it includes an overall perception of safety and security on the ward. The definition's distinct reference to the Public health approach and the 'Working model' may be seen both as a strength and a limitation. While it represents a fairly clear and simple picture of what is meant, it prevents other possible components of a violence prevention and management climate, that do not readily fit into the theoretical framework, from being included. An example of this is the physical ward environment which has been suggested to have an impact on violence incidents as well as on the perception of safety and security among patients and staff (National Institute of Clinical Excellence 2006; Royal College of Psychiatrists 2000).

Staff communication skills such as listening to and negotiating with aggressive patients have been identified in patient interview studies as crucial to violence prevention and management (Carlsson *et al*. 2006; Duxbury & Whittington 2005; Olofsson & Jacobsson 2001). In the same studies however, patients have described how these behaviours are not very common among staff in conflict situations. It was therefore encouraging to find in study **IV** that the one item that was more positively perceived by patients on trained wards compared to untrained wards was: 'Staff try to understand why a patient is acting aggressively'. The E13 does not reveal in what ways the patients perceive that the staff try to understand. However, it is reasonable to assume that only a

few of the patients have themselves been aggressive and observed the staff behaviour first hand, and that most patients have picked up the efforts of staff to understand the aggressive patient by observing incidents on the ward from a distance. In a study by Jones *et al.* (2010), about half of the patients on acute psychiatric wards said that they had witnessed or experienced violence and aggression on the wards.

The need to include current or former patients in the evaluation procedures concerning violence prevention and management in psychiatric care has been highlighted in several studies (Abderhalden 2008; National Institute of Clinical Excellence 2006; Duxbury & Whittington 2005). Still, reviews of evaluation studies on interventions related to violence prevention and management staff training and reduction of coercive interventions, show that patient participation is rare (Johnson 2010; Richter *et al.* 2006). This may be due to the fact that most of these studies evaluate mainly quantitative variables. Studies that do evaluate subjective experiences typically focus on staff. Nevertheless, subjective perceptions and experiences may play an important role in the evaluation of violence prevention interventions, not only in their own right but also in order to make quantitative evaluations more meaningful. For example, a comprehensive intervention evaluation may show that the use of seclusion and restraint has decreased but so has the overall feeling of safety and security of patients and staff. Since relatively few studies have included both quantitative and qualitative evaluation variables, especially regarding the views of patients, it may be argued that it is still too early to conclude that there is a clear link between low rates of for example coercive interventions and high levels of perceived safety and security.

The E13 was developed to provide qualitative evaluation variables to the influence of the Bergen staff training model, a model that is based on the Public health approach and the 'Working model'. Interestingly, all three prevention levels and all three staff factors of these theoretical frameworks (figure 3) were covered by the four items that in study **IV** showed significantly more positive ratings on wards where the staff had been trained. These included ward rules (effective structure/all prevention levels), the staff remaining calm in difficult situations (emotional regulation/secondary and tertiary prevention), the staff's interest in why a patient acts aggressively (positive appreciation/secondary and tertiary prevention) and the staff's readiness to intervene at an early stage of patient aggression (effective structure/secondary prevention). This indicates that the Bergen model may be a good example of a type of modern staff training that manages to address the different dimensions of violence prevention and management in a way that is comprehensible for staff and possible for them to relate to in nursing practice.

As stated previously, the nursing staff cannot alone be responsible for the violence prevention and management climate on the wards. It is imperative to recognize that the culture and climate on the wards as well as in the larger organisation will strongly influence the staff members' way of thinking and behave towards each other and towards the patients (Paterson *et al.* 2005). It is a huge undertaking for an inpatient psychiatric ward to decide to work with violence prevention and management from the perspective of the Public health approach and the 'Working model'. The undertaking is the responsibility of the clinic management organisation and must involve support systems to the ward managers and to the members of staff. Possibly, the model

suggested in figure 3 could also serve as guidance for the organisation in what support that may be needed.

7 METHODOLOGICAL CONSIDERATIONS

Three out of four studies (**I-III**) in this thesis were conducted within the context of psychiatric intensive care. The findings of these studies may therefore not be readily transferable to other types of psychiatric inpatient settings. At the same time, the descriptions of the study settings allow the reader to estimate differences and similarities between this and other types of settings.

The choice of introducing the Brøset Violence Checklist (BVC) on the PICU in study **I** and **II** as was based on the literature that showed that this new risk assessment instrument for short-term use had the potential to be successfully implemented in hectic acute psychiatric settings and be managed by the nursing staff. Moreover, it was an instrument with emphasis on initiation of early preventive interventions rather than just collecting risk ratings (Woods & Almvik 2002). The other instrument, the Staff Observation Aggression Scale Revised (SOAS-R) (Palmstierna & Wistedt 1987) was used since it already had been introduced on the PICU and the clinic several years ago and was known by most of the nursing staff. Another incident rating scale that could have been considered an alternative is the Report Form for Aggressive Episodes (REFA) (Bjørkly 1996). The REFA focuses on detecting situational aggression triggers for the individual patient and includes a list of 30 situations or interactions and six sections for the recording of the characteristics of the episode. Unlike the SOAS-R, at least two staff members are involved in the recording of the event and the patient is also asked to provide information needed to record the incident as accurately as possible (Bjørkly 1996).

Despite a research tradition of evaluating prediction capacities of risk assessment instruments such as the Brøset Violence Checklist (BVC) with Receiver Operator Characteristics (ROC) and Area Under the Curve (AUC) analysis (Abderhalden 2008; SBU 2005; Almvik et al. 2000), study **I** used an extended Cox proportional hazards model (time-to-event analysis) with the occurrence of severe incidents as events. An extended model was used in order to use time to multiple events from the same patient. The reason for this choice was that the data included repeated BVC ratings of the same patients during their whole stay on the PICU. Also, the analyses needed to incorporate time-dependent co-variates and be sensitive to risk factors (BVC) changing over time. The data needed to be treated as dependent since the same patients were assessed repeatedly and since more than one violent incident could be related to the same individual patient. In studies using ROC/AUC analyses, all BVC sums are included from the patients and treated as independent observations, even though the same patient could produce several BVC-ratings.

Research in naturalistic settings presents different challenges than research in more controlled environments. In studies **II** and **IV**, which evaluate the effect or influence of interventions on psychiatric wards, there are a number of confounding variables that may have had an impact on the results. It is therefore difficult to fully control what is actually evaluated in intervention studies such as those involving staff training on a

number of wards. It may for example be unclear to what extent the staff on wards that have been trained have actually used their newly learnt skills.

Since the psychiatric intensive care unit (PICU) in study **II** was merged into one ward after previously consisting of two during the research evaluation period, thereby involving care for more acutely disturbed patients, it is difficult to draw any definite conclusions from the changes in incident rates. It could therefore be argued that another research approach ought to have been used. The PICU-project in many ways resembled conditions that may have been suitable for action research. In action research, the researcher is actively participating in a problem solving process at the research setting, involving the development of practical knowledge together with the persons belonging to the setting in their everyday lives (Reason & Bradbury 2008). In the PICU-project, both the staff and the ward managers were involved in different work groups, in making decisions on the content of the project and in discussions about which of all the new routines were working and not working in nursing practice. In my role as consultant, I interviewed all staff members at the beginning and at the end of the project, in addition to keeping field notes and memos regarding the project progress. It is possible that by using an action research approach in study **II**, this type of data could have been part of a clinically more valuable evaluation of the project, resulting in a description of the process of developing nursing practice rather than just a comparison of before - and after incident rates. However, the PICU-project was not initially planned nor conducted strictly as a research project and research data was only collected retrospectively. The interviews and the field notes were inspected retrospectively by me but found to be of inconsistent quality and were therefore not included in the research-based evaluation.

In study **III**, the relatively newly developed methodological approach of interpretive description was used (Thorne 2008). This approach differs somewhat from older and more established methods for qualitative inquiry such as phenomenological approaches, ethnography or grounded theory, since it might be seen as a "design frame" rather than a fixed method. Interpretive description was developed as a response to what was perceived as a need within nursing science to find a qualitative research approach that could seek understanding of clinical phenomena specifically related to nursing practice. At the same time, interpretive description encourages the researcher to borrow different design strategies from the more established methods mentioned previously, based on the nature of the research question and the data (Thorne 2008). In order to do this, the researcher must be familiar with other various qualitative methodologies, and the approach of interpretive description could therefore be seen as unsuitable for inexperienced researchers and students. Being a PhD student myself, the first attempt to analyse the interview data in study **III** was scrapped, after having spent quite a substantial period of time on it. This was due to the impression that the analysis seemed to stay too close to the initial data text. In a second attempt, which led to the findings of study **III**, more effort was spent on the interpretation rather than the description of data. Besides my supervisor, a group of senior psychiatric nursing researchers contributed to this process. This challenge to find the right level of interpretation in analyzing the data has also been described by others using the methodological approach of interpretive description (Håkansson 2010; Hunt 2009).

42

The involvement of both staff and patients is one of the strengths of study **IV**. Moreover, the non-parametric approach in the analyses could also have added to a robustness of the findings. In a recent evaluation study of a violence prevention and management staff training programme (Bowers 2009), beside quantitative evaluations of different incident rates, the levels of staff perceptions before and after the training programme were measured by the following questionnaires: Attitude to personality disorder questionnaire, Patient-Staff conflict checklist, Attitudes to containment measures questionnaire, Ward atmosphere scale (including patient ratings), Team climate inventory, Multifactor leadership questionnaire and Masloch burnout inventory. The arsenal of evaluation tools in Bowers' study mirrors the complexity of the issue under investigation. At the same time such extensive evaluations are very demanding, (probably) expensive and time consuming procedures of collecting and analysing data, and may not constitute a realistic approach for all clinical psychiatric and mental health organisations. In order to also allow for continuous smaller scale, ward based evaluations of quality improvement, there is a need for brief and easy-to-use evaluation tools such as the E13.

The evidence of the finding of study **IV** - that the Bergen model staff training had a positive influence on the violence prevention and management climate on the trained wards - is possibly rather weak. The validity could be questioned since the design did not include a control group and since the response rate of both staff and patients was not fully known but appeared relatively low. Since the E13 was constructed to be quick and easy to fill out, with only 13 items, the low response rate was unexpected. It is possible that additional resources should have been assigned to ensure that everyone who wanted to participate on the wards was given a questionnaire. The significantly more positive ratings after the intervention included four items of the staff responses and only one item of the patient responses, which could be argued, is a rather modest result. There is also a risk for a type 1 error due to mass-significance, something that was not tested in the study (Field 2009).

The construction of the E13 items was based on scientific literature and did not include a review of the initial item pool by experts. The instrument was not pre-tested on a representative development sample (DeVellis 2003). This means that the validity and the reliability of the questionnaire remain somewhat unclear. The interpretation of the items may have varied among the participants, regarding for example what could be viewed as good and desirable on a ward and not. Questions may arise, for example 'Is a high level of staff co-operation in challenging situations always only a good thing or does it imply an exclusion of the participation of the patient in solving the problem (Enarsson *et al.* 2007) or 'Does the staff acting harshly with aggressive patients mean that they act violently and destructively or does it mean that they are resolute, effective and firm in a chaotic and dangerous situation?' may be asked.

The factor analysis did not reveal any unambiguous result on possible underlying dimensions and the E13 was therefore used as a one dimension instrument. Another approach could have been to refrain from a one dimension solution, including sum score calculations and comparisons and solely analyzing the items one by one. At the same time, the interpretation and the value of the E13 could be seen as dependent on the questionnaire as a whole where the items are related to each other. For example,

what is the climate of a ward with high ratings of perceptions of safety and security but with low ratings on the relationships between staff and patients? What does it mean if the rating of staff co-operation is high but the staff interest in trying to understand the patient's reasons to be aggressive is low?

8 CONCLUSION

Violence prevention and management in nursing practice should mean that a caring approach is part of the primary, secondary as well as the tertiary level of prevention.

A caring approach in violence prevention and management is related to the nurses' need for emotional regulation and effective structure.

In nursing practice, violence prevention on all three levels does not only involve prevention of violence and injury but also the protection of the dignity of the patient and the prevention of damage on the nurse-patient relationship.

The Brøset Violence Checklist may well be used by nurses to predict risk of short-term violence in acute psychiatric care. It should however be related to early preventive interventions and used as a part of a more comprehensive risk assessment.

In evaluation studies of violence prevention and management interventions, a mixed methods design should be considered, including the perspective of patients.

9 SAMMANFATTNING PÅ SVENSKA

Bakgrund: Hot och våld från patienter på psykiatriska vårdavdelningar är ett problem för både patienter och personal som förutom fysiska skador och mental stress också bidrar till att skapa en osäker och otrygg vård- och arbetsmiljö. Bakgrunden till våldsamt beteende hos patienter anses ofta vara en kombination av flera faktorer kopplade till patientens tillstånd och bakgrund, till avdelningens miljö och organisation och till interaktion och relation mellan individer på avdelningen, t.ex mellan personal och patienter. I den vetenskapliga litteraturen framhålls vikten av att utforma en omvårdnad på psykiatriska vårdavdelningar som har ett preventivt fokus på hot och våld och som undviker en ensidig betoning av en reaktiv och kontrollerande inställning.

Syfte: Det övergripande syftet med denna avhandling var att utforska och utvärdera olika aspekter av tillämpad omvårdnad i relation till att predicera, förebygga och bemöta våld från patienter i akut psykiatrisk vård. De specifika syftena i avhandlingens delarbeten var: att utvärdera den kortsiktigt prediktiva kapaciteten hos riskbedömningsinstrumentet Brøset Violence Checklist (BVC) när instrumentet använts av sjuksköterskor och skötare på en psykiatrisk intensivvårdsavdelning (studie I), att jämföra förekomsten av tvångsåtgärder och våldsrelaterade skador på personal före och efter ett tvåårigt vårdutvecklings- och våldspreventivt projekt (studie II), att beskriva aspekter av sjuksköterskors och skötares vårdande förhållningssätt på psykiatriska intensivvårdsavdelningar (studie III), och slutligen i studie IV, att testa hypotesen att utbildning av personal i våldsprevention och bemötande enligt den så kallade 'Bergen-modellen', har en signifikant positiv påverkan på det våldspreventiva och våldsbemötande klimatet på psykiatriska avdelningar, såsom det uppfattas av patienter och personal.

Metoder: Både kvantitativa och kvalitativa metoder har använts i avhandlingens delarbeten. I studie I samlades data baserat på BVC och aggressionsrapporteringsinstrumentet Staff Observation Aggression Scale in retrospektivt från en psykiatrisk intensivvårdsavdelning (PIVA). Denna data analyserades sedan i en 'extended Cox proportional hazards' modell. I studie II samlades registerbaserad data retrospektivt in över tvångsåtgärder och våldsrelaterade skador på personal från samma PIVA som i studie I. Skillnader i data från året innan och året efter vårdutvecklingsprojektet analyserades genom Chi-två tester. I studie III samlades kvalitativ data in genom 19 individuella intervjuer med sjuksköterskor och skötare från fyra PIVA i olika delar av Sverige. Intervjuerna analyserades genom kvalitativ innehållsanalys i form av tolkande beskrivning. I studie IV utvecklades ett frågeformulär kallat 'E13' med 13 påståenden relaterade till våldspreventivt och våldsbemötande avdelningsklimat på psykiatriska vårdavdelningar. E13 distribuerades till patienter och personal på 41 psykiatriska vårdavdelningar innan personalen började utbildas i Bergen-modellen och till 19 avdelningar som efter en tid hade fått personalen utbildad. Insamlad data analyserades genom faktoranalys, Cronbach's alpha, Fisher's exact test och Mann-Whitney U-test.

46

Resultat: Brøset Violence Checklist (BVC) visade i studie I god prediktiv kapacitet. Redan om ett av de sex riskfaktorerna var markerat för en patient som närvarande i BVC ökade risken sex gånger för allvarligt våld från patienten under kommande dygn. Om ingen av riskfaktorerna var markerade, predicerade BVC på ett korrekt sätt att det inte fanns risk för allvarligt våld under kommande dygn vid 99% av alla skattningar. I studie II framkom att den totala förekomsten av tvångsåtgärder hade ökat ett år efter interventionen. Förekomsten av våldsrelaterade skador på personal hade under samma period inte förändrats. Resultaten kan dock ha påverkats av att PIVA enheten, under datainsamlingsperioden, slogs ihop från två avdelningar till en och blev därmed inriktad på att endast vårda och behandla patienter med de mest akuta beteendeproblemen och tillstånden. I studie III framkom i intervjuanalysen två huvudteman i form av två olika typer av vårdande förhållningssätt. För att beskriva dessa förhållningssätt användes metaforerna bulldozern och ballettdansaren. Förhållningssättet kopplat till bulldozern fungerade som ett sätt att skydda avdelningen från kaos genom att ta kontroll över det som ansågs vara destruktiva eller på annat sätt störande patientbeteenden. Samtidigt innebar detta en risk att representera ett icke-vårdande förhållningssätt. Ballettdansaren motsvarade ett tydligt vårdande förhållningssätt inriktat på att bygga en relation mellan vårdaren och patienten. Samma vårdare kunde anta olika förhållningssätt beroende på situation. I studie IV bedömdes efter analys att E13 skulle anses mäta endast en dimension. I jämförelsen mellan utbildade och ännu inte utbildade avdelningar framkom att personal på avdelningar som blivit utbildade enligt Bergen-modellen hade mer positiv uppfattning om sin avdelnings våldspreventiva och våldsbemötande klimat avseende fyra av påståendena i E13. Dessa påståenden omfattade goda regler på avdelningen, personalens förmåga att vara lugna vid bemötandet av aggressiva patienter, personalens vilja att försöka förstå varför en patient är aggressiv och personalens bemötande av aggressiva patienter på ett tidigt stadium. Patienter på utbildade avdelningar hade mer positiv uppfattning om en av påståendena, gällande att personalen försöker förstå varför en patient är aggressiv. För varken personal eller patienter uppfattades något av påståendena mer negativt på de utbildade avdelningarna. I en andra analys användes de summerade svaren i varje frågeformulär (summa = 0-13) vilket visade att personal på utbildade avdelningar hade en totalt sett mer positiv uppfattning än personal på icke utbildade avdelningar. För patientgruppen hittades ingen sådan signifikant skillnad.

Slutsatser: Brøset Violence Checklist (BVC) visade sig fungera som ett bra riskbedömningsinstrument men bör i första hand användas för att indicera tidiga våldsförebyggande åtgärder. I tillämpad omvårdnad ingår ett vårdande förhållningssätt i allt våldspreventivt arbete, från vardagsbemötande till kontrollerande åtgärder vid fysiskt våldsamma situationer. I samband med hot och våld, ingår i det preventiva arbetet att skydda patientens värdighet och även relationen mellan vårdare och patient. På grund av forskningsområdets komplexitet kan det i samband med systematiska utvärderingar av våldspreventiva interventioner vara lämpligt att överväga att samtidigt använda både kvantitativa och kvalitativa metoder, gärna inkluderande ett patientperspektiv.

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11 REFERENCES

Abderhalden, C. (2008). *The systematic assessment f the short-term risk for patient violence on acute psychiatric wards.* Maastricht University, Maastricht.

Abderhalden, C., Needham, I., Miserez, B., Almvik, R., Dassen, T., Haug, H. J., et al. (2004). Predicting inpatient violence in acute psychiatric wards using the Broset-Violence-Checklist: a multicentre prospective cohort study. *J Psychiatr Ment Health Nurs, 11*(4), 422-427.

Alexander, J. (2006). Patients' feelings about ward nursing regimes and involvement in rule construction. *J Psychiatr Ment Health Nurs, 13*(5), 543-553.

Alexander, J., Bowers, L. (2004). Acute psychiatric ward rules: a review of the literature. *J Psychiatr Ment Health Nurs, 11*(5), 623-631.

Almvik, R., Woods, P., Rasmussen, K. (2000). The Broset Violence Checklist. Sensitivity, specificity and interrater reliability. *J Interpersonal Violence, 15*, 1284-1296.

Arnetz, J. E., Arnetz, B. B. (2001). Violence towards health care staff and possible effects on the quality of patient care. *Soc Sci Med, 52*(3), 417-427.

American Nurses Association (2003). *Nursing's social policy statement* (2nd ed.). Maryland: American Nurses Association.

Banduras, A. (1973). *Aggression: a social learning analysis*. New Jersey: Prentice Hall.

Barker, P., Buchanan-Barker, P. (2010). The tidal model of mental health recovery and reclamation: application in acute care settings. *Issues Ment Health Nurs, 31*(3), 171-180.

Barrett, E. A. (2002). What is nursing science? *Nurs Sci Q, 15*(1), 51-60.

Beech, B., Leather, P. (2006). Workplace violence in the health care sector: A review of staff training and integration of training evaluation models. *Aggression and violent behavior, 11*, 27-43.

Beer, D., Pereira, S., Paton, C. (2001). *Psychiatric intensive care*. London: Greenwich Medical Media Limited.

Benson, A., Secker, J., Balfe, E., Lipsedge, M., Robinson, S., Walker, J. (2003). Discourses of blame: accounting for aggression and violence on an acute mental health inpatient unit. *Soc Sci Med, 57*(5), 917-926.

Bigwood, S., Crowe, M. (2008). 'It's part of the job, but it spoils the job': a phenomenological study of physical restraint. *Int J Ment Health Nurs, 17*(3), 215-222.

Birkler, J. (2007). *Filosofi och omvårdnad. Etik och människosyn* (Swe). Stockholm: Liber AB.

Bjorkly, S. (1996). Report form for aggressive episodes: preliminary report. *Percept Mot Skills, 83*(3 Pt 2), 1139-1152.

Björkly, S. (2006). Psychological theories of aggression: principles and application to practice. In D. Richter & R. Whittington (Eds.), *Violence in mental health settings. Causes, consequences, management.* New York: Springer Science.

Bowers, L. (2000). The expression and comparison of ward incident rates. *Issues Ment Health Nurs, 21*(4), 365-374.

Bowers, L. (2002). *Dangerous and severe personality disorder. Reaction and role of the psychiatric team.* London: Routledge.

Bowers, L. (2009). Association between staff factors and levels of conflict and containment on acute psychiatric wards in England. *Psychiatr Serv, 60*(2), 231-239.

Bowers, L., Allan, T., Simpson, A., Jones, J., Van Der Merwe, M., Jeffery, D. (2009). Identifying key factors associated with aggression on acute inpatient psychiatric wards. *Issues Ment Health Nurs, 30*(4), 260-271.

Bowers, L., Brennan, G., Flood, C., Lipang, M., Oladapo, P. (2006a). Preliminary outcomes of a trial to reduce conflict and containment on acute psychiatric wards: City Nurses. *J Psychiatr Ment Health Nurs, 13*(2), 165-172.

Bowers, L., Flood, C., Brennan, G., Allan, T. (2008a). A replication study of the City nurse intervention: reducing conflict and containment on three acute psychiatric wards. *J Psychiatr Ment Health Nurs, 15*(9), 737-742.

Bowers, L., Hackney, D., Nijman, H., Grange, A., Allan, T., Simpson, A., et al. (2007). *A Longitudinal Study of Conflict and Containment on Acute Psychiatric Wards: Report to the Department of Health*. London.

Bowers, L., Jeffery, D., Bilgin, H., Jarrett, M., Simpson, A., Jones, J. (2008b). Psychiatric intensive care units: a literature review. *Int J Soc Psychiatry, 54*(1), 56-68.

Bowers, L., Nijman, H., Allan, T., Simpson, A., Warren, J., Turner, L. (2006b). Prevention and management of aggression training and violent incidents on U.K. Acute psychiatric wards. *Psychiatr Serv, 57*(7), 1022-1026.

Brennan, G., Flood, C., Bowers, L. (2006). Constraints and blocks to change and improvement on acute psychiatric wards--lessons from the City Nurses project. *J Psychiatr Ment Health Nurs, 13*(5), 475-482.

Carlsson, G., Dahlberg, K., Ekebergh, M., Dahlberg, H. (2006). Patients longing for authentic personal care: a phenomenological study of violent encounters in psychiatric settings. *Issues Ment Health Nurs, 27*(3), 287-305.

Carlsson, G., Dahlberg, K., Lutzen, K., Nystrom, M. (2004). Violent encounters in psychiatric care: a phenomenological study of embodied caring knowledge. *Issues Ment Health Nurs, 25*(2), 191-217.

Chien, W. T., Chan, C. W., Lam, L. W., Kam, C. W. (2005). Psychiatric inpatients' perceptions of positive and negative aspects of physical restraint. *Patient Educ Couns, 59*(1), 80-86.

Council of Europe (2004). *Recommendation, Rec(2004)10 of the Committee of Ministers to Members States Concerning the Protection of the Human Rights and Dignity of Persons with Mental Disorder.* Strasbourg.

Crowe, M., Carlyle, D. (2003). Deconstructing risk assessment and management in mental health nursing. *J Adv Nurs, 43*(1), 19-27.

Deacon, M., Warne, T., McAndrew, S. (2006). Closeness, chaos and crisis: the attractions of working in acute mental health care. *J Psychiatr Ment Health Nurs, 13*(6), 750-757.

Delaney, K. R., Johnson, M. E. (2008). Inpatient psychiatric nursing: why safety must be the key deliverable. *Arch Psychiatr Nurs, 22*(6), 386-388.

DeVellis, R. F. (2003). *Scale Development - Theory and Applications*. Thousand Oaks: Sage Publications.

Duxbury, J. (2002). An evaluation of staff and patient views of and strategies employed to manage inpatient aggression and violence on one mental health unit: a pluralistic design. *J Psychiatr Ment Health Nurs, 9*(3), 325-337.

Duxbury, J., Björkdahl, A., Johnson, S. (2006). Ward culture and atmosphere. In D. Richter & R. Whittington (Eds.), *Violence in mental health settings. Causes, consequences, management.* New York: Springer Science.

Duxbury, J., Whittington, R. (2005). Causes and management of patient aggression and violence: staff and patient perspectives. *J Adv Nurs, 50*(5), 469-478.

Edvardsson, D. (2005). *Atmosphere in Care Settings. Towards a Broader Understanding of the Phenomenon.* Umeå University, Umeå.

Enarsson, P., Sandman, P. O., Hellzen, O. (2007). The preservation of order: the use of common approach among staff toward clients in long-term psychiatric care. *Qual Health Res, 17*(6), 718-729.

Farrell, G., Cubit, K. (2005). Nurses under threat: a comparison of content of 28 aggression management programs. *Int J Ment Health Nurs, 14*(1), 44-53.

Field, A. *Discovering statistics using SPSS, 3rd edition*. London: Sage Publications.

Finfgeld-Connett, D. (2008). Meta-synthesis of caring in nursing. *J Clin Nurs, 17*(2), 196-204.

Flood, C., Brennan, G., Bowers, L., Hamilton, B., Lipang, M., Oladapo, P. (2006). Reflections on the process of change on acute psychiatric wards during the City Nurse Project. *J Psychiatr Ment Health Nurs, 13*(3), 260-268.

Frueh, B.C., Knapp, R.G., Cusack, K.J., Grubaugh, A.L., Sauvageot, J.A., Cousins, V.C., et al. (2005). Patients' report of traumatic or harmful experiences within the psychiatric setting. *Psychiatr Serv, 56*(9), 1123-1133.

Gournay, K. (2000). *The recognition, prevention and therapeutic management of violence in mental health care: a consultation document.* London: United Kingdom Central Council for Nursing, Midwifery and Health Visiting.

Gullotta, T. P., Bloom, M. (Eds.). (2003). *Encyclopedia of Primary Prevention and Health Promotion*. New York: Kluwer Academic/Plenum Publishers.

Haglund, K. (2005). *Patient and staff perceptions of medication administration and locked entrance doors at psychiatric wards.*, Uppsala University, Uppsala.

Halldorsdottir, S. (1996). *Caring and Uncaring Encounters in Nursing and Health Care - Developing a Theory.*, Linköping University, Linköping.

Halldorsdottir, S. (2008). The dynamics of the nurse-patient relationship: introduction of a synthesized theory from the patient's perspective. *Scand J Caring Sci, 22*(4), 643-652.

Hellzen, O., Asplund, K., Sandman, P. O., Norberg, A. (2004). The meaning of caring as described by nurses caring for a person who acts provokingly: an interview study. *Scand J Caring Sci, 18*(1), 3-11.

Hunt, M. R. (2009). Strengths and challenges in the use of interpretive description: reflections arising from a study of the moral experience of health professionals in humanitarian work. *Qual Health Res, 19*(9), 1284-1292.

Håkansson, C. (2010). *Living with irritable bowel syndrome. A patient perspective on everyday life, health care encounters and patient education.*, Karolinska Institutet, Stockholm.

International Council of Nurses (ICN), P. S. I. P., World Health Organization (WHO), & International Labor Office (ILO) (2005). *Framework guidelines for addressing workplace violence in the health sector - The training manual.* Geneva: World Health Organisation.

International Labor Office (ILO), International Council of Nurses (ICN), World Health Organization (WHO), & P. S. I. P. (2002). *Framework guidelines for addressing workplace violence in the health sector.* Geneva: International Labor Office.

Irwin, A. (2006). The nurse's role in the management of aggression. *J Psychiatr Ment Health Nurs, 13*(3), 309-318.

Jansen, G. J., Dassen, T. W., Groot Jebbink, G. (2005). Staff attitudes towards aggression in health care: a review of the literature. *J Psychiatr Ment Health Nurs, 12*(1), 3-13.

Johansson, I. M., Skarsater, I., Danielson, E. (2007). Encounters in a locked psychiatric ward environment. *J Psychiatr Ment Health Nurs, 14*(4), 366-372.

Johnson, M. (2004). Violence on inpatient psychiatric units: state of the science. *J American Psychiatr Nurs Association, 10*, 113-121.

Johnson, M. E. (2010). Violence and restraint reduction efforts on inpatient psychiatric units. *Issues Ment Health Nurs, 31*(3), 181-197.

Johnson, M. E., Hauser, P. M. (2001). The practices of expert psychiatric nurses: accompanying the patient to a calmer personal space. *Issues Ment Health Nurs, 22*(7), 651-668.

Jones, J., Nolan, P., Bowers, L., Simpson, A., Whittington, R., Hackney, D., et al. (2010). Psychiatric wards: places of safety? *J Psychiatr Ment Health Nurs, 17*(2), 124-130.

Krug, E. G. e. a., eds. (2002). *World report on violence and health.* Geneva: World Health Organization.

Lancee, W. J., Gallop, R., McCay, E., Toner, B. (1995). The relationship between nurses' limit-setting styles and anger in psychiatric inpatients. *Psychiatr Serv, 46*(6), 609-613.

Lanza, M. L. (1992). Nurses as patient assault victims: an update, synthesis, and recommendations. *Arch Psychiatr Nurs, 6*(3), 163-171.

Lelliott, P., Quirk, A. (2004). What is life like on acute psychiatric wards? *Curr Opinion in Psychiatry* (17), 297-301.

Lilja, L., Hellzen, O. (2008). Former patients' experience of psychiatric care: a qualitative investigation. *Int J Ment Health Nurs, 17*(4), 279-286.

Liu, J., Wuerker, A. (2005). Biosocial bases of aggressive and violent behavior--implications for nursing studies. *Int J Nurs Stud, 42*(2), 229-241.

Lowe, T., Wellman, N., Taylor, R. (2003). Limit-setting and decision-making in the management of aggression. *J Adv Nurs, 41*(2), 154-161.

Lunds Hospital och Asyl (1896). *Förhållningsreglor för vårdpersonalen* (Swe). Lund: Berlingska Boktryckeri- och Stilgjuteri-Aktiebolaget.

Meleis, A. I. (2007). *Theoretical Nursing: Development and Progress* (4th ed.). Philadelphia: Lippincott Williams & Wilkins.

Mellesdal, L. (2003). Aggression on a psychiatric acute ward: a three-year prospective study. *Psychol Rep, 92*(3 Pt 2), 1229-1248.

Moos, R. (1974). *Evaluating treatment environments: A social ecological approach.* New York: Wiley.

Moran, A., Cocoman, A., Scott, P. A., Matthews, A., Staniuliene, V., Valimaki, M. (2009). Restraint and seclusion: a distressing treatment option? *J Psychiatr Ment Health Nurs, 16*(7), 599-605.

Moylan, L. B. (2009). Physical restraint in acute care psychiatry: a humanistic and realistic nursing approach. *J Psychosoc Nurs Ment Health Serv, 47*(3), 41-47.

National Institute of Clinical Excellence (NICE) (2006). *Violence - the short-term management of disturbed/violent behaviour in in-patient psychiatric settings and emergency department. Clinical practice guidelines.* London: NICE.

Needham, I. (2006). Psychological responses following exposure to violence. In D. Richter, Whittington, R. (Ed.), *Violence in Mental Health Settings: Causes, Consequences, Management* (pp. 295-318). New York: Springer Science.

Niehoff, D. (1998). *The biology of violence.* New York: The Free Press.

Nijman, H., Muris, P., Merckelbach, H., Palmstierna, T., Wistedt, B., Vos, A., et al. (1999a). The Staff Observation Aggression Scale-Revised SOAS-R. *Aggressive Behaviour, 25*(3), 197-209.

Nijman, H. L., aCampo, J. M., Ravelli, D. P., Merckelbach, H. L. (1999b). A tentative model of aggression on inpatient psychiatric wards. *Psychiatr Serv, 50*(6), 832-834.

Nijman, H. L., Palmstierna, T., Almvik, R., Stolker, J. J. (2005). Fifteen years of research with the Staff Observation Aggression Scale: a review. *Acta Psychiatr Scand, 111*(1), 12-21.

Nolan, K. A., Shope, C. B., Citrome, L., Volavka, J. (2009). Staff and patient views of the reasons for aggressive incidents: a prospective, incident-based study. *Psychiatr Q, 80*(3), 167-172.

Olofsson, B., & Jacobsson, L. (2001). A plea for respect: involuntarily hospitalized psychiatric patients' narratives about being subjected to coercion. *J Psychiatr Ment Health Nurs, 8*(4), 357-366.

Palmstierna, T., Lassenius, R., Wistedt, B. (1989). Evaluation of the Brief Psychopathological Rating Scale in relation to aggressive behavior by acute involuntarily admitted patients. *Acta Psychiatr Scand, 79*(4), 313-316.

Palmstierna, T., Wistedt, B. (1987). Staff observation aggression scale, SOAS: presentation and evaluation. *Acta Psychiatr Scand, 76*(6), 657-663.

Paterson, B., Robertson, M., McCormish, S., Kay, S., Greenwald, G. et al. (2009a). Control and restraint: changing thinking, practice and policy. *Mental Health Practice 13*(2), 16-20.

Paterson, B., Bradley, P., Stark, C., Saddler, D., Leadbetter, D., Allen, D. (2003). Deaths associated with restraint use in health and social care in the UK. The results of a preliminary survey. *J Psychiatr Ment Health Nurs, 10*(1), 3-15.

Paterson, B., Leadbetter, D. (1999). De-escalation in the management of aggression and violence: towards evidence-based practice. In J. Turnbull & B. Paterson (Eds.), *Aggression and violence: approaches to effective management* (pp. 95-123). Basingstoke: Palgrave Macmillan.

Paterson, B., Leadbetter, D., Miller, G. (2005). Beyond Zero Tolerance: a varied approach to workplace violence. *Br J Nurs, 14*(15), 810-815.

Paterson, B., Ryan, D., McComish, S. (2009b). *Research and best practice associated with the protection of staff from third party violence and aggression in the workplace – a literature review.* Edinburgh: NHS Health Scotland.

Patton, M.Q. (2002). *Qualitative research and evaluation methods.* Thousand Oaks, CA: Sage Publications.

Peplau, H. E. (1997). Peplau's theory of interpersonal relations. *Nurs Sci Q, 10*(4), 162-167.

Price, B. (2002). Laddered questions and qualitative data research interviews. *J Adv Nurs, 37*(3), 273-281.

Quirk, A., Lelliott, P., Seale, C. (2005). Risk management by patients on psychiatric wards in London: An ethnographic study. *Health, Risk & Society, 7*(1), 85-91.

Rask, M., Brunt, D. (2007). Verbal and social interactions in the nurse-patient relationship in forensic psychiatric nursing care: a model and its philosophical and theoretical foundation. *Nurs Inq, 14*(2), 169-176.

Raubenheimer, J. (2004). An item selection procedure to maximise scale reliability and validity. *SA J Industrial Psychology, 30*(4), 59-64.

Reason, P., Bradbury, H. (2008). *The Sage handbook of action research: participative inquiry and practice.* (2nd ed.). London: Sage Publications.

Richter, D., Needham, I., Kunz, S. (2006). The effects of aggression management training for mental health care and disability care staff: a systematic review. In D. Richter, Whittington, R. (Ed.), *Violence in Mental Health Settings: Causes, Consequences and Management* (pp. 211-227). New York: Springer Science.

Royal College of Psychiatrists (2000). *National audit of managment of violence in mental health settings*. London: Royal College of Psychiatrists.

Ryan, C. J., Bowers, L. (2005). Coercive manoeuvres in a psychiatric intensive care unit. *J Psychiatr Ment Health Nurs, 12*(6), 695-702.

Salzmann-Erikson, M., Lutzen, K., Ivarsson, A. B., Eriksson, H. (2008). The core characteristics and nursing care activities in psychiatric intensive care units in Sweden. *Int J Ment Health Nurs, 17*(2), 98-107.

SBU. (2005). *Riskbedömningar inom psykiatrin. Kan våld i samhället förutsägas?* (Swe). Stockholm: Statens beredning för medicinsk utvärdering.

Schein, E. H. (1992). *Organizational culture and leadership*. San Francisco: Jossey-Bass.

Sethi, D., Marais, S., Seedat, M., Nurse, J., Butchart, A. (2004). *Handbook for the documentation of interpersonal violence prevention programmes. .* Geneva: Department of Injuries and Violence Prevention.

SFS. (1991). *The Compulsory Psychiatric Care Act (1991:1128)* (Swe). Stockholm: National Board of Health and Welfare.

Shattell, M. M., Andes, M., Thomas, S. P. (2008). How patients and nurses experience the acute care psychiatric environment. *Nurs Inq, 15*(3), 242-250.

Shepherd, M., Lavender, T. (1999). Putting aggression into context: an investigation into contextual factors influencing the rate of aggressive incidents in a psychiatric hospital. *Journal of Mental Health, 8*(2), 159-170.

Sjöström, N., Eder, D. N., Malm, U., Beskow, J. (2001). Violence and its prediction at a psychiatric hospital. *Eur Psychiatry, 16*(8), 459-465.

Smith, M. E., Hart, G. (1994). Nurses' responses to patient anger: from disconnecting to connecting. *J Adv Nurs, 20*(4), 643-651.

SOU. (2006). *Ambition och ansvar [Ambition and responsibility]*. Stockholm: Statens Offentliga Utredningar.

Steinert, T. (2002). Prediction of inpatient violence. *Acta Psychiatr Scand Suppl*(412), 133-141.

Stewart, D., Van der Merwe, M., Bowers, L., Simpson, A., Jones, J. (2010). A review of interventions to reduce mechanical restraint and seclusion among adult psychiatric inpatients. *Issues Ment Health Nurs, 31*(6), 413-424.

Stockholm County Council (2010). Medarbetarfokus 2009 med hälsobokslut (Swe). Stockholm: Stockholms läns landsting.

Swedish Work Environment Authority (1993). Violence and Menaces in the Working Environment, AFS 1993:2.

Swedish Work Environment Authority (2006). *Violence and threats in the health care sector. Korta sifferfakta 8.2006 (Swe)*. Retrieved 10-30, 2010.

Szmukler, G., Appelbaum, P. S. (2008). Treatment pressures, leverage, coercion, and compulsion in mental health care. *Journal of Mental Health, 17*(3), 233-244.

Therneau, T.M., Grambsch, P.M. (2000). Modeling survival data: extending the Cox model. New York: Springer-Verlag.

Thorne, S. (2008). *Interpretive description*. Walnut Creek, CA: Left Coast Press.

Thorne, S., Kirkham, S., O'Flynn-Magee, K. (2004). The analytic challenge in interpretive description. *International Journal of Qualitative Methods, 3*(1).

Thorne, S., Kirkham, S. R., MacDonald-Emes, J. (1997). Interpretive description: a noncategorical qualitative alternative for developing nursing knowledge. *Res Nurs Health, 20*(2), 169-177.

Tinbergen, N. (1964). *Social behaviour in animals with special reference to vertebrates* (2nd ed.). London: Chapman and Hall Ltd.

Vatne, S., Fagermoen, M. S. (2007). To correct and to acknowledge: two simultaneous and conflicting perspectives of limit-setting in mental health nursing. *J Psychiatr Ment Health Nurs, 14*(1), 41-48.

Vatne, S., Holmes, C. (2006). Limit setting in mental health: historical factors and suggestions as to its rationale. *J Psychiatr Ment Health Nurs, 13*(5), 588-597.

Webster, C.D., Douglas, K.S., Eaves, D., Hart, S.D. (1997). *HCR-20: Assessing the risk for violence*. Vancouver: Mental Health, Law and Policy Institute, Simon Fraser University.

Whittington, R. (1997). Violence to nurses: prevalence and risk factors. *Nurs Stand, 12*(5), 49-54.

Whittington, R., Baskind, E., Paterson, B. (2006). Coercive measures in the management of imminent violence: restraint, seclusion and enhanced observation. In D. Richter & R. Whittington (Eds.), *Violence in mental health settings. Causes, consequences, management*. New York: Springer Science.

Whittington, R., Wykes, T. (1994). An observational study of associations between nurse behaviour and violence in psychiatric hospitals. *J Psychiatr Ment Health Nurs, 1*(2), 85-92.

Winship, G. (2006). Further thoughts on the process of restraint. *J Psychiatr Ment Health Nurs, 13*(1), 55-60.

Woods, P., Almvik, R. (2002). The Broset violence checklist (BVC). *Acta Psychiatr Scand Suppl*(412), 103-105.

World Health Organization (1996). *WHO Global Consultation on Violence and Health. Violence: a public health priority.* Geneva.

Vuckovich, P. K., Artinian, B. M. (2005). Justifying coercion. *Nurs Ethics, 12*(4), 370-380.

12 APPENDIX

12.1 THE BRØSET VIOLENCE CHECKLIST (BVC) (SWE)

Stockholm Läns Sjukvårdsområde   **Personnummer:**
Klinik: **Namn:**

År: _____

Avd: _____

BVC – Bröset Violence Checklist

Måndag /	Dag	Kväll	Natt
Förvirrad			
Retlig			
Bullrig			
Verbalt hotfull			
Fysiskt hotfull			
Attackerar föremål			
Summa			
Signatur			

Tisdag /	Dag	Kväll	Natt
Förvirrad			
Retlig			
Bullrig			
Verbalt hotfull			
Fysiskt hotfull			
Attackerar föremål			
Summa			
Signatur			

Onsdag /	Dag	Kväll	Natt
Förvirrad			
Retlig			
Bullrig			
Verbalt hotfull			
Fysiskt hotfull			
Attackerar föremål			
Summa			
Signatur			

Torsdag /	Dag	Kväll	Natt
Förvirrad			
Retlig			
Bullrig			
Verbalt hotfull			
Fysiskt hotfull			
Attackerar föremål			
Summa			
Signatur			

Fredag /	Dag	Kväll	Natt
Förvirrad			
Retlig			
Bullrig			
Verbalt hotfull			
Fysiskt hotfull			
Attackerar föremål			
Summa			
Signatur			

Lördag /	Dag	Kväll	Natt
Förvirrad			
Retlig			
Bullrig			
Verbalt hotfull			
Fysiskt hotfull			
Attackerar föremål			
Summa			
Signatur			

Söndag /	Dag	Kväll	Natt
Förvirrad			
Retlig			
Bullrig			
Verbalt hotfull			
Fysiskt hotfull			
Attackerar föremål			
Summa			
Signatur			

Frånvaro av symptom/beteende ger 0 poäng.
Förändring i, eller förekomst av beteende ger 1 poäng
(t ex är pat vanligtvis förvirrad ger detta 0 poäng, men
ökar förvirringen ges 1 poäng).
Totalpoäng (Summa) är summan av vertikal kolumn.
Bedömning:
Summa:
0 **=** ingen eller liten risk för våld
1-2 = måttlig risk för våld, förebyggande åtg bör vidtas
> 2 = hög risk för våld. Förebyggande åtg bör vidtas
och man bör planera för hur ett eventuellt
utbrott skall hanteras

Bröset Violence Checklist, Almvik. R. 1998

För bedömningsdefinitioner, v g se baksidan ➡

12.2 THE STAFF OBSERVATION AGGRESSION SCALE (SOAS-R) (SWE)

<table>
<tr><td colspan="3"><i>Stockholm Läns Sjukvårdsområde</i>
Klinik:

Avd/Enhet:</td><td colspan="2">Personnummer:

Namn:</td></tr>
<tr><td colspan="3">SOAS-R: AGGRESSIONSRAPPPORTBLAD
(Staff Observation Aggression Scale-Revised)</td><td colspan="2"></td></tr>
<tr><td>Hur började aggressionen?</td><td>Vad använde patienten?</td><td>Vart riktades aggressionen</td><td>Vad hände/ skadades</td><td>Hur lugnades patienten</td></tr>
<tr>
<td>
☐ Ej provocerad

Provocerad av:

☐ Medpatienter

☐ ADL-hjälp

☐ Nekas förmån

☐ Krav från personal, ex medicinering

☐ Tillrättavisas av Personal.

☐ Annat: _____
_____
_____
</td>
<td>
☐ Ord, ej hot

☐ Ord, fysiskt hot

Vanliga föremål:

☐ Stol

☐ Glas

☐ Annat: _____
_____

Egna kroppen:

☐ Hand

☐ Fot

☐ Tänder (bits)

☐ Annat: _____
_____

Farliga föremål eller metoder:

☐ Strypgrepp

☐ Kniv

☐ Sax

☐ Annat: _____
_____
</td>
<td>
☐ Ingen/Inget

☐ Annat föremål

☐ Vårdpersonal

☐ Patienten själv

☐ Medpatient

☐ Annan person
</td>
<td>
☐ Inget/ingen Skada

Föremål:

☐ Skadat, användbart

☐ Skadat, kasseras

Personer:

☐ Kände sin säkerhet hotad

☐ Fick ont < 10 min

☐ Fick ont > 10 min

☐ Fick synlig skada, t ex blåmärke, rivsår mm

☐ Behövde behandling, t ex vila, värktablett, bandage

☐ Behövde läkar-vård
</td>
<td>
☐ Av sig själv

☐ Samtal med pat

☐ Fördes bort

☐ Fick läkemedel (tabl, flytande)

☐ Fick injektion

☐ Måste fasthållas

☐ Isolering i avskilt rum

☐ Bältesläggning
</td>
</tr>
<tr><td>Datum:</td><td colspan="2">Klockslag:</td><td colspan="2">Sign:</td></tr>
<tr><td colspan="5">Vid varje aggressionstillfälle från patienten görs markering för tidpunkt samt markeringar i alla tillämpliga rutor, minst ett kryss i varje kolumn. Rapporteringen avser alla aggressionstillbud, adekvata som inadekvata</td></tr>
</table>

SOAS-R Nijman/Palmstierna 1987/1998

12.3 THE E 13 QUESTIONNAIRE (SWE) (ENG)

JL Stockholms läns sjukvårdsområde

Enkät I–personal

Jag är:
kvinna❏   man❏

Avdelning: _____

Ålder: 25 eller yngre❏   26–40❏   41 eller äldre❏

Yrke: skötare❏   sjuksköterska❏   läkare❏   psykolog/kurator/arbetsterapeut❏
annat❏

Jag instämmer

Sätt ett kryss på varje rad

		Inte alls			Helt	Vet ej
1	Personalen är ofta ute på avdelningen med patienterna	❏	❏	❏	❏	❏
2	Det är goda relationer mellan patienter och personal	❏	❏	❏	❏	❏
3	Personalen samarbetar med varandra när de bemöter aggressiva patienter	❏	❏	❏	❏	❏
4	Patienterna är ofta rädda för andra patienter	❏	❏	❏	❏	❏
5	Personalen klarar av att lugna ner aggressiva patienter	❏	❏	❏	❏	❏
6	Reglerna för patienterna på avdelningen är bra	❏	❏	❏	❏	❏
7	Det känns tryggt och säkert att vara på avdelningen	❏	❏	❏	❏	❏
8	Bara vissa i personalen klarar av att bemöta aggressiva patienter	❏	❏	❏	❏	❏
9	Personalen är lugn i bemötandet av aggressiva patienter	❏	❏	❏	❏	❏
10	Personalen försöker förstå varför en patient är aggressiv	❏	❏	❏	❏	❏
11	Personalen bemöter aggressiva patienter på ett tidigt stadium	❏	❏	❏	❏	❏
12	Personalen är hård mot aggressiva patienter	❏	❏	❏	❏	❏
13	Både kvinnlig och manlig personal deltar i bemötande av aggressiva patienter	❏	❏	❏	❏	❏

Stockholms läns sjukvårdsområde

I am: _____

woman❏   man❏

Ward/Unit: _____

Age: 25 or younger❏   26–40❏   41 or older❏

Occupation: nursing assistant❏   reg nurse❏   physician❏   psychologist/social worker/occupational therapist❏   other❏

I agree

Put an X in one column in each row

		Not at all			Fully agree	Do not know
1	The staff are often out on the ward with patients	❏	❏	❏	❏	❏
2	The relationship between staff and patients is good	❏	❏	❏	❏	❏
3	The staff co-operate when approaching aggressive patients	❏	❏	❏	❏	❏
4	Patients are often scared of other patients	❏	❏	❏	❏	❏
5	The staff manage to calm down aggressive patients	❏	❏	❏	❏	❏
6	The rules for patients on the ward are good	❏	❏	❏	❏	❏
7	Being on the ward feels safe and secure	❏	❏	❏	❏	❏
8	Only certain members of staff are capable of approaching aggressive patients	❏	❏	❏	❏	❏
9	The staff are calm when approaching aggressive patients	❏	❏	❏	❏	❏
10	The staff try to understand why a patient is acting aggressively	❏	❏	❏	❏	❏
11	The staff approach patients already at the first sign of aggression	❏	❏	❏	❏	❏
12	The staff are harsh with aggressive patients	❏	❏	❏	❏	❏
13	Both female and male staff are involved in approaching aggressive patients	❏	❏	❏	❏	❏

12.4 SCHEDULE OF THE BERGEN MODEL STAFF TRAINING COURSE

Session	Course content	Teaching method
Day 1	Aggression theory Understanding emotional and physical reactions to violence Identifying own patterns of thought Risk factors related to inpatient violence: Internal/Environmental/Situational/Interactional factors Bowers' three staff factors of the 'Working model' Basic caring approaches at the level of primary prevention	Lectures Group discussions
	Self defence Break away techniques Body relaxation	Practical training
Day 2	Law – health care, work environment Early interventions – secondary prevention Nursing care plans Risk assessment and incident report The ward rules The issue of power Limit setting De-escalation techniques and negotiation Ethical considerations	Lectures Group discussions
	Self defence & break away techniques, cont. Verbal and non-verbal communication in limit setting	Practical training Role play
A one to two-week break		
Day 3	Deepening of ethical issues in relation to nursing practice Identifying own emotional reactions to violence Law – coercive interventions The role of the multidisciplinary team To take physical control – tertiary prevention External support – assault alarm Coercive interventions: to listen and talk to the patient, physical safety – anatomy and physiology, staff leadership and teamwork, after care of patients and staff	Lectures Group discussions
	Self defence & break away techniques, cont. Techniques of physical and mechanical restraint Identifying caring and uncaring approaches Supporting the patient's ability to regain self-control Keeping coercive interventions safe and well organised	Practical training Role play
Day 4	To bring the Bergen model to work in 'reality' Organisational support Refresher hours based on current ward situations Comprehensive analysis of violent incidents Techniques of physical and mechanical restraint, cont.	Lectures Group discussions
	Integrating a caring approach and good order in ethically sound and safe limit setting and physical control situations	Practical training Role play

60