CHAPTER II

LITERATURE REVIEW

This chapter is concerned with a review of the literature relating to factors contributing to aggressive and violent behaviour in mental health inpatient facilities. Information was gathered from various sources which include published material in books, various psychiatric journals and also publications on websites. Information was thoroughly studied and summarized in this chapter.

Carnwell and Daly (2001) state that the purpose of a literature review is to "critically appraise and synthesize the current state of knowledge relating to the topic under investigation as a means of identifying gaps in the knowledge". Necessary steps in this process include a definition of the scope of the review, identifying sources of information, reviewing the available literature, and conducting the review. The purpose of this review was to survey available electronic databases (e.g. Pub Med) and the English language psychiatric and nursing peer reviewed journals in order to identify, firstly, the general scope of research reports on contributing factors to violence and aggression in mental health facilities, and secondly, theoretical reviews of the subject. Lastly, since a stated purpose of this study is to try and identify interventions to reduce violence and aggression, a review of management principles is given at the end of this chapter.

WHAT IS AGGRESSION AND VIOLENCE

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

In the last decade of the last century, several theoretical frameworks were developed to explain the origins of aggression. These include psychological theories, genetic and biological models, and sociological, or cultural, theories. One of the early theories about the origin of aggression stems from the psychodynamic theory. From this point of view there is a permanent opposition between the death instinct (thanatos) and the life instinct (eros). The death instinct may be neutralized by libidinal energy or redirected through sublimation or displacement, but aggressive energy may also be directed towards others or result in self-destruction if the instinct is unrestrained or if neutralization is incomplete (Freud, 1930).

Aggression can also be considered as a learned social behaviour. The social learning theory emerged in the 1960s, largely as a result of the theorizing of Albert Bandura and his associates. Social learning consists of the acquisition of responses through observation and the maintenance of particular behaviors through reinforcement. The theory includes recognition of biological factors in aggression without regarding such factors as direct causes of aggressive behaviour (Bandura, 1999). Explanations of human aggression based on the science of behavioural biology, can be traced back to Konrad Lorenz's 1966 book *On Aggression*. Lorenz explained aggression as behaviour triggered by specific external stimuli following a progressive accumulation of aggression-specific energy within the person. Aggression is followed by a cathartic decrease in such energy and the beginning of a new build-up. For the ethnologists, aggressive behaviour is an innate instinct that must be regularly discharged in appropriate context. In this view aggression is inevitable and functions as a self-assertive force in the presence of aggression-releasing stimuli.

TYPES OF AGGRESSION

There are different types of aggression. Theoretical perspectives on aggression suggest that typographically and functionally distinct subtypes of aggression exist (Dodge & Schwartz, 1997). It is important to consider the multidimensional nature of aggression because different stimuli combine with different types of physiological and mental processes to create distinct forms of aggression.

Although different classification systems for aggression have been proposed, as seen below, these typologies tend to overlap somewhat, with each system

having a slightly different emphasis. The forms of types of aggression that are reviewed consist of the clinical classification, the stimulus-based classification, the instrumental versus hostile classification, and the positive versus negative classification.

Clinical Classification: The clinical literature research, heavily influenced by the work of Feshbach (1970) has frequently referred to two forms of aggression (Dodge et al., 1997; Scarpa & Raine, 1997). The first form is called "affective," "reactive," "defensive," "impulsive," or "hot-blooded" aggression. This type of aggression is defined as a violent response to physical or verbal aggression initiated by others that is relatively uncontrolled and emotionally charged. In contrast, the second form of aggression is referred to as "predatory," "instrumental," "proactive," or "cold-blooded" aggression. This type of aggression is characterized as controlled, purposeful aggression lacking in emotion that is used to achieve a desired goal, including the domination and control of others (Dodge, 1991; Meloy, 1988). Meloy (1988) views aggression in humans as either predominantly affective or predatory. Similarly, Dodge (1991) categorizes childhood aggression as either proactive or reactive, while admitting that very few aggressive acts are purely reactive or proactive in nature. In the Diagnostic and Statistical Manual—IV (American Psychiatric Association, 1994) reference is made to Intermittent Explosive Disorder, a form of clinical aggression similar to reactive aggression in which the individual for an intermittent, short period of time loses control and becomes inordinately aggressive.

Stimulus-based classification: Internal stimuli and external stimuli are important antecedents of aggression. Moyer (1968) presented a comprehensive review

of different forms of aggression and their neural and endocrine regulation. He classified aggressive behavior according to seven stimulus situations that elicited the behavior. These antecedent stimuli are as follows:

- Predatory aggression, stimulated by the presence of a natural object of prey
- Inter-male aggression, stimulated by the presence of a novel male conspecific in a neutral arena
- Fear-induced aggression stimulated by threats and always preceded by escape attempts
- Irritable aggression, stimulated by the presence of any attachable object. The tendency to display irritable aggression is enhanced by any stressor, such as isolation, electrical shock, and food deprivation.
- Territorial aggression, stimulated by the presence of an intruder in the home or territory of a resident
- Maternal aggression, stimulated by a threatening stimulus in the proximity of the mother's young
- Instrumental aggression, stimulated by any of the situations already described, but strengthened by learning

The above classification system emphases the context-dependent nature of aggression and the diversity of situations that trigger aggression.

Instrumental versus hostile aggression: Feshbach (1970) originally developed this typology, and it has been elaborated upon more recently by Atkins et al. (1993). This influential model separates aggression into instrumental and hostile functions. Instrumental aggression produces some positive reward or advantage (impact) on the aggressor unrelated to the victim's discomfort. The purpose of hostile

aggression is to induce injury or pain (negative impact) upon the victim. In this case, there is little or no advantage to the aggressor. This model has been widely studied in community samples of children and adults with varying results (Atkins et al., 1993). One problem with this classification is that the constructs require careful delineation because many aggressive episodes will have components of both instrumental and hostile aggression.

Positive versus negative aggression: Generally speaking, aggression is considered to have a negative function that not only elicits disapproval from others, but also is evaluated as destructive and damaging in its consequences. However, Blustein (1996) argues that the term "aggressive" behavior is ambiguous, denoting both positive and negative behaviors. Similarly, it could be called "excessive" or "inappropriate" aggression. Ellis (1976) considered positive aggression to be healthy, productive behavior if it promoted the basic values of survival, protection, happiness, social acceptance, preservation, and intimate relations.

In the context of positive aggression, a certain amount of aggression is thought to be necessary and adaptive throughout childhood and adolescence because it helps build autonomy and identity (Gupta, 1983; Romi & Itskowitz, 1990). Furthermore, a certain degree of aggression or dominance helps to facilitate engagement in cooperative and competitive activities with one's peers. Channeled in the proper direction, human aggression is the force that enables a person to be healthfully self-assertive, dominant, and independent and to achieve mastery of both the environment and the self. Therefore, Jack (1999) believes that positive aggression takes many forms, including self-protection, standing up in the face of negation, pushing for new possibilities, and defending against harm.

With respect to negative aggression, this behavior has been defined as acts that result in personal injury or destruction of property (Bandura, 1973). Alternatively, it also has been defined as attacking behavior that harms another of the same species (Atkins et al., 1993). Negative aggression also is defined as forceful action that is directed towards the goal of harming or injuring another living being (Moyer, 1968). Encroaching on the home or territory of a resident and causing others financial, physical, and emotional damage also is included in negative aggression (Moyer, 1968). Negative aggression is considered unhealthy because it induces heightened emotions that can in the long-term be damaging to the individual.

Male versus female aggression: It is commonly recognized that males are more aggressive that females. Although males often engage in physical aggression or "direct" forms of aggression, females are more likely to exhibit what has been termed "relational aggression" or "indirect" forms of aggression, such as exclusion of others from their social group and slander (Crick, 1995; Crick et al., 2002; Hadley, 2003; Moffitt et al., 2001).

Quinsey et al. (2004) found that in children and youth, although both males and females are more likely to engage in aggressive behavior and commit violent crimes between the ages of 14 and 24 years than at other ages, the onset for females tends to be two years earlier on average. Furthermore, there are gender differences in the seriousness of aggression. Males are more likely than females to commit more serious acts of aggression.

Women generally cope with anger and frustration in less violent ways. In a study interviewing 60 women of different ages, ethnicities, and class backgrounds, Jack (1999) concluded that women might mask their aggression through

manipulation, silence, and exaggerated sweetness. However, over time, such coping mechanisms, can lead to depression, disconnected relationships, or even numbing behaviors such as overeating, drinking, or drug use.

AGGRESSION IN PSYCHIATRIC CARE

Despite its clinical importance, aggression is a scarcely studied topic. This is mostly due to the innate nature of the conditions encircling the aggressive psychiatric patient. Majority of studies have demonstrated a moderate association between mental illness and violence. The relationship between violence and mental illness vary considerably across different diagnoses.

Today aggression and violence pose a major problem for public health and criminal justice systems. Aggression usually cause harm and injuries to either self, others or environment. Despite its noteworthy prevalence and serious consequences, methodological problems and difficulties derived from the innate nature of the pathology hampers research on violence and aggression. However, much has been learned about the complex and controversial relationship between violence and mental disorders and the assessing violence risk over the last 30 year.

Aggression is a serious problem in society as well as in health care. The increase in aggressive incidents in health care settings is reflected in the attention that is being paid to the phenomenon of aggressive behaviour by patients in the scientific journals.

A search with the key words 'violence', 'aggression' and 'patient' in the electronic database Pub Med showed that 183 papers addressing this topic were published between 1995 and 1999. However, in the period 2000 to 2004 a total of 317 papers addressing aggression in health care were published.

On the basis of a systematic review of the literature, (Bjorkly, 1996) estimated that 15% to 30% of hospitalized psychiatric patients have been involved in physical assaults. The prevalence of aggression among hospitalized psychiatric patients has to be estimated by comparing results from several descriptive studies. The large study in the Netherlands was performed in which investigators found prevalence rates ranging from 22.8 incidents per bed per year on locked admission wards to 17.6 incidents per bed per year on the long-stay wards (Broers & De Lange, 1996). Nijman (1999) reviewed a substantial number of descriptive studies on the epidemiology of aggressive incidents and found a considerable range in the number of incidents, from 0.15 assaults per bed per year (Fottrell et al., 1980) to 88.8 incidents per bed per year (Brizer et al., 1987). Several explanations have been suggested for this wide range. Davis (1991) put forward the explanation that studies on inpatient violence are difficult to compare because of differing definitions of violence and the various settings in which studies were performed. These settings ranged from general hospitals to psychiatric and forensic hospitals.

INSTRUMENTS FOR MEASURING AGGRESSION IN PSYCHIATRIC CARE

In the research literature, aggression is operationalized in various ways. Some research papers include 'verbal abuse' and 'threatening behaviour' (Bouras et al., 1982), others refer to 'damage to property' (Armond, 1982) and 'self harm' (Fottrell et al., 1978). Some studies focus on 'physical attacks on persons' only (Shader et al., 1977; Dietz & Rada, 1982; Tardiff, 1984) while others limit their scope of interest to 'physical attacks on hospital staff' (Ruben et al., 1980; Hodgkinson et al., 1985). Until the introduction of the Staff Observation Aggression Scale,

(Palmstierna & Wistedt, 1987) aggression or assaultive behaviour was defined vaguely in research or not defined at all. In the soas-r (Nijman, 1999), the definition of aggression by the APA (American Psychiatric Association, 1994) was adopted, conceptualizing aggression as 'any verbal, non-verbal, or physical behaviour that is threatening (to self, others or property), or physical behaviour that actually does harm'. Some studies make the distinction between 'physical and verbal assaultiveness', while others do not distinguish between these modes of aggression in their statistical analysis or do not address the issue at all (Haller and Deluty, 1988).

A wide spectrum of measurement scales is available for research purposes. According to Bech (1994) instruments for measuring the aggressive behaviour of psychiatric patients can be divided into self-rating aggression scales and observer aggression scales. The existing self-report scales as well as the observer based scales do have some limitations. According to Bjorkly (1996), self-report scales such as the bdhi have so far failed to be accurate instruments for predicting violence. Yudofsky et al., (1986) pointed out that patients whose cognitive abilities are impaired by psychosis or organic mental disease cannot reliably complete questionnaires. Furthermore, many patients are not angry between aggressive episodes, and do not reliably recall or admit to past violent events. A review by Bowers (1999) concluded that all observer scales have some drawbacks for research.

ASSOCIATED FACTORS OF PATIENT AGGRESSION IN PSYCHIATRIC CARE

Methodological problems in this research field are mostly grown from the lack of consensus on the definitions of violence and aggression. It is not clear what is meant by violence and aggression. Aggression can be observed in numerous

different clinical conditions and has a fluctuating course. Definition of violence widely vary in the literature including: 1) physical aggression; 2) both physical and verbal aggression; and 3) physical aggression that results in significant injury (1). Similar to the challenge on defining these terms, the assessment and measurement of aggression and violence are challenges for mental health professionals, with no single instrument being the "gold standard" to assess violence across various conditions.

A literature search was conducted through Pub Med web site using keywords including aggression, agitation, excitation, violence and management were used for searching. Relevant papers were selected by reviewing their abstracts.

PREDICTORS OF FUTURE VIOLENCE FOR PSYCHIATRIC PATIENTS

DEMOGRAPHIC PREDICTORS

1. Presence of past violent behaviour
2. Frequency and seriousness of recent violent behaviors
3. Convictions due to past violent acts
4. Commitment of violent acts at an early age
5. Age is a special predictor within distinct age groups, i.e. older age in dementia patients while younger age in schizophrenia and mania patients.
6. Lower education level
7. Lower income
8. Child abuse history and witnessing domestic violence whilst being raised up
9. Alcohol and substance abuse history
10. Involuntary legal status during psychiatric assessment
11. Criminal arrest history in patient's father

CLINICAL PREDICTORS

Diagnosis: Diagnoses strongest predictors for violence in order; substance use disorders, antisocial personality disorder, psychotic disorders with substance misuse co-morbidity, other personality disorders (e.g. borderline personality disorder), psychotic disorders without substance co-morbidity

Psychiatric Symptoms and Signs:

- "Threat-control override symptoms": a symptom pattern where the patient is feeling threatened and not under their own control (some of
- the Schneiderian symptoms)
- Consistent command hallucinations from familiar voices
- Perceived stress by the patient and impact of the stress on patient's life (stress can be financial, interpersonal circumstantial (e.g. housing, hospitalization), and physical and mental health related)
- Anger and motor impulsiveness during examination
- Hostile and aggressive interpersonal style
- Presence of violence thoughts and fantasies
- Low levels of total and verbal IQ

3. Physical Symptoms

- Loss of unconsciousness
- Organic brain disease
- Being under the effect of alcohol and drugs during the psychiatric assessment

4. Treatment related factors:

Non-compliance

SITUATIONAL AND STRUCURAL PREDICTORS

- Housing
- Mental health care coverage; lack of contact with a specialized mental health service
- Social support networks: number of people such as family, friends, and mental health professionals within the social network of the patient inversely related with future violence risk

FOR INPATIENTS

- Quality of the relationship between the patient and the staff of the psychiatric ward
- Overcrowding of the ward
- Presence of provocative relatives, friends or fellow patients in the ward
- Access to weapons

1. DEMOGRAPHIC FACTORS

Gender is an important risk factor. Males are deemed to be more likely to be violent than females within the population but emerging evidence has been suggesting that the gender gap is gradually diminishing among individuals with mental illness. The crime rate among female patients is increasing and noticeably high when compared with general female population. Furthermore, female inpatients have assaulted more frequently than male inpatients, while males have engaged in fear-inducing behaviour more often and more serious forms of violence. It has been reported that males tended to fight with acquaintances and strangers in public places while females were more likely to fight with family members at home. These findings

suggest that sex should not be considered as a distinguishing risk factor any more at least for inpatients but it indicates varied types of violence.

Studies repetitively showed an inverse relation between violence and age. Patients in their late teens and early twenties are at the greatest risk for violence. Age as a risk factor also is known to interact with other risk factors, namely diagnosis and phase of the illness. For instance, elderly patients with dementia and younger patients with acute schizophrenia and mania form higher risk groups. Studies constantly reported that there also is an apparent relation between violence and lower level of education and socioeconomic class, which points out the importance of social and cultural measures in the management of violence.

2. CLINICAL FACTORS

Numerous studies have reported that there is a causal connection between psychiatric diagnosis and violence. As reviewed above, growing evidence indicates that substance use disorders and antisocial personality disorder are markedly higher risk groups for committing violent behaviour over all other mental disorders. Evidence also suggests that psychotic disorders with co-morbid substance abuse and personality disorders even without any co morbidity are associated with violence. When personality disorders are mentioned, it generally signifies antisocial and borderline personality disorder, since there is scarce literature concentrating on other personality disorders. Psychotic disorders without alcohol or substance abuse also pose a particular risk for violence but the risk, which can be ascribed to this group, is relatively low. However, those patients are certainly more likely to act violently compared to patients with non-psychotic mental illnesses.

The most consistent finding seems to be the correlation between schizophrenia and aggression (Ehmann et al., 2001; Flannery et al., 2001; McNiel & Binder, 1994) while others indicate a relationship between mania and subsequent aggression (McNiel & Binder, 1995). Several studies have concluded that mild mental retardation (Powell et al., 1994), substance abuse (Flannery et al., 2001) and personality disorder (Raja et al., 1997) are significantly related to violent behaviour, but there is no consistent pattern in research results linking a particular diagnosis to violent episodes.

Although psychotic symptoms have been long implicated as a risk factor for violence presumably due to the belief that such patients were in less control of reality, emotions, and behaviour. Delusions also play a role in the precipitation of violence. In addition, command hallucinations are also considered by many clinicians to be a risk factor. In contrast, the familiarity of voice and the consistency with delusions appeared to be more vital in acting out. It has been reported that not only the presence of psychotic symptoms but also their ratings by Brief Psychiatric Rating Scale were inversely correlated with the risk of violence, with the exception of hostility subscale. These opposite findings and important caveats in either side of this discussion currently make a general conclusion difficult and further research is required to work out the relationship of psychotic symptoms and violence.

Perceived stress by the patient is an important factor increases the risk for violence. The origins of this stress can be various; financial (e.g. unemployment), interpersonal (e.g. problems at workplace, at home, in family), circumstantial (e.g. housing, hospitalization), and physical and mental health related problems (e.g. serious physical illness of self or significant other, psychological factors such as

threats to self-esteem). Perception and effect of these stressors on patient's life can vary across individuals making it difficult to evaluate. Despite the difficulty and subjectivity involved in evaluation, a well rounded risk assessment should include individual's level of stress and meaning and impact of their stressors.

A previous history of violence is a strong and robust predictor of violent inpatient behaviour. Many studies have confirmed this, and according to Steinert (Steinert, 2002) no published studies have actually questioned this. Other historical variables that are related to violence are previous hospitalization and the total length of hospitalization. (Chang & Lee, 2004).

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

3. ENVIORNMENTAL FACTORS

The environmental stimuli of aggression can be divided into two categories: physical stimuli and stimuli in the social environment. Two examples of physical environmental stimuli as antecedents of aggression are high ambient temperature and noise.

The following provides an overview of the social environmental factors influencing the rate of aggressive incidents in patient care. Studies on the association between the time of day and an increase of aggression showed that most incidents took place during the day, with fewer occurring in the evening, and the lowest rate found during the night. Some studies reported on the finding that most assaults occurred during meal times and early in the afternoon (Carmel & Hunter, 1989; Lanza et al., 1994; Bradley et al., 2001; Vanderslott, 1988; Nijman et al., 2002), while others found an increased rate of aggressive acts in the morning (Fottrell et al., 1980; Hodgkinson et al., 1985; Cooper & Mendonca, 1991). Several studies found a relationship between length of stay (duration of admission) and aggression. These studies indicated that most assaults took place just before or in the first days after admission to the hospital (Tardiff, 1984; Nijman et al., 1999; Barlow et al., 2000; Kuei-Ru Chou et al., 2002). Some research has been done into the association between the day of the week and aggressive behaviour. Nijman found that most incidents on an acute admission ward took place on Monday and the fewest on Friday (Nijman, 1999). In another study (Carmel & Hunter, 1989) the days on which the majority of incidents were registered were found to be Monday, Tuesday and Friday. The locations in which aggressive incidents occur most frequently are the ward corridors and

dayrooms (Hodgkinson et al., 1985; Lanza et al., 1994). Other locations mentioned in studies are the nursing station and the locked door, places where interaction between staff and patients takes place (Nijman et al., 1995).

VIOLENCE AND SUICIDE

Several studies have also reported a relationship between violence and suicide. In one study, persons who attempted suicide had significantly higher scores for lifetime aggression than those who did not. Longitudinal investigations have demonstrated associations between suicide and self-reported aggression and between suicide and hostility. However, in the developmental literature, suicidal and violent behaviors have often been associated with two different types of underlying psychopathology: internalizing problems and externalizing behaviors. Internalizing problems, such as anxiety, depressions, and somatization, are strongly associated with suicide. These actions stand in contrast to externalizing behaviors, which include violent and antisocial behaviors. The literature shows that different risk factors and developmental paths are associated with each type of psychopathology. To better understand the occurrence of suicide and its relationship to violence, it is important to consider the psychosocial factors underlying suicide and violence, especially familial factors and early life events. The literature suggests that risks of suicidal and violent behaviors are associated with variables that relate to family dysfunction and various measures of childhood difficulties. Suicide has also been associated with the poor mental health of parents, including psychiatric disorders and a history of substance abuse. Many of the above factors have also been associated with violence, including substance use disorders, head trauma, and physical abuse as a child.

Violent behavior by psychiatric patients poses a considerable challenge to psychiatric staff and health planners because of the risks to the individuals involved in violent incidents and the implications of those risks for the organization of services' Estimates of violence in inpatient settings in western setup have varied widely, from .07 to 7.9 violent incidents per patient per year' and some evidence has suggested that inpatient violence is increasing. Violence in psychiatric settings causes a considerable drain on resources. Because there is no generally accepted definition of violence in psychiatric settings, comparison of previous studies' findings is difficult. Some studies have focused on verbal abuse or threatening behavior, damage to property, self-harm, physical attacks on others, and attacks on health care staff. Difficulties in comparing research findings also arise from differences in study populations and settings. An additional problem is that most studies have not compared the characteristics of violent patients with those of non violent patients.