Violent offenders with schizophrenia
Quantitative and qualitative studies focusing on the family of origin

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“if men define situations as real they are real in their consequences”
W. I Thomas (1863-1947)
Abstract

Individuals with schizophrenia are more at risk of committing a violent crime, compared to the general population, but their contribution to the overall violence in society is low. Family members and individuals in the immediate network are most at risk of becoming victims when violence is severe.

The focus of the thesis is on violent offenders with schizophrenia and their relatives. A combination of quantitative and qualitative methods was used. The aims were to explore incidence of violent crimes, the extent to which family members were victims, to investigate individual background factors among violent offenders, and to identify psychotic symptoms and triggering factors associated with fatal violence. In addition, parents were interviewed to build an understanding of their experiences and emotional reactions.

One study examined all 369 male individuals who had committed a violent crime (assault, homicide or attempt to any of these crimes), who in a pre-trial forensic psychiatric evaluation (FPE) during 1992-2000 were diagnosed with schizophrenia, and who were referred to forensic psychiatric treatment. Although the majority of the 615 victims was unacquainted to the offenders, family members or male acquainted were most at risk of being severely injured (in need of medical treatment) or killed as victims. Among family members, mothers were most at risk of becoming victims of the severe violent crimes.

Background factors were studied for the 207 Swedish offenders who for their first time were subjects of a FPE during the study period. One third had parents with alcohol problems, one fourth had had contact with child psychiatry, the majority had only primary school education, one fourth had a previous life-time suicide attempt, two thirds had previous criminality, half of them had alcohol/drug abuse and the majority had extensive earlier psychiatric contacts. There were indications that those offenders who targeted family members had an earlier onset and more severe course of their mental illness in terms of earlier contacts with child- and adolescence psychiatry, more often interrupted high school studies and lower age at first compulsory treatment and at the index crime.

During the nine-year period, 48 offenders committed homicides. Of the 52 victims, 83% were family members or acquainted to the offender. All offenders were markedly affected by their psychotic disorder at the time of the crime. Those who killed a family member had more often delusions and/or hallucinations, were less often intoxicated, had to a lesser extent committed a previous violent crime and they were younger at the time of the homicide. Alcohol intoxication was common among both the offender and the victim when the victim was a male acquainted.

Parents, who were interviewed, were very emotionally involved in their adult sons, although they were not living together. Ignorance regarding the diagnosis of their son and his criminality negatively influenced the contacts, both between parent and son and between parent and professionals in psychiatry. However, the referral to forensic psychiatric treatment represented a status passage that gave the parents hope for a positive development.

The studies have highlighted several areas where management of patients with psychotic disorders might be significantly improved, for example, in terms of medication adherence, identification of co-morbid drug and alcohol dependence, risk assessment and crisis intervention. Patients must be actively involved in their treatment and in addition relatives and close network members must be listened to and regarded as a resource.

Keywords: schizophrenia, offenders, violence, homicide, criminality, victim relations, family members, forensic psychiatry.
The thesis is based on the following papers, which will be referred to in the text by their Roman numerals. The papers were reprinted with permission from the publishers.


## Contents

Abstract .................................................................................................................. V  
Original papers ...................................................................................................... VII  
Contents .................................................................................................................. IX  
Preface ..................................................................................................................... 1  
Introduction ............................................................................................................ 3  
  - Schizophrenia ........................................................................................................ 4  
  - Diagnostic criteria – DSM-IV ............................................................................... 5  
  - Epidemiology ........................................................................................................ 7  
  - Major mental disorders and violence ..................................................................... 8  
  - Limitations in epidemiological studies ................................................................... 12  
  - Concurrent risk factors ........................................................................................ 13  
  - Female offenders with mental disorders ................................................................. 14  
  - Attributable risk ..................................................................................................... 16  
  - Impact on family members ................................................................................... 17  
  - The Swedish legal system ..................................................................................... 18  
Aims ......................................................................................................................... 21  
Methods ................................................................................................................... 22  
  - Methodological considerations ........................................................................... 22  
  - Quantitative studies ............................................................................................. 23  
  - Qualitative study .................................................................................................. 26  
  - Ethical considerations .......................................................................................... 29  
Results and discussion ............................................................................................ 30  
  - Victims of violence ............................................................................................... 30  
  - Violent offenders’ background ............................................................................. 33  
  - Violence as interaction ........................................................................................ 37  
  - Violence as a secret ............................................................................................... 40  
  - Conclusive comments ........................................................................................ 44  
Case vignettes .......................................................................................................... 45  
  - Case I - Fatal violence against family member .................................................... 45  
  - Case II- A mother’s description of her experiences ............................................. 46  
Acknowledgement .................................................................................................... 48  
References ............................................................................................................... 50  

Paper I – IV ..............................................................................................................  
Svensk sammanfattning ............................................................................................  

- IX -
Preface

From twenty years of work as a social worker within general and forensic psychiatry, as well as within treatment and prevention of alcohol and drug dependence, I have gained both actual and tacit knowledge that has served as a ground and source of inspiration when writing this thesis.

My first working place in psychiatry in the early 1980s was at a forensic psychiatric ward for court referred patients out of whom many had a diagnosis of schizophrenia. In those days, a common belief regarding schizophrenia was that a dysfunctional pattern in the family played a significant role in the aetiology of schizophrenia. A pathological mother-child interaction was in particular made responsible for the development of schizophrenia. Accordingly, young people with schizophrenia were to be kept apart from their parents. Nowadays the pendulum has oscillated to the other end and the psychiatric services strongly rely on family members and persons in the immediate network in treating and supporting individuals with a psychotic disorder. Network members are important and family members ought to be involved but there is, as I see it, a risk that family members and significant others at times find it extremely demanding to take responsibility in situations that are difficult to cope with, for example violent behaviour.

I have participated in a number of forensic psychiatric evaluations where I have had contacts with parents to mentally ill violent offenders. In these contacts it has been obvious that the parents are emotionally very affected, not only by their adult sons’ or daughters’ mental illness, but also by their violent behaviour or criminality.

Family members, especially mothers, are at particular risk of becoming victims of severe violence committed by offenders with schizophrenia. Combined with my own reflections on the situation for family members, this led me to a focus on the family of origin in the different studies of the present thesis. As a complement to information gathered from quantitative data I also wanted to lift forward the experiences of the parents involved.

Even if violent crimes committed by offenders with schizophrenia constitute a small part of the overall violent criminality in society, it is an important task to try to prevent these crimes and psychiatry has a significant responsibility. For each and every crime that is committed there are many people suffering, not only the victims themselves but also the offender and other persons close to them. Hopefully extended knowledge in the field will contribute to adequate measures both in terms of treatment, support and prevention.
Introduction

Crimes committed by offenders with major mental disorders have an attraction on public both in reality and in fiction. There are a number of books, films and TV-series dealing with this theme and in reality these relatively rare crimes often attract disproportional mass-medial attention. Consequently, individuals with mental disorders are often looked upon as dangerous, and schizophrenia is strongly connected with public fears about potential violence (Link et al., 1999a; Crisp et al., 2000; Stuart & Arboleda-Floréz, 2001; Thompson et al., 2002; Angermeyer & Matschinger, 2003).

A number of studies during the last decade have shown an association between a diagnosis of schizophrenia and an increased risk of committing a violent crime (Swanson et al., 1990; Hodgins, 1992; Wessley et al., 1994; Modestin & Ammann, 1995; Hodgins et al., 1996; Tiihonen et al., 1997; Wallace et al., 1998; Brennan et al., 2000). But despite this elevated risk of violence among individuals with schizophrenia, their contribution to the overall criminality in the society is small (Swanson, 1994), and the public faces an almost negligible risk of becoming a victim of violence committed by an unacquainted mentally disordered offender. Individuals in the close network of the offender are more likely to be exposed to violence (Steadman et al., 1998), and mothers seem to be particularly vulnerable to assault (Estroff et al., 1998).

This thesis concerns men with schizophrenia who have committed violent crimes with a special focus on their family of origin. The research questions that I have tried to answer are the following: To what extent are family members’ victims of violence committed by individuals with schizophrenia in Sweden? Do the offenders who target their family members differ from offenders with other victims? Which are the context and triggering factors in homicide committed by individuals with schizophrenia? Does the pattern differ between homicides with family victims and unacquainted victims, respectively? And finally, which are the experiences and emotional reactions that parents have, when their sons with schizophrenia commit a violent crime? Both quantitative and qualitative research methods have been used to answer these questions.

I am aware of the risk that the subject of the thesis in itself might increase negative public perceptions of people with mental illness. I believe, however, that facts are the best means to change stigmatising attitudes. Hopefully my findings and reasoning regarding mental illness and violence
will contribute to a more nuanced picture and also have some implications on preventive measures.

**Schizophrenia**

The World Health Organization states that “*mental and behavioural disorders are the result of a complex interaction between biological, psychological and social factors*” (WHO, 2001). This wide bio-psycho-social approach emphasizes the complexity when discussing and dealing with the broad range of mental disorders. Basic assumptions vary and different factors within the bio-psycho-social model are given different weight in explaining onset and course of mental disorders. A common model for explaining onset of mental disturbances is the stress and vulnerability hypothesis (Zubin & Spring, 1977), meaning that a person with high level of vulnerability would be more prone to experience mental disturbances when exposed to a certain type or amount of stress, than a person who is less vulnerable. Factors that contribute to vulnerability have both biological and psychological roots. This way of understanding mental disorders has implications also on the apprehension of measures needed for prevention and treatment.

The American Psychiatric Association (APA) has proposed the following definition of a mental disorder: “a clinically significant behavioural or psychological syndrome or pattern that occurs in an individual and that is associated with present distress (e.g., a painful symptom) or disability (i.e., impairment in one or more important areas of functioning) or with a significantly increased risk of suffering death, pain, disability, or an important loss of freedom” (APA, 1994).

Every new edition DSM (Diagnostic and Statistical Manual of Mental Disorders) has included an increased number of disorders. In the first edition from 1952, there were 128 categories and the most recent fourth edition includes 357 categories of mental disorders. From a sociological perspective criticism has been raised against what is judged as a “medicalization” of human behaviour (Eaton, 2001). This criticism focus more on personality disorders, temporary states of mental distress and behavioural features, than on the major mental disorders, such as schizophrenia.

Still, schizophrenia remains a somewhat controversial diagnosis (McKenna, 1994), mostly because of its umbrella-like structure that covers a great number of symptoms and behaviours, possible including several distinct
disorders. The aetiology of schizophrenia remains to a large extent unclear (McKenna, 1994; Frances et al., 1995).

The diagnostic criteria for schizophrenia have shifted over time and they are still subject for ongoing revision. Emil Kraepelin (1856-1926) and Eugen Bleuler (1857-1939) were the first to describe the disorder. Kraepelin named in the late nineteenth the disorder *Dementia praecox* and emphasized the early onset and the chronic deteriorating course. Bleuler, in the early twentieth, focused more on the splitting and the fragmentation of thoughts and suggested *Schizophrenia* as a more suitable term for the disorder. He de-emphasized the course in favour of four symptoms that he saw as characteristic: disturbances in associations and affects, autism and ambivalence. Later on, in the mid 1950s, the German psychiatrist Kurt Schneider provided a definition that included only a particular group of delusions and hallucinations that he considered significant for the diagnosis such as delusions of being externally controlled, thought insertion, thought withdrawal, thought broadcasting and voices communicating with or about the person. These “Schneidarian psychotic symptoms” dominated into the 1970s. But as they were found not very specific for schizophrenia, a new set of criteria with separate subgroups was established, still in use in the prevailing diagnostic systems (Frances et al., 1995).

**Diagnostic criteria – DSM-IV**

In this thesis, diagnoses are derived from the DSM-system which is a consensus-based system of psychiatric diagnoses provided by the American Psychiatric Association. The manual is subject to continuous revisions, as research and clinical experience in the field proceed, which also emphasize the complexity in defining and diagnosing mental disorders. During the nine-year study-period, 1992-2000, two versions of DSM were in use in forensic psychiatry in Sweden: DSM-III-R (third edition revised) during 1992-1995, and DSM-IV from 1996 (APA, 1987, 1994). The differences in the criteria set of schizophrenia between these two editions are minor. One important difference is that the duration of active symptoms mentioned in general criteria C (se below), was prolonged from one week in the DSM III-R to one month in the DSM-IV.
**Schizophrenia- DSM-IV criteria (shortened)**

*General criteria* to be fulfilled:

**A:** At least two of the following symptoms:
- Delusions
- Hallucinations
- Disorganized speech
- Grossly disorganized or catatonic behaviour
- Negative symptoms

**B.** Social/occupational dysfunction.

**C.** Duration. At least six months duration of signs, including at least one month of criteria A.

**D.** Exclusion of schizoaffective and mood disorder.

**E.** Exclusion of substance/general medical condition causing the symptoms.

**F.** Assessed relationship to a pervasive developmental disorder.

*Subtypes of schizophrenia with their main characteristics:*

- **Paranoid type** - preoccupation with one or more delusions or frequent auditory hallucinations.
- **Disorganized type** – disorganized speech and behaviour together with flat or inappropriate affects.
- **Catatonic type** – at least two of following symptoms are present; motoric immobility, excessive motor activity, extreme negativism or mutism, peculiarities of voluntary movements and/or echolalia or echopraxia.
- **Undifferentiated type** – general criteria are met but not any of the criteria for the subtypes above.
- **Residual type** – absence of prominent delusions, hallucinations, disorganized speech, grossly disorganized or catatonic behaviour.

But presence of negative symptoms and symptoms from criteria A in an attenuated form (odd beliefs, unusual perceptual experiences).

*Other psychotic disorders related to schizophrenia.*

**Schizophreniform disorder**

Criteria A, D and E of schizophrenia are met, with duration of an episode of at least one month but less than six months.

**Schizoaffective disorder**

**A.** Concurrent with symptoms meeting criteria A for schizophrenia there is a period of illness with a major depressive episode, a manic episode or a mixture of both.

**B.** Delusions or hallucinations for at least two weeks have been present in the same period of illness but in absence of prominent mood symptoms.

**C.** Symptoms that meet criteria for a mood episode are present for a substantial portion of the total duration.

**D.** Exclusion of a substance or a general medical condition.
Epidemiology

The overall risk to develop schizophrenia during lifetime is estimated to 0.8-1%, equal for men and women, and the prevalence to 0.3-0.6% (Eaton, 1985; Regier et al., 1988; Bijl et al., 1998; WHO, 2001). An estimation of the prevalence of mental disorders in the US based on a community study with 18 571 interviews, that constituted the Epidemiologic Catchment Area (ECA), reported the one-month prevalence of schizophrenia to be 0.6% (Regier et al., 1988). In a recent study all figures from the ECA were revised using complementary figures from the National Comorbidity Survey (NCS). For schizophrenia it implied that the duration criterion was extended and the one-year prevalence of schizophrenia together with schizophreniform disorders was estimated to 1% (Narrow et al., 2002).

An estimation for Sweden suggest that 30,000 – 40,000 individuals are in need of support from the society due to schizophrenia or similar psychotic disorders (Socialstyrelsen, 2003a).

Men have their onset of schizophrenia at 20-25 years of age and women have their peak of onset five years late (Räsänen et al., 2000). The course of the disorder varies between individuals and between men and women, where females have a somewhat more favourable course. The prognosis for about half of the individuals who develop schizophrenia is judged to be good or fairly good (WHO, 2001).

Individuals diagnosed with schizophrenia have a markedly increased overall mortality. Most frequent causes of death are cancer, cardiovascular diseases and suicide (Ösby et al., 2000). The increased risk of suicide is most pronounced for men (Allebeck, 1986; Hiroeh et al., 2001). Radomsky and colleagues (1999) showed that 27% of consecutively admitted adult psychiatric inpatients diagnosed with schizophrenia had attempted suicide at least once during their lifetime and the risk of suicidal behaviour was highest as young adults. In a meta-analysis of mortality studies, Inskip and colleagues (1998) estimated the lifetime suicide risk to be four percent for persons with schizophrenia, six percent for affective disorders and seven percent for persons with alcohol dependence. In a follow-up study of mentally disordered offenders in Sweden, who during the years 1988-1991 had been subject to forensic psychiatric evaluation and followed in registers until the end of 1995, four percent of those diagnosed with schizophrenia had committed suicide (Kullgren et al., 1998).
Introduction

**Major mental disorders and violence**

The risk of committing a violent crime among individuals diagnosed with schizophrenia is elevated both for men and women compared to the general population. This has been reported in a number of studies from different countries during the last decade (Lindqvist & Allebeck, 1990a; Swanson et al., 1990; Hodgins, 1992; Swanson, 1994; Wessley et al., 1994; Modestin & Ammann, 1995; Hodgins et al., 1996; Tiihonen et al., 1997; Steadman et al., 1998; Wallace et al., 1998; Brennan et al., 2000). Various research methods have been employed, such as population studies, follow-up studies and cohort studies, estimating the prevalence of violent acts among individuals with schizophrenia, or studies estimating prevalence of schizophrenia among individuals who have committed violent crimes. All studies have their limitations and benefits but have all shown an association between major mental disorders, including schizophrenia, and an increased risk of committing a violent crime.

One important study aiming at estimating prevalence and incidence of mental disorders in the general population is the *Epidemiologic Catchment Area Program (ECA)* (Robins & Regier, 1991). The study was performed in five sites in the United States from 1978 –1985, including a total of 3,000 to 5,000 individuals per site. Psychiatric diagnoses were derived from the Diagnostic Interview Schedule (DIS) based on the DSM-III (Robins et al., 1981). Diagnostic interviews were performed in two waves, 12 months apart. Although the ECA study was not designed to provide an epidemiologic assessment on violent behaviour, there was information that could be used for such an analysis (Swanson et al., 1990). In a sub sample of close to 10,000 respondents the life-time prevalence of self-reported violent acts (defined as had hit or thrown things at partner, spanked or hit a child, been fighting, used weapon in a fight or gotten into physical fight while drinking) was estimated to 18%, and for the one-year period preceding the interview to 4%. Whereas 2.3% of the respondents with no major disorder reported violent behaviour in the last one year, the corresponding figure for persons with schizophrenia spectrum or major affective disorders was 7% (OR 3.2) \(^1\). Those who only had substance abuse or dependence had a prevalence of violence in the last year of 19.7% (OR 10.6), which increased

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\(^1\) Odds ratio (OR) represents the odds that someone with a particular exposure, for example a diagnosis of schizophrenia, has a specific outcome, for example commits a violent crime, divided by the odds that someone without that exposure commits such a crime. Relative risk (RR) represents the ratio of incidences, e.g. cases of violent crimes among those with diagnosis of schizophrenia, divided by the incidence among unexposed (those with no mental disorder).
to 22% (OR 12.2) within the group with co-morbidity of major mental disorders and substance abuse (Swanson, 1994).

**Birth cohort studies** have an advantage when studying associations of the present kind. The method allows for large samples and the design provides numerous of data over a long period, provided that there are well functioning national databases or registers. The fact that the three most important cohort studies are from the Nordic countries Sweden, Denmark and Finland, is due to the personal code numbers used in these countries.

The Metropolitan Project used an unselected *Swedish birth cohort* composed of all 15 117 persons born in Stockholm in 1953 (Hodgins, 1992; Hodgins & Jansson, 2002). All individuals were followed in different registers or databases for a 30-year period. Out of all individuals, 1.1% of both males and females were classified as having a major mental disorder (MMD) defined as diagnosis of schizophrenia, major affective disorder, paranoid state or other psychosis. Other mental disorders, intellectual handicap and substance abuse were also taken into account. Men with MMD were 2.56 times more likely to have been convicted for any criminal offence compared to men with no disorder or handicap, and 4.16 times more likely to have been convicted of a violent crime. Highest odds ratios were found for men with substance abuse/dependence with OR 20.37 for any crime and OR 15.44 for violent crime.

Another Scandinavian study by Hodgins and co-workers (1996) followed in the Danish person register all individuals born in Denmark from January 1944 to December 1947, who were still alive and living in Denmark 1990. The cohort consisted of 324 401 persons. Information on diagnoses was collected from the psychiatric register and charges and convictions were taken from the police register. Altogether 7030 persons, 1.9% of the men and 2.5% of the women, were judged to have a major mental disorder, defined as having at least one discharge diagnosis of schizophrenia, manic-depressive psychoses, psychogenic psychoses or other psychosis. Violent offences were defined as all offences involving interpersonal aggression or threat thereof. Both in men and women a greater proportion of the MMD-group had been convicted for a crime. This was true for any offence, (RR 3.7 for men, RR 4.5 for females), but more pronounced for violent offences (RR 4.5 for men, RR 8.7 for females). In the same Danish cohort Brennan and colleagues (2000) calculated the risk as related to specific diagnoses, i.e. schizophrenia, affective psychosis, other psychosis and organic brain syndromes. Totally 2.2% of the men in the cohort until 44 years of age were hospitalised for at least one for those major mental disorders, and these men committed 10% of the violent crimes committed by all men in
the cohort. The figures for the women were 2.6% and 16% respectively. Men with organic psychosis, and both men and women with schizophrenia were significantly more likely to be arrested for violent crimes than were persons who had never been hospitalized. Odds ratio (OR) was 4.6 for men with schizophrenia and OR 23.2 for the women. This increased risk remained when controlling for demographic factors, substance abuse and personality disorders.

In Finland Tiihonen and colleagues (1997) studied a birth cohort in the northern part of the country, consisting of 12,058 individuals born in 1966. The cohort was followed for 26 years and the individuals were by that still fairly young at time for follow-up. Data from the Finnish Hospital Discharge Register and criminal registers were collected as well as hospital records. Out of all men in the cohort 2.4% were registered for a violent crime. The odds ratio for committing a violent crime for a man when diagnosed with schizophrenia was 7.0 using mentally healthy men as a reference. A co-existing alcohol abuse increased the risk for committing a violent crime to OR 25.2 and for individuals with schizophrenia without alcohol abuse the risk decreased to OR 3.6 (Räsänen et al., 1998).

Other studies have started off from patients with mental disorder measuring the prevalence of violent acts during follow-up. One of the largest follow-up studies is the MacArthur Violence Risk Assessment Study by Steadman and colleagues (1998), performed at three sites in the United States. They followed 1136 male and female patients with mental disorders one year after discharge from acute psychiatric facilities with interviews every tenth week, in which the patients were asked about aggressive behaviour. In addition, they used information from collateral informants and official agency records. A comparison group of 519 people living in the same neighbourhood was interviewed once. They found the presence of substance abuse to be a key factor for a significantly increased rate of violence, both among patients and others living in the same neighbourhood. Abuse was however more common in the patient group. For individuals without substance abuse there were no significant differences between groups. It must be stressed that among the patients who refused to participate there were more individuals with schizophrenia, they were older and fewer had personality disorders. Many of the patients lived in neighbourhoods with higher crime rates than the cities as a whole and this could also have affected the figures.

In a Swedish register-based longitudinal follow-study a group of 644 discharged patients diagnosed with schizophrenia were in registers followed for a period of 15 years, and the crime rate of violent offences among men
with schizophrenia was found to be about four times higher as compared to men in the general population (Lindqvist & Allebeck, 1990a).

**Case control studies** represent yet another approach. In a study from United Kingdom, Wessely and colleagues (1994) identified 538 incident cases of schizophrenia over a 20-year period from a community psychiatric case register in a defined catchment area in London. The cases were matched with controls from the same register, representative for non-schizophrenic mental disorders. They found that the persons with schizophrenia were more likely to acquire a criminal record than persons with other mental disorders. Other factors of significance for criminal offences were being male, unemployment, low social class and substance abuse. The criminal careers began later for those with schizophrenia and were shorter than those of the controls.

Modestin and Ammann (1995) used an unselected sample of all 1265 adult inpatients admitted in Berne, Switzerland, during 1987, and compared them with controls from the general population matched for sex, age, marital status, social class and size of community of residence. Individuals with a psychiatric diagnosis were more likely to be found in the criminal register, 51% vs. 36% in males and 21% vs. 6% in females. Alcoholism/drug use and personality disorder were significantly correlated with criminality whereas for schizophrenia and related disorders an enhancement of criminality rate could only be found for females. All types of crime were included in the study.

Another approach in case control studies has been to estimate the prevalence of mental disorders in a sample convicted for a crime. In an Australian study Wallace and colleagues (1998) used two databases, the higher courts records of convictions and the state-wide psychiatric case register in Victoria. Between the years 1993 and 1995 totally 4156 individuals were convicted for serious crimes, out of which 25% had a prior psychiatric contact. Individuals with personality disorders and/or substance misuse were the most likely to appear in the convicted group. The increased risk of being convicted for a crime when having schizophrenia, was modest and coexisting substance misuse had a great impact. Lower figures were found in United Kingdom where Taylor and Gunn (1984a) estimated the prevalence of psychiatric disorder among individuals who were on remand in Brixton prison. Out of the 2743 remanded men, 9% suffered from a psychiatric disorder, including 6.1% with schizophrenia. Those with schizophrenia accounted for 9% of the offenders who had committed a violent crime. In a Canadian study of remanded offenders 1% had psycho-
tic disorders among those who had committed a violent crime against a person (Stuart & Arboleda-Florez, 2001).

**Limitations in epidemiological studies**

All types of studies have their strengths and weaknesses and must be interpreted with caution. There are some critical reviews that stress limitations in terms of sampling, measurements and defining criteria (Arboleda-Florez et al., 1998; Eronen et al, 1998; Hodgins, 1998; Modestin, 1998; Walsh et al, 2002). Definitions of central concepts such as mental disorder and violence vary a lot. The frequently used concept of major mental disorder includes a number of diagnoses, and validity can be questioned depending on the diagnostic procedure. Diagnoses at discharge from in-patient psychiatric treatment are likely to be the most accurate. However, in a Swedish study where diagnoses within forensic psychiatry were compared with diagnoses that the individuals had received at earlier treatment episodes, the accordance was found to be moderate. Diagnoses of schizophrenia and personality disorders were more frequent in the forensic psychiatry and the authors claimed that this difference could not only be due to the course of the disorders (Bergman et al., 1999). A confounding factor in register-based studies using diagnosis at discharge from psychiatric in-patient treatment might be that violent or aggressive behaviour sometimes is a criterion for admission (Arboleda-Florez et al., 1998). Notably is also that individuals who only receive out-patient treatment are seldom registered and can therefore be missed in register-based studies. In the ECA survey only 16% of those who met criteria for major affective disorder or schizophrenia reported ever being admitted to a hospital for a mental health problem (Swanson, 1994). Munk-Jørgensen and colleagues (1993) in Denmark found however that most persons who develop a major mental disorder are at some point in their lives admitted to a psychiatric ward.

Studies also differ in their use of definitions of violence or violent criminality. For example the ECA study included both verbal threats and throwing things at someone as violent acts, while some studies use narrow criteria only including interpersonal physical violence. Sexual offences are sometimes included but those crimes are in general rare among psychotic patients (Nijman et al., 2003). The violence or the aggressive behaviour can be self-reported, reported by network members, or most commonly in some form registered due to legal consequences. Self-reported information depends on the extent to which a person recalls events and also admits violent
behaviour. On the other hand, interviews or questionnaires might reveal violence that is never reported to the police or brought to justice.

Mentally disordered offenders are not always prosecuted, especially if the violence is of less severity, which might introduce a bias in studies on arrested offenders. On the other hand, in cases of severe violent criminality, offenders with psychosis are more likely than others to be arrested in direct connection to the crime scene (Robertson, 1988). Taylor & Gunn (1984b) also found a tendency by the police to view mentally ill as more dangerous than other persons. Since they also often failed to report a permanent address and presented with active psychiatric symptoms, they were more likely to be kept in custody. Hence, varying criteria for arrest or admission might also influence the results.

Register-based epidemiological investigations, such as the Nordic birth cohort studies, are in general regarded superior since they are not affected by disproportional representations (Hodgins, 1998). The association found between schizophrenia and violent criminality should however not be interpreted to show that the disorder has had a direct impact on the crime in every case. It is merely an association over time. The issue of what comes first, the mental disorder or the crime has also been studied and although the disorder “almost invariably comes first” as stated by Taylor & Hodgins (1994), a considerable number of the offenders with schizophrenia have committed crimes before first admission to psychiatric services and many offenders are found within the general psychiatry (Tengström & Hodgins, 2002). In a Danish register-based study of all individuals diagnosed with schizophrenia born after November 1, 1963 and followed until May 1999, Munkner and colleagues (2003a) found that 27% of the 4619 individuals had committed a crime before their first psychiatric hospital contact. By the time of diagnosis of schizophrenia totally 32% had committed a crime and 12 % had committed at least one violent crime.

In spite of weaknesses and limitations of the studies mentioned it still remains a reasonable conclusion that schizophrenia is associated with an increased risk of committing a violent crime.

**Concurrent risk factors**

The association between major mental disorders and violence is most often reported as a simple link between the two entities, but the association is of course more complicated than that. The diagnosis of schizophrenia covers a variety of symptoms, among them delusions and hallucinations, which by
themselves can have an impact on the behaviour (Taylor et al., 1998). A sub-set of psychotic symptoms characterised by a feeling of being threatened and/or that the internal control is apprehended as overridden (TCO-symptoms; Threat, Control-Override), has been found to be associated with violent behaviour (Link & Stueve, 1994).

There are also a number of sociodemographic, social, clinical and psychopathological factors, that besides the mental disorder, indicate a risk of criminal/violent behaviour (Link et al., 1992; Estroff & Zimmer, 1994a; Estroff et al., 1994b; Novaco, 1994; Hiday, 1995, 1997; Tiihonen et al., 1997; Silver et al., 1999; Brennan et al., 2000; Tengström et al., 2001; Hodgins & Jansson, 2002). Based on a compilation by Coid (1996) the following factors have among others been suggested to indicate risk for violence for individuals with mental disorders:

- **Sociodemographic/social variables**: being male, young, low socio-economic status, living in urban areas, homelessness, social disorganisation, neighbourhood poverty, victimisation and loss of social support.

- **Clinical/psychopathological variables**: history of violence, poor compliance with treatment, recent discontinuation of treatment, substance abuse, primary or an additional diagnosis of a personality disorder, psychopathy, persecutory delusions, TCO-symptoms.

It should be stressed that many of these factors are also valid for individuals without mental disorder and many factors might be present simultaneously. The impact of a co-existing use of alcohol and/or drugs on violent acts is strongly emphasized in many studies and is the single strongest risk factor for violence (Lindqvist & Allebeck, 1990b; Hodgins, 1992; Swanson, 1994; Wessley et al., 1994; Modestin & Ammann, 1995; Tiihonen et al., 1997; Räsänen et al., 1998; Scott et al., 1998; Steadman et al., 1998; Swartz et al., 1998a; Soyka, 2000). However, the general conclusion is that the elevated risk of committing a violent crime when having schizophrenia remains also when controlling for sociodemographic factors and substance abuse (Link et al., 1992; Swanson, 1994; Wessley et al., 1994; Brennan et al., 2000).

**Female offenders with mental disorders**

The criminality in Sweden is substantially lower among women than men, although there has been a successive increase of offences committed by
women since 1975. The proportion of women among those suspected of crime has doubled within a 20-year period (1975-1995) (BRÅ, 1999), although from a low level. Compared to men, the increase over time is larger among women. One suggested explanation is that it correlates with the transformation of the female role in the society, where women have entered a number of arenas that earlier were dominated by men (BRÅ, 2001). Public views on what is acceptable behaviour for women and women’s lifestyle have changed over time, including increased alcohol consumption. All these factors contribute to violent behaviour (BRÅ, 1999, Weizmann-Henelius et al., 2003).

In the year 2000, 18% of the suspects in reported crimes were women (BRÅ, 2001). In Sweden, the gender gap is most pronounced for violent criminality with a proportion of female suspects in about 7% of the crimes (BRÅ, 1999). The gender differences can also be seen in type of crimes that has led to imprisonment, where about 13% of those incarcerated for embezzlement are women, compared to 2-3% of those incarcerated for assault or homicide (BRÅ, 2002).

The gender difference for violent criminality is however not as obvious among mentally disordered men and women. In a sample of 331 severely mental disordered admitted to psychiatric units at three hospitals in US, male and female patients reported the similar prevalence of violent acts the four months prior to admission (Hiday et al., 1998). Gender differences were nevertheless found regarding alcohol use where women were less likely to have been drinking, the injuries caused by females were less severe and the women were more likely to target family members and to be violent in their home.

In the first analysis of ECA data Swanson and colleagues (1990) found equal rates of violence among men and women with a psychiatric diagnosis, but when adjusting for age, marital and socioeconomic status, gender was found to have a significant effect with more males committing violent crimes (Swanson, 1994). With data from an epidemiological study conducted in Israel, Stueve and Link (1998) found that mental illness narrowed the gender gap in self-reported violence. In a Danish birth cohort, Hodgins and colleagues (1996) also showed that even if rates of conviction were much higher among men than women, the differences between sexes decreased among those with a severe mental illness.

Lindqvist & Allebeck (1990a) found in a Swedish sample of mentally disordered individuals that the increased risk of acquiring a criminal record for women with major mental disorders was not only found for violent
Introduction

Introduction

Atypical risk

Even if individuals with schizophrenia are more likely to commit violent crimes than others, their contribution to the overall violent criminality in the society is marginal, since the prevalence of schizophrenia is low. From a public health perspective, the measure of attributable risk is of interest describing “the proportion of new cases arising in a population that are attributable to the exposure under study” (Zahner et al, 1995). In this case it tells us how much of the total violence in the community that is associated with mental illness. In a critical review of major epidemiological studies Walsh and colleagues (2002) stated that the calculated proportion of violent criminality in society attributable to schizophrenia consistently falls below 10%. From data in the ECA-study Swanson and colleagues (1990, 1994) found that only 3% to 5% of violence in the community could be attributed to schizophrenia. These figures include all violent crimes, including homicide. In homicide, the proportion of offenders with major mental disorders are about 10-15% in comparable Western countries.
Hence, it is important to stress that the vast majority of the severe violence in the society is not associated with major mental disorders. This is often neglected in the public debate on mental illness and violence, which seems to nurture public beliefs of dangerousness and further stigmatise individuals with mental illness, as well as their relatives (Arboleda-Floréz et al., 1998; Taylor & Gunn, 1999; Angermeyer, 2000).

Impact on family members

Mental illness is obviously first and most affecting the life of the individual that has developed the disorder, but it also brings consequences for persons in the immediate network, especially family members. The importance of the immediate networks has been further emphasized by the process of de-institutionalisation in psychiatry. Over the last decades there has been a considerable amount of research regarding family burden, coping strategies, stigma and stress within families (Thomson & Doll, 1982; Cook et al., 1994; Magliano et al., 1998a; Phelan et al., 1998; Schene et al., 1998; Saunders, 1999; Östman & Hansson, 2000; Saunders & Byrne, 2002; Östman & Kjellin, 2002). Caregiver burden is a complex construct with both objective and subjective aspects. Objective burdens such as possibly strained economy or changed housing conditions are more easily measured than caregivers’ subjective burdens, which are subjective and depending on the caregivers’ own personality and coping resources.

One important aspect for relatives seems to be how they experience the degree to which the mentally disordered person is able control his or hers behaviour (Greenberg et al., 1997; Magliano et al., 1998b). Negative symptoms of schizophrenia, such as passivity, depression, affective flattening and social withdrawal, have been found to be the most difficult symptoms to cope with both in terms of objective and subjective burden. One main interpretation brought forward is that these negative symptoms are apprehended as behaviours that the mentally ill person should be able to control, in contrast to episodes of florid psychosis (Fadden et al., 1987; Tucker et al., 1998). Symptoms that are regarded as controllable elicit the most criticism, irritation, anger and stress by family members (Wearden et al., 2000). However, another study failed to show any correlation between responsibility, as perceived by the parents, and negative symptoms (Provencher & Mueser, 1997). Needless to say, the reactions from signi-
significant others in the network also have implications on the behaviour of the mentally disordered person.

For individuals with schizophrenia who show violent behaviour, family members are most likely to be the victims. In an Australian study 90% of caregivers to people with serious mental illness, who were admitted to an acute psychiatric unit, reported experience of verbal or physical abuse, and 33% of relatives to persons with schizophrenia had suffered physical injury (Vaddadi et al., 1997). The figures might be biased by the fact that violent behaviour can be a criterion for admission. In a Swedish sample of 228 relatives to patients admitted to psychiatric treatment (49% diagnosed as psychotic), 16% reported having been physically hurt by their relative (Östman & Hansson, 2000). Caregivers to forensic psychiatric patients with schizophrenia seem to be more at risk. Of 79 interviewed caregivers, as many as 83.5% reported violent incidences (MacInnes & Watson, 2002). Within the network mothers to mentally disordered persons are in general reported to be most at risk for violence. If the adult child is living together with the mother, has a coexisting alcohol abuse and is economical dependent on the parent, the risk is further elevated (Estroff et al., 1998).

However, many individuals with schizophrenia have few contacts with relatives and friends. In a study on approximately 7000 individuals with major mental disorder (75% with a diagnosis of psychosis) living in sheltered housing in Sweden, half of them had contact with family or friends at least once a month, whereas the other half had contacts a few times per year or more seldom (Socialstyrelsen, 2003b). The same pattern was found in the United Kingdom, where half of the patients with severe psychotic disorder were found to have few contacts with a relative. In contrast to what might be expected, one study showed that the frequency of contacts was not correlated with the quality of the relation (Harvey et al., 2001).

The Swedish legal system

According Swedish law an offender cannot be sentenced to prison if he/she is judged to have committed the crime under influence of a “severe mental disorder” (30 kap 6 § BrB). If the offender still suffers from a severe mental disorder during trial he will be convicted but referred to forensic psychiatric treatment and not imprisoned (31 kap 3 § BrB). The concept of “severe mental disorder” is medico-legal and includes in short psychotic states irrespective of aetiology, with disturbed apprehension of reality and with symptoms such as confusion, thought disturbances, hallucinations and/or
delusions. Severe personality disorders with uncontrollable impulsivity or compulsive behaviour, might also be judged as a “severe mental disorder”.

A forensic psychiatric evaluation is requested by the court and there are two types of evaluations; one minor (according to §7, (1991:2041)), and one more extended (§1 (1991:1137)). The latter will in the forthcoming text be referred to as forensic psychiatric evaluations (FPE). In more severe crimes the minor evaluation serves the purpose to give the court recommendations whether a FPE should be performed or not.

At present about 650 forensic FPEs are requested by courts every year in Sweden. They are performed by a team consisting of a psychiatrist, a psychologist, a social worker and ward staff. In addition to psychological tests and repeated clinical interviews, information is collected from files and registers regarding criminality, previous hospital treatment, interventions from social authorities etc. Significant others may also be contacted for information. The FPE is conducted according to rules and guidelines from The National Board of Forensic Medicine (SOSFS 1996:14).

The proportion of offenders who are referred for a FPE is small in Sweden (figure 1). Out of about 1,200,000 crimes, reported to the police per year in Sweden, approximately 60,000 concern homicide and/or physical assault, and 8,000 of these violent crimes leads to a conviction, in ca 7,300 cases to incarceration. Approximately four percent of these violent offenders are by court referred to a pre-trial forensic psychiatric evaluation, in which around half are assessed as having a severe mental disorder and a minority is diagnosed with schizophrenia (RMV, 2002).

During the nine-year study period 1992-2000, covered by the present studies, there were on average 576 FPEs performed every year, varying between 514 and 657. About 10% of the evaluations concerned female offenders, (on average 53 women per year). Out of all individuals that were
subject to a FPE, 79% were Swedish citizens and about two thirds had Sweden as their country of origin. The crimes of interest in the thesis, homicide and physical assault, constituted on average 47.5% of the crimes committed by men with corresponding percentage of 39.5% for female offenders. Personality disorders dominated among diagnostic categories at FPE (Table 1).

**Table 1. Main diagnosis at FPE 1992-2000- any crime.**

<table>
<thead>
<tr>
<th>Main diagnosis FPE 1992-2000</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schizophrenia</td>
<td>16%</td>
</tr>
<tr>
<td>Other psychosis</td>
<td>17%</td>
</tr>
<tr>
<td>Abuse/dependency</td>
<td>18%</td>
</tr>
<tr>
<td>Personality disorder</td>
<td>26%</td>
</tr>
<tr>
<td>Other psychiatric disorders</td>
<td>19%</td>
</tr>
<tr>
<td>No diagnosis</td>
<td>4%</td>
</tr>
</tbody>
</table>

In about half of the evaluations (51.8%), the offender was judged to have a severe mental disorder according to the legal definition. A diagnosis of schizophrenia will almost without exemptions be judged as a severe mental disorder.
Aims

The overall aim was to increase knowledge about violent crimes committed by offenders with schizophrenia and to examine the experiences of their relatives. By an extended awareness negative attitudes towards mentally disordered individuals may be challenged, and measures to prevent violent crimes among individuals with psychotic illness can be improved.

The more specific aims were:

- To explore incidence of and victim relations in severe violent crimes committed by offenders with schizophrenia in Sweden. (I)
- To investigate background factors among violent offenders with schizophrenia, with special reference to those who target family members. (II)
- To identify psychotic symptoms and triggering factors associated with fatal violence committed by offenders with schizophrenia. (III)
- To build an understanding of the experiences and emotional reactions among parents of violent offenders with schizophrenia. (IV)
Methods

Methodological considerations

When studying complex phenomena such as human behaviour, an approach combining qualitative and quantitative methods might have several advantages. Quantitative studies are useful to provide descriptive information and allow for between group comparisons whereas qualitative studies are more apt to explore and provide an understanding of human behaviour in all its complexity. The qualitative research tradition has its roots in disciplines such as sociology, social work, anthropology, nursing and psychology. The concept of “qualitative” refers to quality in the sense of hallmarks, features, character, nuances and complexity or nature of the phenomenon under study (Malterud, 2001a).

Quantitative and qualitative research diverge in basic assumptions and main methodological strategies. Whereas quantitative research is associated with a positivistic paradigm the qualitative research belongs to a naturalistic or hermeneutic one (Lincoln & Guba, 1985). These two traditions of sciences contain in their pure forms different views on such issues as objectivity, generalizability, causal associations and the role of values in research. These differences appear in theory more contrasting than they are in practice (Malterud, 2001b).

Whereas quantitative studies are associated with a deductive strategy, meaning that you start off from a theory or hypothesis that is to be confirmed or falsified, qualitative studies are associated with an inductive strategy, where your collected information will guide you to generate further research questions and build your theory. In practice these two strategies are seldom totally separated from each other. Even with a quantitative design based on a hypothesis, new research questions are likely to emerge along with the data collection or as a result of a confirmation or falsification of the first hypothesis. In a similar way, the qualitative researcher will never be altogether free from earlier notions and theoretical assumptions. The abductive strategy (figure 2) with interactions between sampling procedures, data collection and interpretation, oscillating between inductive and deductive strategies, is found in most research projects (Dahlgren et al., 2004).

Grounded theory (Glaser & Strauss, 1967; Glaser, 1978; Strauss, 1987; Glaser, 1992, 2001) is the qualitative method used in the interview study (paper IV).
The methodology provides a set of techniques and procedures for the research process in which the coding of the data is central. Data is fractured and conceptualized through an analytic process (Strauss & Corbin, 1998). Theories, developed through grounded theory are derived from, and grounded in the data in an emergent design. The process of data collection, coding and analysing continues until saturation is obtained, that is when no new information of relevance for the theoretical discovery seems to emerge.

**Quantitative studies**

With the aim to explore the violent crimes in Sweden committed by individuals with schizophrenia, regarding victim relations, background factors and triggering factors for homicides, a quantitative research approach was chosen (paper I, II, III). The study base was identified from PsychBase, a national data base on all individuals who have been subject to a forensic psychiatric evaluation in Sweden (table 2).

The study period for the quantitative studies was set to be 1992 to 2000. In 1992 a new legislation regarding mentally disordered offenders was introduced. At the same time, detailed guidelines were formulated to standardize the procedures and the presentation of the results from the forensic psychiatric evaluation. In addition, it was decided that diagnostic assessments should be made according to the DSM-system. These changes introduced in 1992 made this year suitable as starting point for the retrospective data collection. The endpoint in end of year 2000 was chosen to allow for a sufficient number of individuals to be included in the study.
All individuals diagnosed with schizophrenia, were included. In addition to the five subtypes of schizophrenia, schizophreniform disorder and schizoaffective disorder were included. Even though the disorders are distinct diagnostic entities, they all belong to the schizophrenia spectrum and they share the core criteria (A criteria) for a schizophrenic disorder.

The individuals were distributed on sub-groups and disorders as follows; paranoid type 38.8%, disorganized type 5.9%, catatonic type 1.1%, undifferentiated type 31.2%, residual type 4.6%, schizophreniform disorder 8.1% and schizoaffective disorder 10.3%.

The definitions of violent crimes used in the thesis included the following crime classifications according to Swedish legislation: Murder, manslaughter, causing someone’s death, severe assault, assault, violence against an official, and attempts to any of these crimes. All of the crimes included some kind of physical contact with the victim.

Two new crime classifications were introduced in Sweden in July 1998; “severe molestation” and “severe molestation of women”. These crimes can include physical assault but are also covering other forms of molestation. There were three men with schizophrenia who were prosecuted for these crimes from 1998 until 2000. They were however not included in the study population.

A few offenders who were not sentenced to forensic psychiatric treatment were excluded from the study sample. When studying background factors (paper II) foreign citizens were excluded due to difficulties in getting valid data on the background variables. All homicide offenders in paper III were referred for forensic psychiatric treatment.

**Table 2. Samples of offenders/victims in paper I, II and III**

<table>
<thead>
<tr>
<th>Paper</th>
<th>Male offenders with schizophrenia and violent crime, 92-00</th>
<th>Victims</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>369 All male offenders with schizophrenia referred by court order to forensic psychiatric treatment, irrespective of possible previous FPE. Excluded were 9 men with other sanctions.</td>
<td>615</td>
</tr>
<tr>
<td>II</td>
<td>207 Out of the 264 offenders, who for their first time were subject to a FPE, 57 were excluded due to other sanction than forensic psychiatric treatment (6), foreign citizenship (43), unknown relation to their victim (4), evaluation protocol missing (4).</td>
<td>–</td>
</tr>
<tr>
<td>III</td>
<td>48 All offenders who had committed a homicide, irrespective of the offenders’ numbers of FPE.</td>
<td>52</td>
</tr>
</tbody>
</table>
Data was extracted from the forensic psychiatric evaluation protocols (papers II and III), court convictions (papers I, II, III and IV), and the national police register (paper II). For extracting data from convictions and forensic psychiatric evaluations, research protocols were constructed. In the protocol used for the convictions, information on victim relation, victim sex, weapon, injuries, place and time of crime, witnesses, and intoxication of offender/victim was collected. The protocol used for the FPE concerning background factors in paper II, was based on a protocol earlier validated in a previous study. The inter-rater reliability for the variables used in paper II was found to be good in the range of kappa 0.63 to 0.86 (Långström et al., 1999). Information was collected on level of functioning (GAF), citizenship, early separation from parents, addiction by parents, behaviour problems in school, bullying, intellectual and educational level, degree from compulsory school, contact with social services, placement in institution or foster home before 18 years of age, psychiatric treatment as child and/or adult, age at first possible coercive treatment, suicide attempts, alcohol- or drug problems five years prior index crime (diagnosis, treatment period or similar), intoxicated at crime, alcohol- or drug treatment, contacts with psychiatric, social or correctional services six and one month before crime, treatment status at crime, earlier criminality, ever been married, children, experience of labour, present civil status, occupation, economical situation and housing.

For the study on the 48 homicide offenders (III) a short narrative was written for every case based on information from the forensic psychiatric evaluations protocol and the court convictions, focusing on triggering factors and events preceding the fatal violence. These narratives constructed the ground for joint assessments concerning the presence of delusions and/or hallucinations and possible triggering factors for the violent act.

During the nine-year study period 1992-2000, 39 adult women fulfilled the inclusion criteria type of crime and diagnosis of schizophrenia, and all but two were sentenced to forensic psychiatric treatment. Four of these women killed their victim (they are reported separately in paper III), but otherwise the outcome of the violence was minor in 80% of the crimes. For various reasons, among them the fact that female offenders have a criminal behaviour much different from male offenders, only male offenders have been included in the present study samples.

2 The study sample in paper II partly overlaps a sample used in a previous study on risk factors for criminal recidivism, including individuals subject to FPE during 1992-1995 (Tengström, et al., 2001).
Qualitative study

In the qualitative interview study (paper IV) the aim was to explore and build an understanding of the parents’ experiences and emotional reactions of having a son with schizophrenia, who also had committed a violent crime. What were their past and present feelings, reactions and thoughts in relation to their sons’ mental disorder and violent behaviour? And were there any common patterns of reactions to be found among the parents? The sample for the study consisted of Swedish parents to Swedish male citizens with schizophrenia, who had recently been referred to forensic psychiatric treatment after conviction for a violent crime (assault, severe assault or homicide). Foreign citizens were excluded because of expected difficulties reaching and interviewing their parents. The purposive sample was consecutively collected from October 2001 until February 2003.

During the study period all FPEs sent to courts in Sweden were monitored in terms of the inclusion criteria regarding diagnosis, type of crime and nationality. When a case fulfilling inclusion criteria was convicted and sentenced to forensic psychiatric treatment, the psychiatric clinic was contacted as soon as the conviction had gained legal force, to arrange a meeting with the offender. The purpose was to get an informed consent to contact and interview his parents. A letter was then sent to the parents, describing the study and inviting them for an interview. The parents were informed that they would be contacted by phone to arrange for an interview, unless they reported that they did not want to participate. The place for the interview was chosen in accordance with their preferences. Those who participated choose to be interviewed at home.

The interviews were semi-structured with sequences of themes of interest, but without any pre-formulated questions. The starting points were the parents’ reflections on the onset of their son’s mental disorder, their experience of violence and of psychiatric services, the impact their sons’ illness had had on family members, reactions from others outside the family and the parents’ view on possible preventive measures.

Every interview lasted 60-90 minutes. In this personal meeting the parents conveyed their situation from their own perspective and in their own words which is a prerequisite for building an understanding of their experiences. The outcome of an interview depends according to Kvale (1996) “on the knowledge, sensitivity and empathy of the interviewer”. Based on my background as social worker in psychiatry, the interview situation was familiar to me and I could provide the empathy needed. The facts that I
had previously met with their son and that the interviews were performed in their own home seemed also to contribute to a positive atmosphere.

All interviews were audio taped and memos were written after every interview regarding additional details, such as non-verbal communication of importance and my own instant reflections. After transcription every interview resulted in 25-30 pages of text, which were consecutively coded by my co-authors and me separately, followed by joint discussions where the codes were compared and discussed together and distributed into categories. The sorting of the material was formed through negotiations and a shared searching for an understanding, moving from the concrete to the more abstract and thereby general.

Examples of the coding process is given below (table 3).

Table 3. Example of coding

<table>
<thead>
<tr>
<th>Quotation</th>
<th>Codes</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>It came insidious and I never understood what it was. He became skinny</td>
<td>Insidious, misinterpreted, self-</td>
<td>Onset of mental disorder</td>
</tr>
<tr>
<td>and pale and quite, very quite. He never had anything to say. And I</td>
<td>blame, guilt</td>
<td></td>
</tr>
<tr>
<td>thought that he ate badly because he worked too much. I did not connect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>it with any disorder. (Interview 9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>He was not acting the way he usually did. He stood there and waved with</td>
<td>Unusual, threat, fear, police,</td>
<td>Violent behaviour</td>
</tr>
<tr>
<td>the knife and I was so afraid all the time. But he is my son and you</td>
<td>shame</td>
<td></td>
</tr>
<tr>
<td>do not want to........ Well, I eventually phoned the police and they</td>
<td></td>
<td></td>
</tr>
<tr>
<td>picked him up, but I did not say anything about the knife. (Interview</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Our different background and pre-understanding stimulated the analytic reasoning. As a social worker in psychiatry I had my prior experiences from meeting persons within different settings including forensic psychiatry, one colleague had a long experience as psychiatrist and one colleague is an experienced qualitative researcher. In our discussions we had few difficulties to reach agreement.

The coding procedure, the discussions and the interviews were parallel processes and every interview was in that way based on the analyses of the previous ones. When saturation was reached, meaning that no further information contributing to the analyses was gained, 23 offenders had been approached and 11 interviews performed with parents (figure 3). In three cases both parents attended the interview, leading to a participation of altogether 14 parents, nine mothers and five fathers.
Eight of the offenders who were approached did not give consent to contact their parents, and four of the parents declined participation. Two of these eight offenders expressed concerns for their parents and did not want them to be disturbed, since they had enough problems of their own in terms of physical illness. Another reason, expressed by four of the offenders, was that their parents were no longer involved in their lives (even though they all had contact with them). At the time of my request, one offender suffered from a florid paranoid psychosis with delusions involving his parents, and he did not want anyone to be in contact with them. Yet another offender rejected my request immediately. Still, my general experience was that the offenders appreciated being contacted.

Four of the parents did not want to be interviewed. One mother left a message to the project secretary and another mother, who actually was the victim in the committed crime, had changed to a secret phone number and did not reply to my letter. The remaining two parents who declined participation wanted to explain their decision. Both were mothers to sons who were convicted for attempted murder. One of them was a young man who had never before committed any crime or received any psychiatric treatment; the other was a man in his mid-forties with an extensive history of drug addiction, criminality and psychiatric treatment. The mother of the younger man said that her “survival strategy” was to keep away from people who regarded her solely as a “mother to a criminal boy” and she diminished the violent act to a play between two boys that turned out wrong. The mother of the older man said that she did not want to have anything to do with her son who she felt had disappointed her in so many ways. He was lost to her and she did not want to be reminded of all the grief and sorrow.

![Diagram](image-url)
he had caused her. She did not return telephone calls from her son and did not visit him, although he wanted her to do so, but she said that she sent his younger brother to visit him once in a while.

It is difficult to know if the parents who were not interviewed would have provided me with a different picture and understanding of parents’ experiences. Based on the information available to me, the overall impression is that this is not the case.

**Ethical considerations**

Collecting sensitive information on an individual for research purposes might be viewed as violation of the persons’ integrity. In the quantitative studies, we have collected such information without consent from those involved from forensic psychiatric evaluation protocols, criminal registers, and court convictions. There are several arguments for this strategy. Firstly, we have presented data in such a way that no information regarding any single individual is revealed. From that perspective we do not think that anyone involved in the study would experience any harm. Secondly, reaching and getting consent from all those involved in the study would be very difficult. Thirdly, we think that the research questions, addressed in the studies, are important enough to balance possible negative effects.

In the qualitative interview study I personally approached the offenders at their psychiatric wards for to seek an informed consent to invite one of their parents for an interview. The aim of the study was explained in general terms and the offenders were invited to ask for further details. We thought it was important to have a fully informed consent from the offender before approaching the parents. Many of the parents had experienced threat and/or violence from their son and they would most likely have hesitated to agree to an interview without this permission from their son. Approaching the parents represented to us a more critical ethical dilemma. They might feel violated already through the letter sent to them inviting them for an interview, and we tried to inform them very clearly how to avoid any further contacts with us, if they so wished.

The studies were approved by the ethical research committee.
Results and discussion

The results from the four studies will be presented and discussed under each of the four headlines below; *Victims of violence*, *Violent offenders’ background*, *Violence as interaction* and *Violence as a secret*. Every part begins with a short summary of the results from the corresponding paper. Some additional findings not reported in the papers are presented.

Victims of violence

During the study period 1992–2000, 615 persons became victims of assault or homicide committed by 369 male offenders who were diagnosed with schizophrenia and by court order referred to forensic psychiatric treatment. In the analyses in paper I the victims were distributed into three groups; Unacquainted (including persons that were injured in their roles as professionals), Network (acquainted individuals and partners) and Family of origin (parents, siblings, grandparents). In the 588 cases where the victim relation could be settled, the victims were most often found to be unacquainted to the offender (56.3%) (figure 4).

Figure 4. Victim relation in violent crimes committed by male offenders with schizophrenia (N =615 ) ( paper I)
When victim status was related to severity of the violence, (need for medical treatment or fatal violence), the picture changed somewhat. The more severe the violence, the closer was the relation between the offender and his victim. Family members together with acquainted men were as victims most at risk of being severely or fatally injured, which is in line with findings also for non-mental disordered offenders (Swanson et al., 1990; Shaw et al., 1999; Rying, 2000; BRÅ, 2001).

One could argue that differences in report pattern contribute to the figures. A close relation to the offender is likely to prevent a report to the police if the violent act is of a minor character, but as unacquainted to the offender you would be more likely to feel afraid or threatened also by minor incidents, and thereby more prone to make a complaint. If the report pattern hypothetically was the same regardless relation, it might have changed the proportion of acquainted vs. family victims but it is not likely to change the association between intimacy of the relation and severity of violence. In homicide, all but nine victims out of 52 (82.7%), were family members or otherwise acquainted to the offender (paper IV), a proportion that is similar for all cases of fatal violence in Sweden during the years 1990-1998, where 83% were family members or acquainted victims (BRÅ, 2001).

Typical examples of assault of an unacquainted victim would be a man who gets shoved while waiting for the bus or a group of people in the underground being pushed or hit by the offender. The violence was in these cases most often impulsive, unexpected, seldom severe and without obvious triggering events. The mental state of the offender at the time seemed to play the most crucial role. Among those who were attacked when carrying out their professional duties, policemen together with security personal and guards, constituted the largest group (35.2%). The violence was often minor and typically committed when the offender was taken into custody in connection with another crime. The second largest group was constituted by staff at psychiatric clinics (25.4%), (five doctors, one psychologist and 29 personnel at psychiatric wards or other treatment units). Some of these were most certainly well known to the offender but were even so regarded as unacquainted, since the violence could be judged as targeting them as professionals and not as private persons. The violent acts towards psychiatric personnel were most often related to coercive treatment of some kind. Remaining victims that were attacked when working were found in a variety of places such as restaurants, shops, petrol

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3 The figures refer to cases that were solved. About 14% of the reported cases of fatal violence remained during these years unsolved.
Results and discussion

station, and buses. These came into dispute with the offender when trying to prevent shoplifting, refusing entrance due to drunkenness and for other similar reasons. Within this group of unacquainted victims it was quite common that one court conviction included a number of crimes and several victims. This illustrated that a crime classification, even for a violent crime such as assault, might cover a wide range of violent behaviours, and in 75% of the 615 cases the injuries was categorised as minor or none.

There were 15 children (eight girls and seven boys), under age of 18, included in the total sample and they were categorised according to their relation to the offender. The majority was unacquainted (11), and only one boy well-known to the offender was severely injured. Most of these children were in their teens. There was no “typical case” when the victim was a child. Regarding girls as victims, four were hit in the back of their head by the same offender after having rejected his invitations, two girls were injured as passengers in a car that the offender deliberately damaged, one girl was hit on a bus when she told the offender to stop yelling at her sister and one girl was trying to defend her mother when she got hit. Among the boys there were two that were hit when trying to defend their mother, one boy, who the offender apprehended as God, got hit when he did not want to talk with the offender, one boy was pushed down to the ground when the offender thought that he was planning to break in to his summer house, one little boy was kicked when he was sleeping on a blanket in a park and one six year old boy was hurt by a plank that the offender threw at him. In the only case of a severe injury the victim was a boy in his early teens who was son to a friend to the offender. After hearing voices, which the offender recognised as belonging to his friend, he ran to the boy who was playing football, stabbed him with a knife and went afterwards straight to the police and reported himself.

Women as victims were in minority in the total sample (44%) but among the 77 victims belonging to the family of origin, women dominated with 60% (35 mothers, 7 sisters and 4 grandmothers). Violence targeting family members took most often place indoors and was seldom witnessed. Female family members were as single group according to relation and gender, most likely to die as victims of severe violence, which supports findings from a US study (Estroff et al., 1998).

Overall, family members in families where an individual has schizophrenia, face a low risk of becoming victims of a violent crime. During the nine-year period 77 family members were victims of violent crimes, about 8-9 per year. Assuming that every person with schizophrenia has two family members with whom he is in contact, and estimating 20,000 men to have
Results and discussion

Schizophrenia in Sweden, there would be 40,000 possible family member victims. The yearly risk of becoming a victim of severe violence would then be 0.021%, or slightly more than two out of ten thousand per year.

Violent offenders’ background

All 207 male Swedish offenders with diagnosis of schizophrenia, who for their first time were subject to a pre-trial forensic psychiatric evaluation, were included for a comparative study on background factors (paper II). Based on findings from the previous study on victim relations, we wanted to know if individuals targeting family members differed from those with other victims. This turned out to be the case, at least to some extent. Offenders with family members as victims had to a larger extent been in contact with child- and adolescence psychiatry ($X^2=3.72$, $p= .054$), had more often interrupted high school studies ($X^2=8.08$, $p= .004$), were younger by the time of the first compulsory treatment (23.4 year vs. 26.5 years, $t=2.05$, $p= .042$) and were younger at the time of the index crime (32.1 year vs. 35.7 years, $t=2.42$, $p= .016$). They were also more likely to still be living with their parents as adults ($X^2=6.50$, $p= .011$). This finding might be interpreted in different ways. Being in close every day contact with a family member might expose them to increased risk to violate a family member. An alternative or additive explanation might be that they were still living in their parental home because their illness was more severe.

The individuals in the total sample of 207 men (mean age 34.8 year (SD=9.2, range= 18-65)), constituted in many aspects an exposed group. A relatively high number, about one third (35%) of the offenders had parents with an alcohol abuse, although information was missing in 24% of the cases. Offenders, who had parents with alcohol abuse, were more likely to be found among the 28.1% with documented acting out behaviour at school ($X^2=4.74$, $p= .029$) and also more likely to be among those 22.0% that were placed in a foster home or institution ($X^2=20.72$, $p= .000$). A total of 26.7% had experienced some kind of contact with child- and adolescence psychiatry, for 10.9% of them as inpatients. There was an association between acting out behaviour at school and contact with child- and adolescence psychiatry ($X^2=18.86$, $p= .000$).

The educational level was generally low in the sample, with only 58.6% continuing to high school after primary school, and about one third (34.7%) of those who entered high school dropped out before full time. Among those who were found guilty of violence against family members, two out of three belonged to this group who did not finish high school.
This can be related to the fact that 98% of all pupils in Sweden who finished compulsory school in the school year 99/00, continued to high school and 73% finished within four years (Skolverket, 2001). Earlier need for special education was also one of four risk factors for committing assault within a two-year period found among a sample of patients with schizophrenia in UK. The other three were; history of recent assault, previous violent conviction and alcohol abuse (Walsh et al., 2004).

The vast majority of the 207 individuals had, prior to the index crime, as adults received psychiatric treatment (88.9%) and many had also been treated involuntarily (70.5%). At some point in life about one fourth (23.2%) had tried to commit suicide. The figure corresponds to the 27% of lifetime suicide attempts that was found in a sample of consecutively admitted psychiatric in-patients with schizophrenia (Radomsky et al., 1999). In the six months prior to the index crime, 70.9% of the offenders had some kind of contact with psychiatric services, and 19.4% had been treated involuntarily during that period. In the week prior to the crime, 25% had been in contact with psychiatric services, in 13.2% within 24 hours preceding the crime and 7.4% were actually inpatients at psychiatric clinics. In an earlier study based on 268 offenders referred to forensic psychiatric evaluations in Sweden, July 1995-June 1996, similar high levels of psychiatric contacts six months prior to the crime was found, especially for those who had a psychotic disorder (Holmberg & Kristiansson, 1997). These findings highlight a potential and responsibility for psychiatric services to identify individuals at risk for violent behaviour.

Medication adherence represented a problem in this group of offenders. Out of 48 homicide offenders during the years 1992-2000, 47.9% were prescribed an antipsychotic drug from a psychiatric clinic at the time of the homicide, but only 2 individuals (4.2%) actually took the medicine. This is a known problem. Among general psychiatric patients with schizophrenia, close to 50% of those prescribed neuroleptics do not to take their medicine, with highest degree of non-adherence among those with a co-existing alcohol abuse (Bebbington, 1995).

Among individuals with schizophrenia alcohol and/or drug addiction is common. Among severely mentally ill psychiatric patients in New Hampshire, US, 51% had an alcohol use disorder and 58% had another substance use disorder (Mueser et al., 2000). Studies from larger cities in USA and Germany have shown that 50% or more of all young men with schizophrenia have alcohol or drug dependence and the situation seems to be similar in Sweden (Socialstyrelsen, 1999). In the present study 52.5% had a documented alcohol and/or substance abuse within the last five-year
period prior to FPE, and it was assessed as an ongoing abuse at the time of the crime in 39.6%. Information on use of narcotic illegal drugs turned out to be less reliable in the FPE protocols. Narcotic drugs were often used in combination with alcohol. Cannabis was the most frequent reported narcotic drug used by 21.5% of the abusers. Among those with alcohol abuse (52.5%) it was reported that they used alcohol for the first time at a mean age of 14 years, and they had an addictive behaviour about three years later at a mean age of 17.5 years. Individuals with alcohol abuse were more likely to have had parents with a similar problem ($X^2=17.24$, $p=.000$). The association might however be biased by the fact that the questions in forensic psychiatric evaluations regarding parental abuse are more likely to be raised when the offender himself has an alcohol or drug problem.

About two thirds (68.6%) had prior to the FPE been convicted for a crime, in 42.9% for a violent crime, although the severity of the violence was in general minor. The individuals with an alcohol/drug abuse had to a larger extent a criminal record prior to referral for forensic psychiatric evaluation than those with no abuse ($X^2=23.08$, $p=.000$) and this also applied to earlier violent crimes ($X^2=11.38$, $p=.001$). A criminal conviction preceded also more often a diagnosis of psychosis for the abusers than for the non-abusers: ($X^2=19.00$, $p=.000$). One explanation brought forward by Munkner and colleagues (2003b) might be that abuse “overshadows” the underlying mental disorder delaying a diagnosis of schizophrenia. They also found that a criminal career seemed to delay first contact with psychiatry, and the individuals were less likely to be correctly diagnosed.

Those suffering from alcohol/drug abuse were also more likely to have been intoxicated at the crime scene than non-abusers ($X^2=31.67$, $p=.000$). However, information regarding intoxication was absent in nearly half of cases, which indicate that in cases where the mental disorder dominate, the possible influence of alcohol and drugs is often overlooked.

Even if about one third (37.9%) of all offenders had at some point of their lives had a relationship with a partner, with at least a one-year duration, and two thirds (64.3%) had been employed for six months or more, their social situation by the time of the crime was unstable. Few had any work or ongoing studies (9.8%) and 94.2% were living as singles. Out of all offenders, 13.2% were actually homeless, which is otherwise a rare phenomenon in Sweden. When the number of homeless persons in Sweden was measured 1999, about 8400 individuals were estimated to be homeless, which however was an increase since 1993. About one third of the homeless persons (35%), were said to suffer from mental illness, and 70% had an
Results and discussion

alcohol and/or substance abuse, with an overlap of 25% (Socialstyrelsen, 2000).

For comparison between groups the 207 offenders were distributed into either “Family-victim-group” (FV) with 49 offenders, or “Other-victim-group” (OV) with 158 offenders, based on their index crime (paper II). To control for the possibility of a previous crime belonging to another category than the index crime, all earlier convictions regarding violent criminality were studied. It turned out that 89 offenders (42.9%) had earlier been convicted for at least one violent crime, targeting altogether 236 victims. These previous violent crimes committed by the 89 offenders were, according to the crime classification, of less severity than the ones that led to a FPE. Six of the previous violent crimes were classified as aggravated assault (1.7%) compared to 41.6% cases of aggravated assault or actual or attempted homicide within the crimes that preceded the FPE. Only eight of these previous violent offences had been targeting family members. Six of these offenders of previous family violence were in the present study in the OV-group, which means that only 4% of the offenders in the OV-group had a previous violent crime involving a family member.

Regarding the 49 FV-offenders 18 individuals had no prior conviction, 14 had committed a non-violent crime and 17 individuals had committed an earlier violent crime. Taken together the figures implicate that offenders who were targeting their family members represented a reasonably well-defined group.

Several possible biases and limitations of the present studies must be considered. The fact that the offenders targeting family members were significantly younger than the other offenders (32.1 year vs. 35.7 years, \( t=2.42, p=.016 \)) might have an impact on the background variables. Offenders in the FV group might not have been old enough to develop an alcohol/drug abuse, get employed, be convicted, establish a relationship, and move from their parents to the same extent as the older offenders in the OV-group. However, that fact that they were referred for a FPE at a younger age might be interpreted as in indication of an earlier onset and more severe course of the mental disorder in the FV group. Another possible selection bias could be that the courts are more prone to refer an offender for a FPE when the victim is a family member, where the violence most often is severe.

A general limitation in this kind of study is linked to extraction of information from a FPE protocol. For background variables we used a research protocol for data collection which has been evaluated in a previous
study in terms of inter-rater reliability (Långström et al., 1999). Still, we have not been able to cross-validate information collected with other sources of information. For certain factors that might have been of interest no information was available, for example the offenders’ own experience of being criminally victimized, a factor which has been reported to be significantly associated with violence (Hiday et al., 2001).

Another limitation is the fact that it was not possible to compare the characteristics of the offenders with a non-offender group with individuals with schizophrenia. Many factors such as previous suicide attempts or concomitant substance abuse were very similar to what has been reported in clinical samples of non-offenders. Less is known about other factors such as early behavioural problems or work history. In the absence of a comparison group of individuals with schizophrenia with no history of violent criminality, there is a risk of over-interpretation of figures.

**Violence as interaction**

With an aim to explore possible triggering factors and interactions preceding the fatal violence committed by male individuals with schizophrenia, all cases of fatal violence during the years 1992-2000 were studied (Paper III). During the study period there were a total of 48 homicide offenders with altogether 52 victims, 18 women and 34 men; 18 family victims (13 of them women), 22 victims otherwise acquainted to the offender (3 women), and eight victims unacquainted (2 women).

Victims from the family were more often women ($X^2 = 11.59, \ p = .001$). The offenders who killed a family member were to a larger extent affected by delusions or hallucination when committing the crime, than offenders targeting other acquainted victims (72% vs 43%, n.s.) They were less often intoxicated (16.6% vs. 68.2%, $p = .006$), had more seldom committed earlier violent crimes (16.7% vs. 54.5%, $p = .022$), and they were younger by the time of the homicide (30.2 years vs. 35.9 years) (paper III). These findings are in accordance with findings regarding background factors (paper II) indicating a more severe course of schizophrenia among those offenders who assault a family member.

Violent acts are interactive by their nature and psychotic symptoms and cognitive impairment are likely to contribute to tensed social interactions. We are all constantly involved in dynamic interactions with others, and the way we act and react are based on factors such as earlier experiences, our integrated values and norms, on how we apprehend the present situation
Results and discussion

and what we want to achieve at the time. A well-known theoretical framework when studying interactions is symbolic interactionism (Blumer, 1969). In communication and interaction between people symbols, such as words, gestures or other things are used. The development of a persons’ “self” presupposes an ability to take the role of others, to evaluate yourself as an object and to internalize norms and dominating attitudes. Great importance is attributed to the actors’ ability to interpret the world and how a person defines a situation gives meaning to his or hers reactions or behaviour in that very same situation. While most people learn a common set of meanings, there might be different definitions of the same object. This reasoning is crucial when trying to understand bizarre or deviant behaviour. Individuals who have developed schizophrenia are likely to interpret and apprehend many situations differently, which might obstruct their interactions with others. This is in particular cumbersome in psychotic states and it might in worst cases lead to violent behaviour. The active phases in psychosis have also been stressed as one crucial factor for violence (Taylor & Gunn, 1984; Swanson, 1990; Link et al., 1992; Mulvey, 1994).

All offenders in the present study (paper III) were at the time of the homicide markedly influenced by their psychotic disorder. Although 48% were prescribed antipsychotic drugs, only two were actually taking the medicine. In 54% of all the homicides the offender was clearly affected by delusions or hallucinations when he committed the crime, and in 46% the offender was intoxicated. Eight individuals (17%) were in a psychotic state and at the same time intoxicated. The combination of non-adherence to medication and alcohol or drug abuse is reported to double the risk for violent behaviour among persons with severe mental illness (Swartz et al., 1998a).

Delusions and hallucinations per se have not been found to evoke violent behaviour (Wessley et al., 1993; Taylor et al., 1994; Appelbaum et al., 2000). These are common symptoms in psychoses and the majority of individuals with major mental disorders do not act violently. There are however associations found between aggressive behaviour and delusions of catastrophe, persecutory delusions and feelings of fear (Buchanan et al., 1993; Wessley et al., 1993). Among psychotic offenders delusions are frequently present (Taylor & Gunn, 1984a), and a connection is found between the severity of the crime and the impact of delusions (Taylor, 1985, 1998; Taylor et al., 1998). Some symptoms of particular importance for violent acts are the so-called “threat/control-override symptoms” (TCO) (Link & Stueve, 1994; Link et al., 1998; Björkly & Havik, 2003). If a person feels gravely threatened by others or if the person thinks that others
or “something” has taken over his internal control, there is an increased likelihood for violence. When compared with hallucinations or other psychotic symptoms, individuals with TCO symptoms, irrespective of psychiatric diagnosis, are reported to be twice as likely to engage in violent behaviour (Swanson et al., 1996).

Among 26 offenders who were affected by delusion and/or hallucination in the present sample, 14 could be judged as having TCO symptoms, which constitutes 29% out of all offenders. Even if these symptoms can have a triggering effect for violence they could not explain more than about a third of the homicides. It is worth mentioning that in a Norwegian study, presence of TCO symptoms was more often reported by an observer than by the patients themselves. (Björkly & Havik, 2003). Since presence of TCO symptoms in the present study are based on self-report, this might imply an underestimation. The MacArthur follow-up study was also based on self-report, and no association was found between TCO symptoms and violence (Appelbaum et al., 2000).

Half of the 18 offenders who targeted family members were living together with them when committing the crime, even if some had apartments of their own. All but two of the homicides took place in the home of the offender and/or of the family member. From reading the convictions and FPE you get the impression that those family victims, with few exceptions, were intensely involved in the life of their sons. In most cases mothers were killed by their adult son (11 out of 18), and in six cases the parent was killed when he/she was engaged in arranging for psychiatric treatment. The existence of long-standing conflicts between the offender and the victim were also reported in 88.9% of the cases where the victim was a family member. These conflicts were not only described by the offender, but were in many cases confirmed by others and often well known by psychiatric or social services. The involvement from parents might be in accordance with the concept of expressed emotions (EE), where over-involvement and an overall negative attitude from parents have been reported precipitate relapse of psychotic episodes (For a review: Wearden, et al., 2000).

Alcohol plays a significant role in most violent crimes, regardless of the mental status of the offender. In the present study the presence of alcohol intoxication was related to victim relation. Whereas only 3 of the 18 offenders targeting a family member were intoxicated, as many as 16 of the 22 offenders who killed an otherwise acquainted person, had been drinking at the time of the crime. Among the acquainted victims, who were in most cases male friends, 13 were themselves intoxicated. Prior to the crime it was common that the offender and his victim had spent many hours drinking
Results and discussion

together. In an upcoming dispute the offender had lost control and killed his friend in an outrage and the amount of violence was in many cases extreme.

It was not possible to assess the mental status of the victims in our study. However, it has been reported that mentally disordered persons are often themselves victimized and a Danish study has shown that men with schizophrenia are ten times more often victim of homicide than individuals in the general population (Mortensen & Juel, 1993).

Low overall functional level is also associated with disturbed interactions possibly leading to violence. Extreme functional impairment i.e. less than 20 on Global Assessment of Functioning Scale (GAF) (APA, 1994) and intense contact with family and friends have been reported to be linked to an increased risk of violence. With higher level of functioning however, frequent social contacts were associated with lower risk of violence as well as an improved quality of life (Swanson et al., 1998). The GAF level was also assessed in the FPE for the 48 offenders of fatal violence in our Swedish sample and the levels were relatively low, but in general not in the lowest part. For those who killed a family member, mean value was 30.1 (SD 7.5) at the time of the crimes, and slightly higher for those with other victims; 32.8 (SD 10.2).

Interaction between two individuals work in both directions, and since a diagnosis of schizophrenia is in general associated with dangerousness by people in the society (Angermeyer & Matschinger, 2003) fear of violence might affect how people act towards the mentally ill individual. Mutual fear and hostility might in turn lead to a vicious circle ending in violent acting out. In a modified labelling approach Link and colleagues (1989) emphasized this risk, i.e. the more the mentally disordered person believes he will be devalued and discriminated against, the more we will feel threatened in his interactions with others.

Form a perspective of symbolic interactionism, violence committed by mentally ill persons must be interpreted in the light of the definition of the world held by the offender in that particular situation. As formulated in the “Thomas Theorem”: “if men define situations as real they are real in their consequences” (Thomas & Thomas, 1928).

Violence as a secret

From the interviews with the parents (paper IV) it became obvious that most of them had never talked with anyone outside the immediate network
about their son’s violent behaviour and only on very rare occasions with others about their his mental disorder. The parents also tended to keep their own feelings a secret.

Four events crystallised as being of importance, mentioned by all parents in one way or another; *the onset of mental disorder, the diagnosis of schizophrenia, the violent behaviour and the referral to forensic psychiatric treatment*. These events can be looked upon as passages from one condition to another, i.e. events that bring changes to life. Hence, the formal theory of status passages (Glaser & Strauss, 1971) was used in the analysis of the interviews. This theory states that we all experience a number of status passages in our lives. Some are part of the normal process of growing up and live our lives, such as beginning school or moving away from home, while others are unique experiences, such as a severe illness or the loss of a dear one. By defining the properties of these status passages, theory might be built based on the empirical data. Critical properties of the status passages are degree of reversibility, temporability, shape, desirability, circumstantiality and multiplicity. The properties of the four passages identified in the present study stressed difficulties parents had to accept and cope with the new situations they were facing. The referral to forensic psychiatric treatment had a different quality since it gave hope for a change to the better (paper IV).

Except for the identified properties and actions taken, described in paper IV, the four status passages also evoked different emotional reactions by the parents, schematically described in Figure 5. These four passages did not necessarily follow one after another and for some they took place within a short time period of time.

In schizophrenia, as in many other mental disorders, a definite time of onset is often difficult to pinpoint, and the insidious *onset of the mental disorder* was a diffuse and painful passage for the parents. They were very active in searching for causes and very emotionally engaged. Many expressed feelings of guilt for not having detected or interpreted the signs of illness correctly. What the parents thought about the cause of the illness turned out to be important. Those with a pure biological explanation did not experience guilt to the same degree as those who referred to psychosocial factors, since they felt that there was nothing they could have done prevent the illness. Those who referred to psychosocial factors, such as school problems, stressful events, or divorce, felt guilty for not having been able to help their son.
Results and discussion

Figure 5. Status passages as related to close-distant and active-passive dimensions respectively

In a survey where relatives, who were members of family support groups, answered to a questionnaire concerning their beliefs about the causes of schizophrenia, “weak mental constitution” was the most frequently chosen alternative followed by “disorder of the brain”, “unconscious conflicts” and impact of genetic factors. The general public, on the other hand, tended to cite stress and psycho-social factors as main causes for developing the illness (Angermeyer, 1996). In another study, “stressful circumstances in the person’s life” was the main perceived cause for schizophrenia, followed by “chemical imbalance in the brain” (Link et al., 1999b).

Within the second passage, diagnosis of schizophrenia, the parents were less active but there was still an emotional closeness. All knew about the “severe mental disorder” since it is a requisite for referral to forensic psychiatric treatment, but the exact diagnosis was seldom known by the parents. They seemed to flinch from information, claiming it to be unimportant, the vocabulary confusing, or they referred to confidentiality. The impression was that the parents were afraid that accepting the diagnosis would be the same as giving up hope for recovery. Many parents expressed grief and sorrow and feelings of guilt complicated their contacts with the psychiatric services.
The passage of violent behaviour/crime brought special strains to the relation between the parents and their son. Many parents had also been exposed to threats from their sons who in some cases also had hurt them. The violent behaviour evoked fear, and they tended to distance themselves from their sons, both emotionally and geographically. They did not want their son to visit them, they felt insecure of what their son was capable of and they very often chose to stay ignorant of the crime their son had committed. None of the parents had been in court, none had read the conviction and they were afraid of talking with their son about what had happened.

Perceived causes of mental illnesses have implications on the apprehension of expected behaviour. Angermeyer (2003) found that people in the community who regarded schizophrenia as a brain injury expressed more fear of violent behaviour. No such connection was made by the parents in the present study, but those who had sons that showed violent behaviour when they were drinking alcohol were much more critical towards their sons’ behaviour, since they expected them to be able to control their alcohol consumption and by that indirectly their violent behaviour. All parents stressed that since their son was mentally disordered, he should not be regarded a criminal.

The recent referral to forensic psychiatric treatment constituted a breakpoint of the distancing attitude and the parents allowed themselves to hope for a change, although they took a fairly passive role. They described it as a relief that their son was in treatment and that they did not have to worry any more. Earlier negative experiences of short-term psychiatric treatment conveyed high, but not unrealistic, expectations on what the long-term forensic psychiatric treatment would achieve. Although most parents had visited their son at the ward, few had taken part of any treatment plans or talked with staff responsible for the treatment, and staff rarely approached them for information. Many parents also chose to make their visits at evenings or weekends.

A theoretical assumption commonly used in social sciences is that the world we live in is socially constructed, in a constantly on-going process (Burr, 2003). This means that our understanding and the way we apprehend interpersonal relations, concepts, societal structures, among other things, are based on social constructs. For example, mass-medial attention on crimes committed by mentally disordered offender as well as the language and expressions used, contribute to the constructs we make of mentally disordered individuals. Depending on our constructed understanding and what discourse we use, our acting in meetings with mentally disordered persons will differ. The interviewed parents also had their social constructs,
Results and discussion

directing their actions and affecting their feelings. When a child develops a severe mental disorder and furthermore commits a violent crime, many things in life changes. Constructs that you carry about what a “normal family” looks like, about origin of mental disorders, about criminality are challenged. Your expectations on other peoples’ reactions and attitudes might also affect your way of dealing with the situation. None of the interviewed parents were living with their adult son and this might have contributed to their choice to keep their feelings to themselves. When comparing parents living with an adult child for the first time admitted to psychiatric treatment with parents not living with their child, one study reported that the latter group was more likely to conceal the hospitalization (Phelan et al., 1998).

The concealment that characterised the families in our study is understandable but destructive. Initiative for breaking the secrecy must be held by the psychiatric services. Parents, and others in the immediate network, are important persons for support and help for the mentally disordered individual and ought to be involved. There must however be a balance between the individuals’ own integrity and the degree of involvement by others. Interest groups can be of great help, but psychiatric services cannot deprive themselves the main responsibility for education, information, support and joint planning sessions together with the mentally disordered individual and the persons in the immediate network.

Conclusive comments

The present studies have increased our knowledge about violent criminality committed by offenders with schizophrenia, both regarding factors connected to the crime and individual background factors shared by the offenders. The studies have also contributed to a deepened understanding of the problems faced by their parents.

The studies have highlighted several areas where management of patients with psychotic disorders might be significantly improved, for example in terms of medication adherence, identification of co-morbid drug and alcohol dependence, risk assessment and crisis intervention. Patients must be actively involved in their treatment and in addition relatives and close network members must be listened to and regarded as a resource. Probably the most important preventive measure would be to improve the general quality of care for psychotic patients in psychiatry.
Case vignettes

Case I - Fatal violence against family member

(Information taken from court conviction and FPE. Some changes are made to obstruct identification)

The case is a 35-year-old man (below called John), who killed his mother. John, was hyperactive as a child, had learning difficulties in school and was described as an “odd child”. At the age of ten he had a short outpatient contact with child- and adolescence psychiatry who recommended having him in a smaller class in school. In his teens he began to sniff glue and to drink alcohol and he quickly developed a substance dependence. From the age of eighteen John had many short and often involuntary, inpatient admissions at a psychiatric clinic. Two of those occurred in connection with suicide attempts. At admissions he most often suffered from severe anxiety, he was obsessed by supernatural phenomena, he felt that forces from outside controlled him and he claimed he could read other persons thoughts. A diagnosis of schizophrenia was given when John was about twenty-one years old. By that time he had moved away from home, but he often visited and stayed over nights at his parents’ house. Threats and violence against his parents were reported to and well-known by the psychiatric clinic and the relation between John and his parents was described as “ambivalent”.

Two months prior to the killing of his mother, John had been involuntary admitted to psychiatric treatment for eight days. At discharge he moved to his mothers’ house, although he had his own department. Johns’ father had died three years earlier. The mother had protested against him being discharged and had expressed that she felt threatened by his son, who held her responsible for the compulsory treatment. The day before the killing she visited his doctor and described that John did not sleep, played music very loud, was agitated, that he had not taken any medication since discharge and she expressed her fear. But the doctor said that he could not do anything at that stage. A friend of the mother persuaded the next day a psychiatric nurse to make a visit and together they tried to convince John to follow them to the hospital, but he refused and chased them out from the house with a knife. John had not been drinking but he was obviously psychotic, talking about little grey devils and UFOs.
Shortly after the two women had left John called for an ambulance. With the knife he had stabbed his mother in her heart and she was dead at the arrival of the ambulance, although John had tried to stop the bleeding and resuscitate her.

In the forthcoming hearing John said that his mother had tried to persuade him to see a doctor and that he was certain he would die if he had followed her advice.

**Case II- A mother’s description of her experiences**

*(Outline of an interview- written in “I-form”, the son is called Max. Some changes are made to obstruct identification)*

A mother presented the following story:

“I think it all started at school. The others never accepted Max, not even his teacher, and he was put into a special class. If it had happened today I would not have accepted it, but I was too weak at that time, and nobody ever talked with me. Later on he was bullied and I could not help him. Max started to work after finishing school and it all went on fine until he met that other teenager who smoked cannabis. And of course, my son also tried it and got stuck, and that has led to it all. He has had three or four cannabis psychoses, and I don’t know if there is also something else. Anyway, he always becomes very weird when he uses drugs. It is no longer him, it is like another person. I don’t know what they call it but he seems to hear voices at times and he thinks that everyone talks badly about him. When Max is like that he gets very aggressive at his siblings, because they have such good lives with cars, partners, work and all the things he doesn’t have. And what can I say? I tell him to stop using drugs because that is what the doctors have said. He must stop using that cannabis and amphetamine otherwise he will never live a normal life.

I regret so much in my life. If I had known what I know today I would have acted so differently. When Max was about seven I divorced his father who shortly after moved to Norway and was seldom heard from. My second husband did not like Max at all and commented on everything Max did wrong. When we moved from the city out into the country Max was twelve. It was probably at a vulnerably age. Max had his friends in town and I was not allowed by my husband to drive him by car, and I was too weak and did not dare to defy my husband. Max’s two half-brothers have always liked him, but they are much younger and could not stand up for
him at that time. When Max was seventeen, he left home. I should have left my husband early on instead for waiting the ten years that passed before we finally got divorced. If I only could turn back time!

I think that Max is worse off now than ever. It has been so difficult to see him suffer and not being able to do anything to help him. Social services and psychiatry have made me so disappointed. The only ones I can talk to are the policemen. They understand my feelings and they phone me and tell me when they have taken him into custody, and I appreciate that they let me know where he is. The social services say that they cannot do anything unless he stop using drugs and the psychiatric clinic only keep him for short periods and stuff him full with their drugs that makes him feel even worse. At least that what he says – that he is better of dead than full of those drugs. At times I have let him live here with me. But once when he had been drinking he was so aggressive towards me. He did not hit me but he destroyed the stereo with a baseball stick and threw things all over the place, and I could not have him living here after that. It was awful to see and it really scared me.

None of my friends can understand how I have suffered. They say that they do, but how could they? They don’t know what its like to wonder day after day where he is, if he is still alive, how he feels not knowing when I will see him next time. The church is the only place where I can get some sort of peace. My other children say that I must think more of myself, but it is difficult. At times I also have such a bad conscious that I haven’t given them all the support they needed because of Max, that he has taken all my energy. But I have really tried to give them time and love and they say that they haven’t missed anything, but I wonder if it is really true.

I can understand that Max has hit a person. What else could he have done to get some shelter over his head? He had been sleeping in toilets for weeks and was refused help both from the social authorities and psychiatry. He also phoned me and asked if he could come and stay here, but I heard that he was in a bad condition and did not dare to have him here. So he told me that he was about to do something drastic so that someone would have to react. When I heard that he had assaulted this man in the park and that he had stayed until the police came, I understood his action. I now sincerely hope that they will keep him for some time so that he can get away from the drugs and start to feel well again. You must understand that he is such a kind and nice person.”
Acknowledgement

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