Violence Risk Assessment in Mental Health

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13.1 Introduction

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In 1996, the 49th World Health Assembly adopted Resolution WHA49.25, declar- ing that violence is a leading worldwide public health problem and that it is increas- ing dramatically.

In 2000, an estimated 1.6 million people worldwide died as a result of self- inflicted, interpersonal or collective violence, for an overall age-adjusted rate of 28.8 per 100,000 individuals. Most of these deaths occurred in low- to middle- income countries. Less than 10% of all violence-related deaths occurred in high- income countries [1].

Approximately half of these deaths were suicides, one-third were murders and one-fifth were war related.

The workplace is one of the settings in which violent behaviour can occur and the healthcare sector is one of the most affected. Violence in healthcare facilities is a growing problem.

Epidemiological estimates of violent behaviour in healthcare are difficult to pro- duce due to a number of biases.

The main biases include the lack of a clear and shared definition of violent behaviour, and the non-reporting of many violent behaviours, leading to incorrect prevalence data.

One US report calculated that every week 20 people are killed in the workplace and 18,000 are attacked [2]; these data were confirmed by European reports [3]. About 48% of non-lethal incidents of workplace violence take place in the health- care sector [4]. About 50% of healthcare workers are victims of violence during

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their careers [5, 6]. Healthcare workers have a 16 times greater risk of suffering from workplace violence than workers in other sectors [7]. Within the healthcare sector, nurses are the category most at risk [8, 9]. Female workers, both nurses and doctors, are exposed to an even higher risk [10]. In a sample of 1826 health profes- sionals, about 11% had suffered from physical assault, 5% on more than one occa- sion, while 64% had received threats and verbal abuse [11]. Saeki et al. [12] report a prevalence of 15%.

Incidents of workplace violence are strongly under-reported, especially in men- tal health services [13, 14]. Many factors contribute to this situation, including the belief that the violence suffered is the result of a personal inability to manage the patient, and the belief that violent behaviour is inherent in the patient's complex mental health condition and hence in the profession [15].

One particular form of violence, murder, is not very frequent but extremely dis- turbing. Research in the USA shows that between 1980 and 1990 106 health work- ers were killed [16]. The US BLS (Bureau of Labour Statistics) [4] reported that 69 health workers were killed between 1996 and 2000. In Italy, between 1988 and 2010, 17 doctors were killed in workplace-related circumstances [17]. Lorettu et al. [17] have identified four categories of situations at risk: one category includes mur- ders committed in the context of doctor-patient conflict; the second and largest group consists of murders committed by psychiatric patients; the third group con- sists of murders committed in an unsafe workplace; and the fourth and last group comprises murder in the context of stalking behaviour.

A study on homicide in psychiatric hospitals in Australia and New Zealand iden- tified three categories: homicides by acutely ill patients soon after admission, homi- cides by forensic patients in low-security settings, and homicides in which vulnerable and elderly patients were victims. The study concludes that 'An important task in any psychiatric hospital is to protect patients and staff from physical violence' [18].

Despite the high prevalence of violent behaviour in healthcare settings, not all healthcare facilities have developed a specific policy against violence, including specific risk assessment and targeted training of healthcare professionals. In the UK only 435 of the hospitals have drawn up and implemented a specific workplace violence prevention policy and only 3% of hospitals provide targeted training to their staff, even though 87% of healthcare workers continue to fear being attacked in the workplace [19].

The services of the Royal College of Psychiatrists, UK, have considered violence risk assessment an integral part of the profession since 1996.

The European Risk Observatory of the European Agency for Safety and Health at Work (EU-OSHA) has identified violence and harassment among the emerging psychosocial risks in

occupational safety and health (OSH).

In Italy, the Ministry of Health's Quality Department has identified violence against health workers as a sentinel event and in November 2007 issued the 'Recommendations for preventing acts of violence against health workers', which in 2012 were included by the Ministry of Health in the Training Manual on Clinical Governance for patient and worker safety, which includes a whole chapter on 'Violence against health workers'. The Joint Commission on Accreditation of Healthcare Organizations, which currently also operates in Italy on behalf of

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various public hospitals, considers risk assessment in healthcare settings a quality indicator for preventing and reducing the number of violent incidents.

All healthcare sectors are at risk of workplace violence; however a number of studies have found that the risk is higher in emergency and psychiatric depart- ments [11, 12].

One review of 424 studies on violent behaviour by hospitalised patients found that the incidence of violent behaviour in psychiatric hospitals was 32.4% [20]. Dickens et al. [21] found that 42.9% of the violent episodes had been reported in the forensic setting. This violent behaviour by patients occurs across the various clinical settings, including psychiatric wards, residential care and community psychiatry and can affect all the operators involved in the management of psychiatric patients.

The social alarm caused by news reports of serious acts of violence by psychiat- ric patients has led some countries to introduce mandatory risk assessment in emer- gency services: see for example the so-called Kendra Law of the State of New York or the British Care Programme Approach.

In addition to clinical risk assessment, which aims to reduce workplace violence, there are other conditions in which risk assessment is required.

Psychiatric risk assessments are also used in the forensic field. In forensic psy- chiatric evaluations, the expert is asked to produce a risk assessment which, together with other elements, is used to make important decisions. For instance, in criminal proceedings, the assessment can support the decision to commit a patient to secure psychiatric facilities with restriction of their personal freedom (in Italy until 2015 patients could be committed to judicial psychiatric hospitals, since replaced by Residences for the Execution of Security Measures). In civil proceed- ings, risk assessment plays a role, for example, in decisions on awarding the cus- tody of children. In criminal cases, mental health assessments influence the conviction, severity of the sentence, involuntary commitment to mental institutions and time spent in such facilities.

Many studies have explored the relationship between mental illness and violent behaviour. This relationship has long been characterised by many prejudices which have often prevented correct understanding and management of the problem.

One very common prejudice is to automatically link mental illness with violent behaviour. This increases the stigma against mental illness and supports the demand for or the maintenance of ideological and indiscriminate freedom-restricting social and healthcare policies.

Although multiple factors are involved in the occurrence of violent behaviour, severe mental illness remains a risk factor and as such it requires risk assessment, in clinical and forensic settings, as well as operator training on violence risk assess- ment and risk management.

13.2 Risk Assessment

Risk is defined as the possibility that a given action or inaction may lead to a loss or a bad consequence. The concept of risk is often used as a synonym for the probabil- ity of a loss or a hazard/threat. Risk assessment is the systematic collection of

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information to determine the degree to which harm (to self or others) is likely at some future point in time.

Risk assessment must take into account both risk factors and protective factors and must be usable in the short term [22].

Assessing the risk of aggressive or violent behaviours linked to mental disor- ders has become a requirement in several mental health settings serving very dif- ferent patient populations: psychiatric units (with acute inpatients), community psychiatry (with outpatients) and forensic psychiatry (with psychiatric offenders), which require different risk assessments. For acute patients admitted to psychiat- ric units, risk assessment is aimed at preventing violent behaviour in the short term. For patients of community mental health services (and in forensic settings) the purpose of risk assessment is to prevent violent behaviour in the short to medium term.

In Italy, the mental healthcare model has evolved over the years: before the 1970s the dominant paradigm was one of involuntary institutionalisation, with emphasis on protecting society, rather than treating patients. This was followed by a shift towards a community-based mental health service, centred on patient care and respecting the freedom and dignity of the individual. The detention model was mainly based on the equation mental illness—violent behaviour: under this approach risk assessment was by and large unnecessary, given the blanket association of men- tal illness with violent behaviour and the consequent indiscriminate

restriction of personal freedom.

In the current mental healthcare model, the rationale for risk assessment lies in the focus on the patient's treatment, is primarily aimed at the patient's safety and is a cornerstone of the success of the therapeutic process. The aim of risk assessment is to identify patients who present a risk of violence, and to plan for them specific interventions and programs to prevent violent behaviour, distinguishing them from patients who do not present such risk and do not require specific programmes [23, 24]. One important objective and challenge is the need to balance appropriate patient care respecting their autonomy, dignity and safety, with the safety of health professionals and the community.

Over the years, a number of assessment tools have been developed to improve risk assessment and its outcomes, with different origins, purposes and uses in differ- ent settings.

Risk assessment is followed by clinical measures with different levels of care, but also by risk management aimed at reducing the risk.

The link between risk assessment and risk management is a complex process that must provide answers to the problem identified, by applying the knowledge derived from scientific evidence and designing a specific treatment plan.

Making a risk assessment without following it up with risk management actions is not good clinical practice.

The link between risk assessment and risk management entails several complexities.

The first complexity stems from the dynamism of the phenomenon: risk assess- ment is a dynamic process (just as the patients, their mental disorder, their life

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circumstances, the resources available are dynamic). Consequently the response, i.e. risk management, must be equally dynamic and readily adaptable to needs.

Secondly, risk management requires periodic verification of its implementation, feasibility, effectiveness and available tools.

A further key element of the risk assessment-risk management process is the circulation of information: the two systems must be closely linked, and information must flow smoothly, with continuous feedback enabling constant adaptation of the strategy in response to changes in risk assessment.

Finally, the circulation of information must be checked.

The NICE Guideline on Violence and Aggression [25] places violence risk assessment and management measures at the heart of the organisation of psychiatric and emergency services and requires their knowledge and observation by all staff with specific training courses, as well as the information and involvement of service users, to protect patients' rights. The following table (Table 13.1) lists the clinical risk management recommendations from the UK Department of Health [26].

The Functional Analysis of Care Environments (FACE) [27] is a portfolio of risk assessment tools based on a multidisciplinary assessment of needs and of possible strategies, and includes the evaluation of outcomes. It is an effective risk manage- ment tool.

Risk management responses cannot be indiscriminate and generalised: they should provide individual, personalised responses to the real need identified. Table 13.2 shows the different responses to different risk levels according to the response customisation principle [23, 27].

The validity and usefulness of risk assessment and of the tools used depend on two variables: calibration, i.e. adjustment of the tool to improve its accuracy, and discrimination, i.e. the tool's actual ability to identify individuals who present a real risk of violence (the real positives) and to respond with specific treatment actions. The discrimination variable is measured by reference to specificity (a test is specific for a given aspect and not for others) and sensitivity (the ability of the test to capture even minimal elements). In this specific case, an ideal evaluation should have high sensitivity, making it possible to identify violent individuals as true positives, and a high specificity to identify non-violent individuals as true negatives. However, even where specificity and sensitivity criteria are respected, operational limits remain linked to the basic prevalence, since an evaluation tool with good sensitivity and specificity works well in the case of a high prevalence of violence, but less so in the case of a low prevalence of violence.

A number of risk assessment tools are available, with different origins and pur- poses and for use in different contexts.

For all evaluation tools, the following elements are also important: the ability to determine the probability of occurrence of a given event (relative risk), the time frame in which it may occur and the type of event (violence against others, self- harm/suicidal behaviour).

The factors measured by violence risk assessment tools can be divided into static and dynamic. Static factors are those that are part of the patient's history and cannot be changed.

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236 L. Lorettu et al. **Table 13.1** Best Practice in Managing Risk 2007 UK Department of Health, National Risk

Management Programme 16 best practice points for effective risk management (RM)

1. Best practice involves making decisions based on knowledge of the research evidence, knowledge of

the individual service user and their social context, knowledge of the service user's own experience, and clinical judgement.

2. Positive risk management as part of a carefully constructed plan is a required competence for all mental health practitioners.

3. Risk management should be conducted in a spirit of collaboration and based on a relationship between the service user and their careers that is as trusting as possible.

4. Risk management must be built on a recognition of the service user's strenghts and should emphasise recovery.

5. Risk management requires an organisational strategy as well as efforts by the individual practitioner.

6. Risk management involves developing flexible strategies aimed at preventing any negative event from occurring or, if this is not possible, minimising the harm caused.

7. Risk management should take into account that risk can be both general and specific, and that good management can reduce and prevent harm.

8. Knowledge and understanding of mental health legislation is an important component of risk management.

9. The risk management plan should include a summary of all risks identified, formulations of the situations in which identified risks may occur, and actions to be taken by practitioners and service user in response to crisis.

10. Where suitable tools are available, risk management should be based on assessment using the structured clinical judgement approach.

11. Risk assessment is integral to deciding on the most appropriate level of risk management and the right kind of intervention for a service user.

12. All staff involved in risk management must be capable of demonstrating sensitivity and competence in relation to diversity in race, faith, age, gender, disability and sexual orientation.

13. Risk management must always be based on awareness of the capacity for the service user's risk level to change over time, and a recognition that each service user requires a consistent and individualised approach.

14. Risk management plan should be developed by multidisciplinary and multi-agency teamsoperating in an open, democratic and transparent culture that embrace reflective practice.

15. All staff involved in risk management should receive relevant training, which is updated at least every 3 years.

16. A risk management plan is only as good as the time and effort put into communicating its findings to others.

Dynamic factors are those that refer to the individual, their environment and their social and

family setting, and can change over time.

Static factors are elements such as having suffered violence or having committed violent acts in the past. Dynamic factors are the use of drugs and alcohol, the pres- ence of mental health conditions and the presence of drug therapy.

Risk assessment tools can be classified into three types: the clinical, the actuarial and the structured clinical model.

The *clinical model* was used in past years. Under this model, risk assessment was mainly based on the clinician's experience and judgment. This approach was not structured as a method and left wide discretion to the clinician to collect and assess

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 Table 13.2 FACE risk assessment

04Serious and

1	2	3
Small apparent risk	Significant apparent risk	Seriou
There are currently no behaviours suggesting risk, but the patient's history or premonitory signs indicate probable risk. The standard treatment ensures necessary supervision or control. No specific risk prevention plans or measures are in place.	The patient's medical history and clinical conditions suggest the presence of risk and this is considered a major problem. A specific plan must be drawn up in addition to the treatment plan.	In viev plan sl

No apparent riskNo history of risk or premonitory signs suggesting risk

imminent apparent risk The patient's history and condition indicate the presence of risk, e.g. the patient is preparing to act.

The risk prevention plan has the highest priority.

information arbitrarily, lacked transparency and was highly vulnerable to cognitive biases. Over the years, clinical risk assessments have been found to be poorly accu- rate, very close to the randomness of the coin toss [28], and have been heavily criti- cised because decisions restricting the personal liberty of individuals were made on the basis of non-objective evaluations, giving rise to significant ethical, professional and clinical problems [29].

The *actuarial model* uses an algorithm to produce a risk score derived from sta- tistical data. It targets static risk factors for which statistical analysis has shown a correlation with an increased risk of violence. The risk is expressed with a score and is referred to a specific period of time.

Various authors have highlighted the limitations inherent in actuarial methods, in particular the fact that they derive from retrospective studies on specific populations that do not lend themselves well to more general extrapolation [30].

Firstly, actuarial assessments are of a statistical nature and have limited clinical relevance, with poor applicability for specific interventions; secondly, they only examine static factors, leaving out all those dynamic factors that enable individual and contextualised assessment of each patient; thirdly, actuarial models concern the long-term perspective and are not practically and operationally usable in the short term; lastly, since they are based on static elements, they do not allow changes to the risk assessment which remains always the same for a given individual, and are not useful for treatment follow-up purposes.

While actuarial risk assessment models are statistically useful, they should not be used alone, but should be flanked by other tools [31].

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Table 13.3

NameClinical Risk Management Tool/ Working with Risk *CRMT Functional Analysis of Care Environment*Risk Assessment Management and Audit System RAMASGeneric Integrated Risk Ass. for Forensic Env. *GIRAFE* Classification of Violent Risk *COVR*Short Term Assessment of Risk and Treatability *START*Historical Clinical Risk 20*HCR 20*Psychopathy Checklist Revisited PCL R*Static 99*Sexual Violence Risk 20 SVR 20 Violence Risk Appraisal Guide VRAG*Interactive Classification Tree*

List of the most common risk assessment tools

Type	Setting	Type of

		risk
Clinical	All	V, S, SC
Clinical	All	V, S, SC
Clinical	All	All
Clinical	Forensic	All
Actuarial	Forensic	V
Clinical	All	V, S, SC
Clinical	All	V
Actuarial	All	V
Actuarial	Forensic	V
Clinical	Forensic	V
Actuarial	Forensic	V
Actuarial	Forensic	V

Evidence Not available

Good ModestNot available GoodGoodVery good Very good

Modest Good Very good

Good

The *structured clinical approach* is based on dynamic factors and is aimed at risk management. The structured clinical approach is based on specific factors derived from scientific evidence, on the examiner's experience and on the direct involvement of the people around the patient (the resources available to the patient examined). Apart from the risk of violence, this approach is often used to assess the risk of sui- cide and of serious carelessness. The limitations of this approach are poor inter-rater reliability, the strong dependence on clinical judgment and the ease of use in defen- sive medicine as it makes it possible to assign more value to false positives.

See the study by Singh and Fazel [32], which examined 128 risk assessment tools providing an overview of the most commonly used tools and their characteristics.

Table 13.3 shows the most common risk assessment tools, their type, the clinical evidence available and their use settings.

In a more general context, in addition to the schematism of a structured evalua- tion, and for the purposes of a more comprehensive forensic psychiatric evaluation, it is useful to consider both the risk factors for violent behaviour and the protective factors.

The following *risk factors* have been identified:

Socio-demographic factors: These include gender, age, marital status, economic status and exposure to violent subcultures of violence.

Personal factors*:* These include coming from physically and mentally abusive families [33, 34], previous violent behaviour and early juvenile delinquency [35–37].

Factors related to substance abuse: Several studies point out that the use and abuse of alcohol and drugs increase the risk of violent behaviour [38–40]; it should be noted that the comorbidity of severe mental illness and alcohol and drug use increases the risk of violent behaviour almost twofold compared to violent behav- iour related to serious mental disorder alone [41, 42].

Factors related to mental disorder: Although this topic has been addressed by numerous studies and reflections, it is still the subject of debate. Some takeaway messages are highlighted in the literature: not all mental disorders increase the risk of violent behaviour [43]; in serious mental disorders the risk of violent behaviour is moderately higher than in the general population [40, 44–47]; mental disorders alone are not sufficient for predicting violent behaviour, since other concurrent risk factors are necessary, such as past predictors (previous violent behaviour, previous victimi- sation), clinical factors (substance abuse), bio-psychosocial factors (age, sex) and contextual factors (stressful life events) [48]; different mental disorders are associ- ated with a different risk of violent behaviour [43, 49, 50]; the concurrent presence of several symptoms and their severity, in combination with other risk factors such as substance abuse and criminal history, increase the risk of violent behaviour [51].

Treatment factors: Many treatment factors are linked to an increased risk of violent behaviour, such as non-compliance with medication [52], abrupt interruption of medi- cation [53, 54], non-compliance or pseudo-compliance of the patient's inability to seek help [55], and conflict or violence with the environment or with caregivers [56].

Situational factors act as environmental stressors (breakup with partner, job loss, money problems) [57].

Factors related to recidivism: Assessing the elements relevant to violence recidi- vism is another important element for violence risk assessment. Some studies high- light the presence of individuals with specific clinical features such as a triple diagnosis (schizophrenia, alcohol abuse, antisocial personality disorder). Others have highlighted the most frequent factors in criminal recidivism by identifying the big eight: criminal history, antisocial personality, antisocial cognition, antisocial associates, family problems, employment instability, lack of prosocial leisure pur- suits, and alcohol and drug abuse.

As to *protective factors*, some can be deduced from risk factors (biopsychosocial factors, personal factors, factors related to alcohol and drug abuse, factors related to mental disorder, factors related to treatment, circumstantial factors, factors related to recidivism). Another protective factor is the availability of psychosocial interven- tions for managing crisis situations that might result in violent acts. Great emphasis is given to factors related to the treatment of the mental disorder (such as compli- ance with medication and psychotherapy, insight, ability to seek help, building a therapeutic alliance) and the ability to self-manage violence with a focus on the ability to recognise one's own violence and triggers.

Another specific protection factor in the forensic field is the presence of adequate social support.

Protective factors have also been included in assessment scales. The Structured Assessment of Protective Factors for violence risk (SAPROF) [58] identifies the following factors:

– ***Internal factors*** (such as good intelligence, secure attachment in childhood, empathy, coping skills)

– ***Motivational factors*** (such as work, leisure activities, financial management, motivation for treatment)

– ***External factors*** (e.g. social network, intimate relationship)

This assessment tool for protective factors, which is useful in association with clinical examination, assesses protective factors by assigning them the following scores: low, low-moderate, moderate, moderate-high and high.

Consequently, again in the more general context and with a view to a broader forensic psychiatric evaluation, an assessment of the risk of violent behaviour in mental illness may be made on a broader basis of general knowledge encompassing at least four areas involved in

violence risk:

- The patient
- The context/environment
- The victim
- Emotional reactions In each of these areas there are risk factors and protective factors. The informa- tion obtained from the investigation must be cross-checked in order to obtain ele- ments as close as possible to real-world data and to enable adequate risk management without recourse to indiscriminate interventions.

13.3 Risk Assessment: The Patient

Assessing the risk of violent behaviour in psychiatric patients is increasingly con- sidered an integral part of good clinical practice. Risk assessment must meet differ- ent needs at different times. While mental illness should not always be equated with violent behaviour, it is equally important not to deny the possible risks posed by psychiatric patients or even the existence of the mental disorder.

Acute psychiatric patients admitted to a psychiatric unit need a risk assessment covering some specific parameters.

It is important to carry out a clinical evaluation that, through a diagnostic filter, is able to rule out or identify organic causes for the violent behaviour. It is particu- larly useful to follow the acronym FIND ME (functional, infectious, neurological, drugs, metabolic, endocrine) in order to investigate possible organic causes of vio- lent behaviour [59].

In addition, as part of a short-term assessment, Simon and Tardiff's Checklist [60] is an unstructured tool for the clinical risk assessment of violence risk approved by a consensus of experts and tested in clinical practice (Table 13.4).

However, for the purposes of broader reflection, more specifically for forensic psychiatric purposes, we suggest assessing the violent behaviour of a psychiatric

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Table 13.4 Factors that must be evaluated in the assessment of the short-term risk of violence

1. Appearance of the patient
2. Presence of violent ideation and degree of formulation and/or planning

3. Intent to be violent

4. Available means to harm and access to the potential victim

5. Past history of violence and other impulsive behaviours

6. Alcohol or drug use

7. Presence of psychosis

8. Presence of certain personality disorders

9. History of non-compliance with treatment

10. Demographic and socio-economic characteristics

patient through three progressive stages implying very different kinds of scientific and clinical knowledge that can be usefully integrated:

1. Examination of the psychiatric disorder

2. Examination of violent behaviour

3. Assessment of a treatment plan

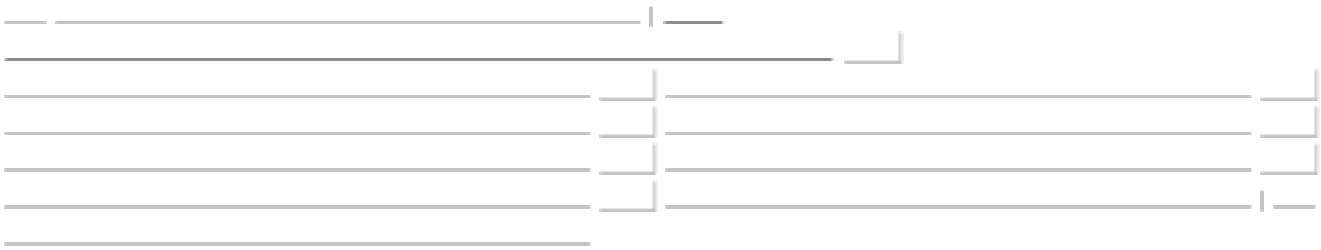
1. Examination of the mental disorder includes the search for symptoms and signs to enable diagnosis in a specific category. In addition to making a categorical diagnosis, it is essential to examine the dimensions that may be present, such as impulsiveness and/or anger, which may have played a role in the violent behav- iour and which contribute to formulation of a dimensional diagnosis; finally, the dynamic aspects must also be examined, including examination of the defence mechanisms in order to formulate a dynamic diagnosis as well [61].

2. Theexaminationofviolentbehaviourisessentialforgoodknowledgeofthecase, for risk assessment and for establishing a treatment plan. It can include at least two stages of investigation from the aetiological diagnosis of violent behaviour (i.e. the social, cultural, subcultural and cross-generational learning of violent behaviour) to the victimological diagnosis (i.e. the link between author and vic- tim, the victim's role).

3. Assessment and formulation of the treatment plan: To make an assessment and design a treatment plan it is essential to have a two-pronged approach: the first prong is to assess and treat the mental disorder, with a feasible and monitorable treatment plan aimed at controlling the mental condition. The second prong is treatment of the violent behaviour, which must be combined with the medication for the mental illness, and which starts from the individual's level of insight into their violent behaviour, its triggers and the underlying relational dynamics.

13.4 Risk Assessment: The Setting

The setting in which the risk assessment is carried out can be very different, with different implications.



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A clinical setting for acute patients (psychiatric units and emergency units) requires a risk assessment focused on avoiding violent behaviour in the short term (usually the hospitalisation period), ensuring patient and caregiver safety.

In a forensic setting, in facilities for mentally disordered offenders, the risk assessment is aimed at preventing violent behaviour in the short term (during stay in the facility and in the medium term (after discharge from the facility).

In addition, the setting itself requires specific assessments that go beyond the patient's examination, since each setting may present specific risk elements. Some workplaces have characteristics that may be related to a high risk of violent behaviour. Some examples are environments with poor lighting, without alarm systems, facilities that are isolated and/or not easily and quickly reachable in case of emergency, places where the influx of visitors is not monitored and facilities without security personnel. Other possible triggers are linked to operational arrangements of the work environ- ment; for example, long waiting times may be a critical issue especially for frontline staff [62]. In addition to being poorly prepared and trained for risk assessment, medi- cal staff are often also poorly protected. A telephone survey in the emergency depart- ments in the USA found that 63% of the facilities do not have 24/7 security personnel; visitor access is controlled only in 21% of facilities; in high-risk areas 39% use a security code; 46% have alarm buttons, 14% have an isolation room, 36% use a CCTV system and 1.6% use a metal detector for detecting weapons [63].

Setting-related protection measures often coincide with risk management. One example is that of a large urban hospital in the USA [64, 65] with a high incidence of violent behaviour; the hospital adopted a series of measures which have drasti- cally reduced violent behaviour, such as the deployment of security personnel, metal detectors, plexiglass in the triage rooms, keypad security system, monitoring of inflows into emergency departments and use of vehicle barriers. Risk manage- ment in the workplace is carried out by security personnel who are assigned a

key role in the security system. However, employing security personnel is expensive and this often limits their use significantly. Appropriate training of security personnel is commonly considered to be a key factor. However, the decision on whether they should be able to use or even carry firearms remains a controversial topic. Other systems such as the use of tasers or pepper sprays are often suggested, although these systems too are not entirely risk free. Alarm systems are a valuable risk man- agement tool in emergency departments and acute psychiatric units. The presence of an alarm system makes it possible to activate immediate response to an incident. Where needed, the various responders can consider different levels of response to an alarm signal. An emergency department should also have a direct alarm line to the nearest police station. Access control and regulation in the evening and night hours is also a useful element in preventing violence.

13.5 Risk Assessment: The Victim

A full risk assessment should also include the assessment of the risk factors relating to potential victims.

It is important to point out that victims often play a specific role in the dynamics leading to the violent incident. Recognising this should in no way be construed as victim-blaming. It means identifying the role played by the victim in order to iden- tify the factors conducive to a person being victimised, and to act on these, espe- cially for treatment purposes.

Some biopsychosocial data are classically recognised as being victimisation risk factors. Being a female is widely recognised as a specific victimisation risk in all contexts [66].

In violence risk assessment several risk factors for victimisation are found across different settings.

In emergency units and/or psychiatric units, many studies have found that the victims of workplace violence are more often women and young (bibliography). Young age is also associated with less work experience. The lack of experience, the difficulty in managing the relationship and the inability to decode their own defence mechanisms and those of patients are among the risk factors for victimisation. A study by Erkol [67] describes the profile of the victim. The professionals at risk are individuals with limited work experience (newly hired professionals and/or recent graduates), individuals without specific training on risk assessment and manage- ment and individuals with duties involving frequent and prolonged direct contact with the patient or also with the patient's family.

Another victim assessment setting is the patient's cohabiting family. Many studies on the violent behaviour of the mentally ill have shown that violent behaviour often occurs in the

family [68]. The dynamics are numerous and complex, linked to the emo- tions expressed in the families of psychiatric patients that feed the ‘family tension’, to the presence of complex and intricate defence mechanisms by which family members tend to underestimate the risk of violence (by resorting to minimisation and/or denial), or to an overestimation of violence risk leading to violent behaviour towards the patient, which in turn generates more violence. Other dynamics can be associated to a general and widespread feeling of guilt towards the family member-patient, leading to toler- ance of the family member’s violent behaviour beyond the acceptable risk. There may also be poor violent behaviour management skills, e.g. failure to apply talk-down and de-escalation techniques. Lastly, there is lack of information and education of family members about available resources such as social services and the police.

Protective factors include psycho-educational interventions for family members of patients with serious mental illnesses aimed at the knowledge of the elements of psychopathology, role of therapy and recommended ways of dealing with the patient’s violent behaviour (including holding the patient accountable, even by reporting the incident to the police). The purpose is to prevent what is often termed ‘a violent incident that could be seen coming’.

13.6 Risk Assessment: Emotional Reactions

Correct risk assessment includes careful evaluation of the healthcare providers’ emotional reactions.

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The therapeutic relationship with a psychiatric patient who engages in violent behaviours can be beset by problems that can undermine the correctness and adequacy of the diagnostic process and the consequent treatment plan. Violent behaviour, just like mental illness, may have a number of recurrences, some of which may be seem- ingly unpredictable, unexpected and incomprehensible. This entails further clinical, ethical and legal responsibilities and poses additional difficulties for professionals. Emotional reactions, in the form of defence mechanisms, are triggered to manage the emotional burden caused by violent behaviour. The possible defence mechanisms are many: they may occur in combination, and they are affected by many variables such as the type of patient and the therapist’s specific training, psychological profile and workplace setting. The positive function of the defence mechanism is to protect the professional against the anxiety that can be induced by a violent patient. However, the inadequate use of defence mechanisms may hinder the understanding of the complex- ity of a violent psychiatric patient. This is the case when the operation of defence mechanisms and the consequences of such operations are not adequately recognised. It follows that the inadequate use of defence mechanisms can constitute an ‘interpreta- tive shield’, an ‘iatrogenic’ resistance to understanding the patient and thus wrong decisions [69].

The therapist's inability to manage anxiety and the consequent use of defence mechanisms influence inappropriately the therapist's behaviour and relationship with the patient and can be perceived by the patient who, despite being psychotic, is able to test their therapist and assess their limitations and weaknesses. As the patient perceives the therapist's defence mechanisms and thereby the therapist's own fear and anxiety in respect of the mental illness and violent behaviour, he/she finds con- firmation of his/her own anxiety, mental illness and violence. Moreover, therapists who are not trained to detect the inadequate use of defence mechanisms will find it increasingly difficult to manage the violent patient because they will progressively lose some professional skills and because the inadequate management of violent behaviour breeds further violence [69].

For example, the psychiatrist should avoid acting on the basis of their feeling of omnipotence, reactive to the fear caused by an agitated patient in the manic phase, as this feeling may lead the psychiatrist to face the patient alone, thus exposing themselves to the risk of violent behaviour by the patient.

Equally wrong is the inappropriate recourse to restraint, dictated by the psychia- trist's fear of the patient and modulated by the defence mechanism of projection, through which the psychiatrist overestimates the patient's potential for violence because they attribute their own hostility and anger to the patient. Inappropriate and/ or indiscriminate use of restraint feeds the climate of violence in the unit and con- tributes to the escalation of violent behaviour.

A psychiatrist who has to assess the risk of violence of a psychiatric patient who has committed violent acts against children may, by using the defence mechanism of identification of the aggressor and minimising the mental illness elements, over- estimate the risk of violence with very different clinical and legal consequences, such as sending the patient to prison rather than to a treatment centre.

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See the literature for an in-depth analysis of the subject and a detailed description of the many defence mechanisms used with psychiatric patients who commit vio- lent acts [14, 69].

In addition to the operators' defence mechanisms, it is useful to point out the collective defence mechanisms, widely applied to relieve the anxiety caused by the patient's violent behaviour in the population. For example, in news reports on par- ticularly violent and cruel incidents that affect the public's sensitivity, mental illness is often invoked as the cause of the violent behaviour. The use of the misleading link between the mental disease and the violent behaviour in these media reports acts as a collective defence mechanism, because it is reassuring to attribute a frightening violent and cruel behaviour to the 'other', to someone who is different from us, to a sick person, and to draw a clear line separating normal individuals (who are assumed to be unable of such cruel violent behaviour) from sick persons, different from us,

who committed the violent act ‘in a fit of madness’. Such collective defence mecha- nisms have a number of consequences. Firstly, they reinforce the automatic stereo- typical link between mental illness and violent behaviour (from which they also stem); secondly, they increase the demand for a reactive and detention-focused response by the institutions, assigning to psychiatry the task of social control and defence; lastly, they constitute a cognitive distortion by focusing the violent behav- iour issue exclusively on mental illness, by preventing reflection of the role of other causal factors of violent behaviour which require specific assessment and manage- ment strategies (use of drugs, social exclusion, poverty, lack of moral compass, etc.) and, above all, by allowing society not to question itself.

In this sector, *protective factors* are many and varied according to whether the defence mechanisms are individual (of the professionals involved in the risk assess- ment) or collective, as expressed by society.

Individual protection factors include the supervision of the professionals dealing with difficult cases and ongoing training. The supervision of professionals enables them to become aware of their own emotional reactions, decode them and recognise their influence on the relationship with the patient and on the professionals’ own consequent behaviour. Professionals may find themselves ‘stuck’ in certain defence mechanisms and be unable to recognise their dysfunctional reaction on their own, because the defence mechanism itself hinders appropriate understanding of such reaction, as it serves to manage anxiety. Supervision, especially in the management of difficult cases, makes it possible to assess the situation objectively, from an exter- nal viewpoint. Nivoli et al. propose possible different levels of intervention on pro- fessionals based on the level of introspection achieved [14] (Table 13.5).

Ongoing training allows mental health professionals to be constantly aware of the possible ‘pitfalls’ of defence mechanisms, recognise them and avoid behav- ioural conditioning.

As regards the *protective factors* against the collective defence mechanisms used in society, it is important to step up the campaign against stigmatisation by the media. It is necessary to work with the media to reduce the use of the stereotypic association of mental illness-violence and analyse correctly the violent acts by

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246 L. Lorettu et al. **Table 13.5** Level of introspection of the mental health professional and psychotherapeutic inter-

vention on emotional transference reactions

Level of introspection (of the mental health professional) Insight is present and appropriate (into one’s own emotional and behavioural reactions)

Limited introspection and presence of anxiety (with strong feelings of fear, anger, frustration, etc.)
Limited introspection and presence of stereotyped use of anxiety defence mechanisms (denial,

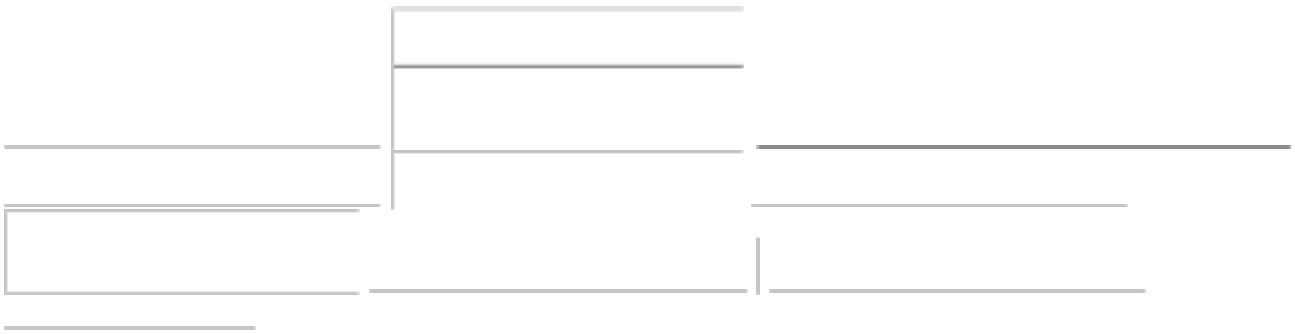
projection, splitting, identification, etc.)

Lack of introspection and counter-aggressive action towards the patient and staff (feelings of guilt, low self-esteem, etc.)

Level of intervention (on the mental health professional)No intervention (recognition, acceptance, therapeutic use of one's own emotions)

Group therapy (with the group of colleagues and staff)Individual therapy (with the group therapy supervisor of the treatment unit)

Individual therapy (with a therapist not necessarily from the same treatment unit)



individuals with serious mental disorders. In Italy, the Italian Society of Psychiatry has launched an awareness and collaboration campaign with the media that includes 'training' on the use of psychiatric terminology ('using the right words') with the correct use of terms such as psychosis, psychopathy, paranoia and fit of madness, to ensure that media reports are accurate and not marred by preconceptions or assump- tions that contribute to the stigmatisation of mental health patients.

13.7 Risk Assessment: Open Questions

Violence risk assessment in psychiatry still involves several open questions.While a number of studies have confirmed the effectiveness of certain risk assess- ment tools in detecting true positives, there are few studies on outcome indicators and consequently we lack reliable evidence about the effectiveness of response interventions after violence risk has been identified and about the consequences of failing to spot individuals at risk of violent behaviour (false negatives) [18]. Possible preventive measures cannot be applied indiscriminately to all patients. Some ele- ments must necessarily be present: the risk must be effective, current and real; the

choice of preventive strategy must be appropriate to the severity of the risk.The measurement of risk factors continues to have a mainly statistical value (especially for actuarial tools) for large populations but it is difficult to apply in

individual cases and when there is low prevalence.The simultaneous presence of risk factors and protective factors, and their sheer

number, risk spreading risk assessment over such a broad ‘clinical space’ that its validity is impaired. Moreover, it should be borne in mind that risk factors are not themselves the causes of violent behaviour; therefore, confusing them with actual causes can be extremely risky for the consequent intervention choices.

The applicability of risk assessment in mental health services is hindered by the long-standing difficulty of translating scientific research into real-world clinical practice. Although the need to perform risk assessment is widely accepted, its actual

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implementation may be hampered by several difficulties, such as inadequate moti- vation and personal interest by mental health professionals, their workload and time constraints, the frequent lack of specific training and the belief that violent behav- iour goes hand in hand with mental illness. However, it is good clinical practice for psychiatrists whose patients exhibit violent behaviour to assess both risk factors and protective factors and how they interact with each other.

Risk assessment, intended as risk formulation, should be promptly recorded in the patient’s medical record in order to achieve two important aims:

- To benefit the patient whose situation is evaluated in terms of risk factors and protective factors

- To document objectively the good clinical practice of the psychiatrist, who worked with professional competence, diligence and prudence Recording the risk assessment and the consequent risk management in the patient’s record is always advisable in view of possible professional liability claims and disputes. Risk assessment can be a source of legal liability for the psychiatrist because of the scrutiny to which the psychiatrist’s decisions are subjected and of their conse- quences in terms of patient restraint and/or other restrictions on the patient’s free- dom, or, where no risk management plan was implemented, in the event of patient violence or suicidal behaviour. The increasing attention of the media and the judi- ciary to cases of malpractice, the many malpractice court cases related to the violent or suicidal behaviour of the psychiatric patient and the continuous changes in the legislation on psychiatric care increasingly create professional liability concerns for psychiatrists in the field of risk assessment and risk management. Risk assessment also involves ethical and professional conduct issues. The psy- chiatrist, like any other doctor, owes a duty of care and professional confidentiality to the patient. Risk assessment is beneficial for the patient to the extent that it helps to draw up a patient-specific treatment plan, particularly in the clinical setting. In the context of forensic psychiatry, in which risk assessment may result in a restric- tion of

the patient's freedom, or a decision on the custody of children, the patient's benefit risks being sacrificed to social protection concerns. This raises questions about the psychiatrist's ethical and professional conduct position. In forensic psychiatry, professional confidentiality, which is another ethical cor- nerstone of the patient-doctor relationship, may also be called into question when psychiatrists have to answer questions on risk assessment and share information with the justice system while continuing to provide patient care. Risk assessment, which in legal settings meets the needs of courts, can pose specific ethical chal- lenges to psychiatrists, different from those encountered in other areas of psychiat- ric practice and which deserve in-depth reflection covering legal, theoretical and organisational aspects. Other aspects of the patient's and the psychiatrist's liability need to be addressed. Patients have the right to refuse treatment and they are not automatically liable for violent behaviour following such refusal. On the other hand, psychiatrists have

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historically been given a social mandate to protect and monitor patients, and have been held responsible for the patient's behaviour; thus they must attempt to balance this mandate and responsibility with the patient's freedom of choice.

Lastly, a few more concerns in the field of risk assessment are worth noting. Variables such as the use of substances can play a highly misleading role in a risk assessment and subsequent risk management. Every day, the literature and, espe- cially, clinical practice confirm that the use of substances increases the risk of vio- lent behaviour in individuals with or without mental illness [70, 71]. Therefore, these individuals are those in greatest need of risk assessment, but they are also those most resistant to evaluation and treatment and who often steer well clear of the healthcare system.

Another important group are psychiatric patients who drop out of pharmaco- therapy [22]. The literature highlights the protective role of pharmacotherapy and compliance with treatment and the importance of the therapeutic relationship. However, mental health professionals often have no effective means to retrieve drop-out patients, especially when the dilemma is between the patient's freedom of choice and need for care.

Lastly, in the specific field of psychiatry, it is important to point out that the stigma on mental illness often delays or prevents access to treatment by psychiatric patients. Although scientific evidence has disproved the automatic association between men- tal disorder and violent behaviour, in the public's perception this association still persists and is often fuelled by inaccurate media reporting of violent incidents.

13.8 Conclusions

Violence remains a multicausal phenomenon, in which many very different factors come together, having different influences and different consequences. Thinking that we can focus on a small number of causal factors, or just on one, such as mental illness, as a way of preventing and managing violence successfully does not corre- spond to clinical reality, epidemiological data and literature, and is a very naïve assumption.

For a broader and more correct understanding, it is far more appropriate to see violence as part of a *continuum*, with, at one end, multiple factors that contribute to causing violent behaviour, whose assessment and management cannot be left exclusively to mental health practitioners, given the many variables involved. Intervention in this field must cover various aspects: political, economic, financial, cultural and subcultural, to address the many causal factors that contribute to vio- lent behaviour. At the other end of the scale, to a much smaller extent, we find mental illness and its contribution to violent behaviour, which requires specific risk assessment and management. In between, we should not forget the significant con- tribution of substance use to violent behaviour both in clinical terms, in so far as it increases the risk of violent behaviour in individuals with and without mental ill- ness, and in social terms, in so far as substance use supports criminal networks

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linked to drug trafficking and distribution. Response in this area must include polit- ical, organisational, economic and health policies.

The WHO has highlighted that ‘The public health approach also emphasises col- lective action. It has proved time and again that cooperative efforts from such diverse sectors as health, education, social services, justice and policy are necessary to solve what are usually assumed to be purely ‘medical’ problems. Each sector has an important role to play in addressing the problem of violence and, collectively, the approaches taken by each have the potential to produce important reductions in violence’ (WHO).

Predicting human behaviour is a difficult endeavour in many areas, and predict- ing violent behaviour is certainly no exception.

Therefore, in the context of violent behaviour, it is appropriate to be able to ‘see’ beyond mental illness, to avoid the risk of focusing attention on a part and missing the whole picture.

References

1. O.M.S. Violenza e Salute nel Mondo. Rapporto dell’Organizzazione Mondiale della Sanità. In Quaderni di Sanità Pubblica, CIS Editore; 2002.

2. The National Institute for Occupational Safety and health (NIOSH). Violence in the workplace risk

factors and prevention strategies. Current Intelligence Bulletin 57, DHHS, N. 96; 1996.

3. Paoli P, Merllié D. Third European survey on working conditions. European foundation for the improvement of living and working conditions; 2000.

4. Occupational Safety and Health Administration (OSHA) guidelines for preventing workplace violence for health care & social service workers. www.osha.gov. US Department of Labor; 2004.

5. Schulte JM, Nolt BJ, Williams RL, et al. Violence and threats of violence experienced by pub- lic health field-workers. JAMA. 1998;280:439.

6. Al-Sahlawi KS, Zahid MA, Shahid AA, et al. Violence against doctors: 1. A study of violence against doctors in accident and emergency departments. Eur J Emerg Med. 1999;6:301.

7. Elliott PP. Violence in health care. What nurse managers need to know. Nurs Manage. 1997;28(12):38–41.

8. Kingma M. Workplace violence in the health sector: a problem of epidemic proportion. Int Nurs Rev. 2001;48:129–30.

9. Lee DT. Violence in the health care workplace. Hong Kong Med J. 2006;12(1):4–5.

10. Boyle M, Koritsas S, Coles J, Stanley J. A pilot study of workplace violence towards paramedics. Emerg Med J. 2007;24(11):760–3.

11. Gascón S, Martínez-Jarreta B, González-Andrade JF, Santed MA, Casalod Y, Rueda MA. Aggression towards health care workers in Spain: a multi-facility study to evaluate the distribution of growing violence among professionals, health facilities and departments. Int J Occup Environ Health. 2009;15(1):29–35.

12. Saeki K, Okamoto N, Tomioka K, Obayashi K, Nishioka H, Ohara K, Kurumatani N. Work-related aggression and violence committed by patients and its psychological influence on doctors. J Occup Health. 2011;53(5):356–64.

13. Dubin WR, Lion JR. Clinician safety. Washington: American Psychiatric Association; 1993.

14. Nivoli GC, Lorettu L, Sanna MN. Valutazione e trattamento del paziente violento. In: Trattato Italiano di Psichiatria. Masson; 1999.

15. Bruns D, Disorbio JM, Hanks R. Chronic pain and violent ideation: testing a model of patient violence. Pain Med. 2007;8(3):207–15.

llorettu@uniss.it

16. Goodman RA, Jenkins EL, Mercy JA. Workplace-related homicide among health care workers in the United States, 1980 through 1990. JAMA. 1994;272:1686–8.

17. Lorettu L, Falchi L, Nivoli F, Milia P, Nivoli GC, Nivoli AM. L'omicidio del medico. Riv Psichiatr. 2015;50(4):175–80.

18. Nielssen O, Large MM. Homicide in psychiatric hospitals in Australia and New Zealand. Psychiatr Serv. 2012;63(5):500–3.

19. National Union of Public Employees. Violence in the NHS. Hlth Serv News; 1991.

20. Bowers L, Stewart D, Papadopoulos C, Dack C, Ross J, Khanom H. Inpatient violence and aggression: a literature review. Report from the Conflict and Containment Reduction Research Programme. London: Institute of Psychiatry, Kings College London; 2011.

21. Dickens G, Picchioni M, Long C. Aggression in specialist secure and forensic inpatient mental health care: incidence across care pathways. J Forensic Pract. 2013;15(3):206–17.

22. O'Rourke M, Wrigley C, Hammond S. Violence within mental health services: how to enhance risk management. Risk Manag Health Policy. 2018;11:159–67.

23. Spinogatti F. La predittività dei comportamenti dannosi. In: Psichiatria Oggi, Anno XXVIII, 1; 2015.

24. Large M, Nielssen O. The limitations and future of violence risk assessment. World Psychiatry. 2017;16(1)

25. National Institute for Health and Care Excellance (NICE). Violence and aggression short term management in mental health, health and community settings. Update edition The British Psychological Society and The Royal College of Psychiatrists, 2015.

26. Department of Health, National Risk Management Programme. Best practice in managing risk. London: National Risk Management Programme; 2007.

27. Clifford PI. The FACE Recording and Measurement System: a scientific approach to person-based information. Bull Menninger Clin. 1999;63(3):305–31. [cited 2013 Sep 21]. http://www. ncbi.nlm.nih.gov/pubmed/10452193.

28. Ennis BJ, Litwack TR. Psychiatry and the presumption of expertise: flipping a coin in the courtyard. Calif Law Rev. 1974;62:693–752.

29. Appelbaum PS. Ethics in evolution: the incompatibility of clinical and forensic functions. Am J Psychiatry. 1997;154(4):445–6.

30. Dernevik M. Structured clinical assessment and management of risk of violent recidi- vism in mentally disordered offenders [Internet]; 2004. http://publications.ki.se/xmlui/ handle/10616/39264.

31. Buchanan A, Binder R, Norko M, Swartz M. Resource document on psychiatric violence

risk assessment. Am J Psychiatry. 2011;169(3):340.

32. Singh JP, Fazel S. Forensic risk assessment: a metareview. Crim Justice Behav. 2010;67:965–8.

33. Monahan J, Steadman H, editors. Violence and mental disorder. Chicago, IL: Chicago University Press; 1994.

34. Walsh EL, Gilvarry C, Samele C, Harvey K, Manley C, Tattan T, Tyrer P, Creed F, Murray R, Fahy T. UK700 Group predicting violence in schizophrenia: a prospective study. Schizophr Res. 2004;67(2–3):247–52.

35. Klassen D, O'Connor WA. Demographic and case history variables in risk assessment deidre. In: Monahan J, Steadman H, editors. Violence and mental disorder. Chicago, IL: Chicago University Press. p. 1994.

36. Connor DF. Aggression and antisocial behavior in children and adolescent: research and treatment. New York: Guilford; 2002.

37. Millaud F, Roy R, Gendron P, Aubut J. Un inventaire pour l'evaluation de la dangerositè de patient psiquiatrique. Rev Can Psychiatry. 1992;37:608–11.

38. Taylor PJ, Gunn J. Homicides by people with mental illness: myth and reality. Br J Psychiatry. 1999;174:9–14.

39. Brennan PA, Mednick SA, Hodgins S. Mayor mental disorders and criminal violence in a Danish birth cohort. Arch Gen Psychiatry. 2000;57(5):494–500.

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40. Wallace C, Mullen P, Burgess P, Palmer S, Ruschena D, Browne C. Serious criminal offending and mental disorder. Case linkage study. Br J Psychiatry. 1998;172:477–84.

41. Dubreucq JL, Joyal C, Millaud F. Risque de violence et troubles mentaux graves. Ann Med Psychol. 2005;163:852–65.

42. Senon JL, Manzanera C, Humeau M, Gotzamanis L. Les maladies mentaux sont-ils plus violents que les citoiens ordinaries? Inf Psychiatr. 2006;82:645–52.

43. Nivoli GC, Lorettu L, Milia P, Nivoli A: Psichiatria Forense. Piccin; 2019.

44. Fazel S, et al. Schizophrenia, substance abuse, and violent crime. JAMA. 2009; 301(19):2016–23.

45. Hodgins S. Mental disorder, intellectual deficiency and crime. Evidence from a birth cohort. Arch Gen Psychiatry. 1992;49(6):476–83.

46. Lewis ME, Scott DC, Baranoski MV, Buchanan JA, Grilith EE. Prototypes of intrafam- ily homicide and serious assault among insanity acquittees. J Am Acad Psychiatry Law. 1998;26:37–48.

47. Lindqvist P, Allebeck P. Schizophrenia and crime. A longitudinal follow-up of 644 schizo- phrenics in Stockholm. Br J Psychiatry. 1990;157:345–50.

48. Elbogen B, Johnson SC. The intricate link between violence and mental disorders. Arch Gen Psychiatry. 2009;66:152–61.

49. Pinna F, Tusconi M, Dessi C, Pittaliga G, Fiorillo A, Carpiniello B. Violence and mental disor- ders. A retrospective study of people in charge of a community mental health center. Int J Law Psychiatry. 2016;47:122–8.

50. Brennan PA, Mednick SA, Hodgins S. Major mental disorders and criminal violence in a Danish birth cohort. Arch Gen Psychiatry. 2000;57(5):494–500.

51. Benezee M, Lebihan P, Burgos ML. Criminologie et psychiatrie. EMC. 2002 37-906-A-10:1–15.

52. Erb M, Hodgins S, Freese R, Moller Isberner R, Jockel D. Homicide and schizophrenia: maybe treatment does have a preventive effect. Crim Behav Ment Health. 2001;11(1):6–26.

53. Appelbaum PS, Robbins PC, Monahan J. Violence and delusions data from the MacArthur Violence Risk Assessment Study. Am J Psychiatry. 2000;157(4):566–72.

54. Marleau JD, Millaud F, Auclair N. A comparison of parricide and attempted parricide: a study of 3 psychotic adults. Int J Law Psychiatry. 2003;26(3):269–79.

55. Millaud F, Dubreucq JL. Evaluation de la dangerositè du malad mental psicotique. Ann Med Psychol. 2005;163:846–51. Dangerousness evaluation of psychotic patient: introduction.

56. Voyer M, Senon JL, Paillard C, Jaafari N. Dangerosite psiquiatrique et predictivite. Inf Psychiatr. 2009;85(8):745–52.

57. Esteve D. Y a-t-il une prévention du parricide psicotique? Perspectives Psiquiatriques. 2003;42(1):56–62.

58. de Vogel V, de Vries Robbé M, de Ruiter C, Bouman YH. Assessing protective factors in foren- sic psychiatric practice: introducing the SAPROF. Int J Forensic Ment Health. 2011;10:171–7.

59. Moore G, Plaff J. Assessment and emergency management of the acutely agitated or violent adult; 2017. https://www.upresearchgate.net >publication.

60. Simon R, Tardiff K. Textbook of violence assessment and management. Arlington, VA: American Psychiatric Publishing, Inc.; 2008.

61. Nivoli G, Lorettu L, Milia P, Nivoli A. La valutazione clinica del paziente con disturbo

mentale e comportamento violento sulle persone. Giornale Italiano di Psicopatologia. 2008;14(4):396– 412. ISSN:1592-1107.

62. Hobbs FDR, Keane UM. Aggression against doctors: a review. J Med. 1996;89:69–72.

63. Ellis GL, Dehart DA, Black C, et al. ED security: a national telephone survey. Am J Emerg Med. 1994;12:155.

64. Ordog GJ, Wasserberger J, Ordog C, et al. Weapon carriage among major trauma victims in the emergency department. Acad Emerg Med. 1995;2:109.

65. Preventing workplace violence. Tips for safety in emergency departments and psychiatric hospitals. Environment of Care News, published by Joint Commission Resources 2008;11:4.

66. Nivoli GC, Lorettu L, Milia P, et al. Vittimologia e Psichiatria Ediermes CSE Torino; 2010.

llorettu@uniss.it

67. Erkol H, Gökdoğan MR, Erkol Z, Boz B. Aggression and violence towards health care providers—a problem in Turkey? J Forensic Leg Med. 2007;14(7):423–8.

68. Lorettu L, Sanna N, Nivoli GC. Le passage a l'acte, homicide du schizophrène. In: Millaud F, editor. Le passage a l'acte. Masson Papis; 2009.

69. Lorettu L. Le reazioni emotive al paziente violento: difficoltà diagnostiche e terapeutiche. CSE Torino; 2000.

70. Van Dorn R, Volavka J, Johnson N. Mental disorder and violence: is there a relationship beyond substance use? Soc Psychiatry Psychiatr Epidemiol. 2011;47:487–503. https://doi.org/10.1007/s00127-011-0356-x.

71. Friedman RA. Violence and mental illness—how strong is the link? N Engl J Med. 2006;355(20):2064–6.

llorettu@uniss.it