

THE DISTINCTION BETWEEN MALINGERING AND MENTAL
ILLNESS IN BLACK FORENSIC PATIENTS

by

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ABSTRACT

One of the main problems facing the psychiatrist in forensic psychiatry is the distinction between malingering and mental illness especially in Zulu speaking patients.

This study identified twenty items from the literature and clinical practice that separate malingering from mental illness. The validity of these items was assessed through an experimental, cross-sectional study design which compared two groups. These were a sample of fifty malingering African patients, male and female and a control group of fifty mentally-ill African forensic patients who were classified as State Patients.

Since the data was categorical, that is, the outcome was either positive (that is malingering) or negative (that is mentally ill) the groups were compared by employing such methods as the chi-square test and Fisher's exact test.

Seventeen items were found to be statistically significant and were regarded as valid items that separate malingering from mental illness.

Then the effectiveness of these seventeen items in separating malingering from mental illness was determined by calculating their sensitivity, specificity, their false positive rate and their false negative rate. The items fell into four categories or groups.

Group I are those three items with a high sensitivity, a

high specificity, a few false positives, a few false negatives, high positive predictive values and high negative predictive values. They were able to diagnose both malingering and sickness with a high degree of accuracy.

Group II consisted of eight items with a high specificity, a few false negatives and high positive predictive values. These items are good at diagnosing malingering patients directly.

Group III consisted of six items with a high sensitivity, a few false positives and high negative predictive values. These items are good at diagnosing sick patients and therefore diagnose malingering indirectly by excluding mental illness.

Group IV consisted of three items which did not show statistical significance between malingering and mentally ill patients.

This study proved that seventeen items were able to separate malingering from mental illness to a statistically significant extent and are effective for the use in the diagnostic assessment of Zulu speaking forensic patients.

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PREFACE

This study represents original work by the author and has not been submitted in any other form to another university. Where use was made of the work of others it has been duly acknowledged in the text.

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CONTENTS

CHAPTER		PAGE
1.	INTRODUCTION	1
2.	REVIEW OF LITERATURE	5
2.1	Definition of Malingering	7
2.2	Competence of Forensic Psychiatrists	10
2.3	Incidence Studies	12
2.4	Case Studies	13
2.5	Malingering in Specific Conditions	16
2.6	Malingering and the whole clinical picture	21
2.7	The Psychopath	29
2.8	Memory Disorders / Amnesias and Automatisms	35
2.9	Psychometric Evaluations	49
2.10	Legal Point of View	61
2.11	Dangerousness	74
3.	PATIENTS AND METHODS	83
3.1	Statistical Significance	89
3.2	Effectiveness of the items	89
4.	RESULTS	94
5.	DISCUSSION	153
5.1	Group I items	155
5.2	Group II items	163
5.3	Group III items	184
5.4	Group IV items	198
5.5	Incidental Findings	202
6.	CONCLUSIONS	209
	REFERENCES	211

CONTENTS ... CONTINUED

CHAPTER	PAGE
APPENDIX A	A1
APPENDIX B	B1
APPENDIX C	C1

CHAPTER 1

INTRODUCTION

In a criminal trial the psychiatrist may be required to comment on either or both of the following:

- 1 Whether the accused is capable of understanding the nature of the criminal proceedings (Section 77(1) of the Criminal Procedures Act 51 of 1977).
- 2 Whether the accused is criminally responsible for the offence he is charged with. (Section 78(2)).

The main problem facing the psychiatrist, doing the above mentioned investigations is to distinguish between mental illness and simulation of mental illness. Certain books use the term simulation instead of malingering. For the purpose of this study both terms will be regarded as having exactly the same meaning.

There is often a strong motive for the accused to simulate mental illness. MacDonald (1976 p.268) states "Simulation is more frequent when a suspect faces the death sentence" and this is the case in South Africa where the death sentence existed when the data for this study was collected. There are also other sentences for serious crimes that may involve long periods in prison. These also provide a motive for the simulation of mental illness.

In this setting the diagnosis of simulation is difficult (MacDonald 1976 p. 268). Van Rensburg and Harms (1983) stated that even experienced psychiatrists sometimes make incorrect diagnoses in Black forensic patients.

Factors contributing to the difficulty in the diagnosis of malingering in forensic patients are the following:

- 1.1 There is a wide range of clinical presentations of simulation (van Rensburg and Harms 1983).
- 1.2 Mental illness and simulation may co-exist (MacDonald 1976 p. 268).
- 1.3 Some mental illnesses e.g. temporal lobe epilepsy may imitate many psychiatric illnesses (Lishman 1983 p.369).
- 1.4 Cultural differences may account for differences in simulation. Ganser Syndrome (Enoch et al. 1979 p.562, 789, 791) and amnesia (Anderson et al. 1973) which are common in western patients were not found in Black patients (van Rensburg and Harms 1983).

Items that assist to separate simulation from epilepsy in the forensic setting were described by Knox (1968). These items include a definite history of epileptic attacks, a lack of motive and a lack of premeditation. The crime may also be senseless with no attempt at concealment or escape. These require good collateral information. Van Rensburg and Harms (1983) concluded

that in Black forensic patients the diagnosis of simulation depended on the whole clinical picture including collateral information. Many black patients have no telephones or proper addresses. The forensic psychiatrist is therefore faced with the difficulty of diagnosing simulation in Blacks in the absence of adequate collateral information and/or long after the alleged offence occurred when symptoms are diminished or absent.

Worldwide, very little research has been done to distinguish between mental illness, and malingering. In South Africa, the only study is by van Rensburg and Harms (1983).

Considering the diagnostic difficulties, lack of collateral information and the fact that over two hundred patients per year are observed in Fort Napier Hospital alone, research on malingering is essential.

It would appear from clinical experience, the literature and from van Rensburg and Harms (1983), that there could be items for recognizing simulation rather than diagnosing it by exclusion of mental disorder. In other words it seems possible to make a positive diagnosis of simulation rather than a negative diagnosis by exclusion of all recognisable mental illnesses.

The hypothesis to be tested in this study is as follows:
There are items or patterns of response that predict
malinger in Zulu - speaking Black forensic patients.

CHAPTER 2

REVIEW OF LITERATURE

One of the major problems concerning the study of malingering is that there is very little written about malingering in the literature (van Rensburg and Harms 1983). Boydstun (1983) stated that there is a collective professional denial of malingering that has led to a relative neglect of formal coverage of malingering in professional literature. He says this occurs because malingering is a gross violation of the basic doctor-patient trust.

Psychiatry is primarily therapeutic and not directed at legal or moral issues. Law on the other hand is a separate profession with different words, or language and often with different aims. The history of the profession of law as discussed by Slovenko (1983) clearly illustrates the current practice of law. He stated that law developed to replace a fight or bar room brawl.

These differences in the two professions together with the fact that research into malingering involves red tape from two disciplines may further discourage psychiatrists from working and writing about malingering.

Some people feel that psychiatrists should not be involved at all in forensic work. Szasz (1962) stated

that there was no relationship between mental illness and crime. Gunn (1977) held the opposite view. The courts however require the psychiatrist to assist by his or her special expertise and knowledge.

In fact, compared to other subjects in psychiatry even a large text book of psychiatry such as the Comprehensive Textbook of Psychiatry (CTP III) by Kaplan, Freedman and Sadock (1983p.p.2811-2875) has a relatively short chapter on malingering.

The same paucity of information about malingering applies to journal articles as will be discussed below. This information is thinly spread to cover important areas in psychiatry.

Mordechai et al. (1987) stated that malingering occurred in three broad areas: legal, insurance and the military. This review will be limited to the legal area.

The literature on malingering in the legal context can be divided into:-

- 1 Definition of malingering
- 2 Diagnostic competence of forensic psychiatrists
- 3 Incidence studies
- 4 Case studies
- 5 Items indicative of malingering in specific conditions
- 6 Items indicative of malingering considering the whole

clinical picture

- 7 The psychopath
- 8 Memory disorders or amnesias and automatisms
- 9 Psychometric evaluations in forensic settings
10. The legal point of view
11. Dangerousness

2.1 DEFINITION OF MALINGERING

Many authors especially when the psychoanalytic influence was at its peak regarded malingering as a form of mental disease (Resnick 1984). Others disagreed with this view and Szasz (1962) stated that malingering has no meaning in the normal physician and patient relationship. It only becomes an issue when the physician represents a social group or body in the role of referee. It is part of the social and psychological games played by society.

Boydston (1983) stated that malingering was not an illness but a behaviour that involved cheating which violates cultural expectations or laws. Doctors do not make the diagnosis of malingering easily. Resnick (1984) summed this up as follows: "Although physicians respond to counterfeit illness with anger, as if they have been given counterfeit dollar bills, there is a great reluctance to call someone a liar".

The reasons for not using the term malingering include the risk of assault and the legal liability. Davidson

(1965) stated that most authors should state "There is no objective evidence to support the subjective complaints," rather than to use the term "malingering". This is done even though legal expert evidence about malingering is protected by immunity.

The many different terms used in relation to malingering were given by Resnick (1984) as follows:

- 2.1.1 Simulation (positive malingering) is feigning symptoms which do not exist.
- 2.1.2 Dissimulation is the concealment or minimization of existing symptoms.
- 2.1.3 Pure malingering is the feigning of disease or disability when it does not exist at all.
- 2.1.4 Partial malingering is the conscious exaggeration of symptoms which do exist.
- 2.1.5 False imputation is the ascribing of actual symptoms to a cause consciously recognised to have no relationship to the symptoms (Garner 1965).

However other authors may use these terms differently and in the past even the term "factitious disorder" was used more or less interchangeably with malingering. The Diagnostic and Statistical Manual of Mental Disorders 3rd Edition Revised. (DSM III R) defines malingering as the intentional production of false or grossly exaggerated physical or psychological symptoms, and lists the medicolegal context of presentation as a

major area in which malingering should be suspected.

In malingering the action is conscious, voluntary and goal directed with a secondary gain. Factitious disorders involve the voluntary production of psychological symptoms in order to assume the patient role (DSM III R 1987 p.360). The presence of a clearly definable goal is the main factor that differentiates malingering from a factitious illness.

The Ganser syndrome which consists of giving approximate answers, which are relevant but may be absurd occurs most often in prisoners (Ganser, 1898). The symptoms begin after and as a result of imprisonment and are not related to the cause of the crime. The DSM III R classifies the Ganser syndrome under the factitious disorders.

Some authors doubt the very existence of the Ganser syndrome. Wertham (1949 p. 191) stated "A Ganser reaction is a hypothetical pseudo-stupidity which occurs almost exclusively in jails and in old fashioned German text books. It is known to be almost always due more to conscious malingering than unconscious stupefaction". There is still a controversy as to whether the Ganser syndrome is a hysterical phenomenon, a psychosis or frank malingering (Resnick 1984).

2.2 DIAGNOSTIC COMPETENCE OF FORENSIC PSYCHIATRISTS

Michael Foucault (1965) has criticized psychiatry which includes forensic psychiatry, for its move from seeing patients as unique individuals with individual characteristics to seeing patients as members of groups with shared characteristics. The mad are called insane and regarded as medically ill or "medicalized". The criminals are put into prisons that are used as warehouses where they follow a strict routine or are "routinized" in order to conform. Everyone has a suitable diagnostic category reduced and controlled by the developed and developing ideas of pathology and deviance.

Kaplan & Miller (1986) stated in a similar vein that even the 19th century psychiatry appeared to be moving toward social categorization where there was a shift from individual fault to social dangerousness. All this suggests that people are no longer seen as unique individuals with unique circumstances but as members of a social group. This applies to the specific items or patterns of response used to diagnose malingerers. However, other psychiatrists such as Resnick (1984) disagree with this view and use specific items to diagnose malingering. They regard the use of specific items that indicate malingering as an improvement in forensic psychiatry and psychology which have become more professional and established as a field.

Another criticism of forensic psychiatry was raised by Kaplan & Miller (1986). They stated that as more legal knowledge was obtained and the practicing of diagnostic skills with legal ends in mind increased, with brief evaluations, there was a loss in clinical skills that were originally sought.

They stated further that in the beginning i.e. up to the first part of the 20th century most psychiatrists practised in prisons or state mental hospitals where they spent a significant amount of their time in direct clinical treatment of patients. They concluded that there is a danger that this direct clinical experience may be decreased by the move of psychiatrists from prisons and hospitals to private offices.

The assumption of this argument is that psychiatrists' knowledge of specific patients increases through ongoing clinical work. Ennis and Litwack (1974) stated that the level of psychiatrists' expertise in legal situations such as in the prediction of dangerousness, in making a diagnosis and in the determination of criminal responsibility was insufficient to justify their being certified by courts as experts. This extreme view is rejected by the reality of the situation and psychiatrists are regarded as experts in most countries.

In addition to the competence issues, the ethics of forensic psychiatrists have been attacked because of

the great publicity of cases involving psychiatrists and the perception that defendants who successfully plead insanity had "beaten the rap" (Kaplan and Miller 1986).

In response to these criticisms the American Academy of Psychiatry and the Law which now has over 1200 members, was founded in 1969. In 1976 the American Board of Forensic Psychiatry was established in order to create standards for forensic psychiatry (Kaplan and Miller 1986). The concerns of the quality of private evaluations as psychiatrists move out from prisons and mental hospitals in which the speciality was originally based, have not been dismissed completely.

2.3 INCIDENCE STUDIES

Many studies are concerned with incidences of mental illness and crime. Gunn (1977) describes the analysis of a one year cohort of hospital order cases collected over a previous ten year period. This study showed that about 41% were diagnosed schizophrenic, 35% subnormal, 12% personality disordered and 8% affectively disordered.

An important South African study was done by van Rensburg (1979) who studied 177 observation cases at Oranje hospital over a two year period. He found 165 (93.2%) were males and 12 (6.8%) females. When

relating specific diagnoses to the type of crime committed, he found, out of 78 patients 41 had schizophrenia, 16 were mentally retarded, 11 had epilepsy, 4 had alcohol psychosis, 3 had a chronic organic brain syndrome and 3 were diagnosed as miscellaneous. Similar findings were reported by Nair and Wessels in 1992.

Incidence studies are helpful in confirming that mentally ill people may commit crimes.

Pasewark et al. (1979) studied people found not guilty by reason of insanity in New York during the period of 1971-1976. There were 225 people in this study. Out of 109 people, 87 had been hospitalized. This suggests that previous hospitalization may be a pointer toward mental illness rather than malingering. Also in this study most of the offenders were young people. This suggests that age may be important in separating mental illness from malingering. Unfortunately, no study has been done to specifically test these ideas in groups of malingering and ill patients.

2.4 CASE STUDIES

Other articles in the literature have concentrated on case studies. One of the biggest of these case studies is by Guojonsson et al. (1980) who discussed the nature of psychiatric evidence in Icelandic criminal proceedings. They presented findings from an

investigation of the role of amnesia, malingering and over-controlled hostility among different types of offenders.

Over a period of 6 years the great majority of all psychiatric reports requested by the courts were done by the same psychiatrist who had standardized his assessment. The same psychological tests were administered to most subjects.

They stated that their procedure made it easier to report reliable psychological and psychiatric information about the defendants. There were 64 reports written. The Minnesota Multiphasic Personal Inventory (MMPI) was used to assess over-controlled hostility. They stated that possible faking in criminal trials occurs in 3 areas namely; the faking of a deficit in psychometric tests, the faking of amnesia and the faking of psychological and psychiatric symptoms.

They concluded that amnesia was most common in homicide cases, and was almost always associated with alcohol intoxication. There was a high rate of over-controlled hostility among sex offenders. They stated that deliberate faking of an intellectual deficit on psychometric tests occurs rarely in a forensic context.

In this study all the psychiatric reports analysed were prepared by one psychiatrist. There is no method of

testing the reliability of this information. One would need at least two psychiatrists to improve the reliability of this study.

Although a fixed interview format together with diagnostic criteria improves reliability as stated by Spitzer et al. (1975), its use in the forensic setting is questionable.

Structured interviews ask specific questions. In the forensic setting this can be counter productive. Macdonald (1976p.267) states that leading questions in the interview, such as questions about hallucinations may give the patient ideas about mental illness. Finally this study by Guojonsson et al (1980) does not indicate whether leading questions were asked and how the psychiatrist decided between malingering and mental illness.

Psychological tests are not well established in the forensic setting as will be discussed below in the review in the section on the psychological evaluation in forensic psychiatry.

The literature on items indicative of malingering is very much a subjective and personal matter. Different writers give their own clinical impressions usually backed up by a few cases.

Macdonald (1976p.267) states that the faker of insanity usually has a poor knowledge of an insane person. He continues to state that there are no textbooks of

psychiatry in the jail library and that the ethical defence attorney provides no hints. He stresses that the onset of symptoms usually occurs after the arrest and the symptoms are seldom present before the arrest. Adequate collateral information is needed to establish the condition before arrest.

Jones and Llewellyn (1917) say the malingerer shows a greater number of symptoms of mental illness. They add that the symptoms are more marked than in mental illness and state for example "He sees less than the blind, he hears less than the deaf and he is more lame than the paralyzed".

In practice the grading of the severity of a symptom is difficult. Also, there is a lack of research that confirms or refutes these impressions in both the malingering and ill patients.

2.5 ITEMS INDICATIVE OF MALINGERING IN SPECIFIC CONDITIONS

Epilepsy is one of the few areas in which items that suggest malingering have been given by Walker (1961), Knox (1968) and Fenton (1972). Lishman (1980 p. 346) using these items gave guidelines for assessing the probability that the offence was committed during a period of epileptic automatism or post-ictal confusion.

The guidelines are:-

- 2.5.1.1 The patient should have a past history of unequivocal epileptic attacks which in the

majority of cases, consist of grand mal seizures or partial epileptic seizures together with automatic behaviour. The automatic behaviour however does not have to have occurred previously but if present, it strengthens the confidence of the diagnosis. Vague perceptual disturbances for example déjà vu sensations or feelings of depersonalisation should not be accepted as indicating temporal lobe epilepsy without other distinctive features as these symptoms may occur in neurotic patients.

- 2.5.1.2 The diagnosis must be based on clinical evidence as an abnormal electroencephalogram (EEG) only lends support but does not establish a diagnosis. An epileptic may have a negative EEG.
- 2.5.1.3 The crime will always have been sudden and motiveless with no evidence of planning or premeditation.
- 2.5.1.4 The crime will appear to be senseless, and not entirely appropriate to the circumstances.
- 2.5.1.5 There would typically have been little or no attempt at concealment and often no attempt at escape.
- 2.5.1.6 The abnormal behaviour will have been of short duration lasting minutes rather than hours.

2.5.1.7 Witnesses may have noted impairment of awareness, by for example inappropriate actions or gestures, stereotyped movements, unresponsiveness or irrelevant replies to questions. There may also be an aimless wandering around or a dazed or vacant expression.

2.5.1.8 The patient should have amnesia for the event but no continuing anterograde amnesia when full awareness has occurred.

He concluded by saying that the fewer the items found in a patient the less likely is the act due to epilepsy.

Falconer and Taylor (1970) stated abnormal behaviours were more likely to arise from epilepsy if they are sudden in onset, short lived, irregularly recurrent and out of character with the individual concerned.

Lishman (1980p.345) stated that most authorities agree that murder or lesser crimes of violence occurring during seizures or post-ictal "automatisms" must be very rare indeed.

Although guidelines given by Lishman above are very useful there are problems linked to them in practice. For one thing they require good collateral information which is often not available to the psychiatrist because of poor communication in places like South Africa.

Many black patients have no proper addresses or telephones. Also, the psychiatrist sees the accused early in the court proceedings before much evidence has been led and/ or long after the alleged offence when symptoms are diminished.

An epileptic may also confabulate because of amnesia. Thirty days in the observation unit may pass without a single fit being observed if there is a low fit frequency. The complexity of the crime which is an important item in crimes related to epileptic automatisms or post-ictal confusion is also not mentioned. There is an absence of studies that compare the presence of these guidelines in forensic patients diagnosed as malingering and those patients who had genuine epilepsy bearing in mind that amnesia is a common symptom in forensic psychiatry.

Hysteria is another condition where items that separate illness from malingering have been given although at times this distinction may be difficult or impossible. Prins (1980 P.P.73-74) gives the following items:-

- 2.5.2.1 The motivation in malingering is at a conscious level, whereas in hysteria it is unconscious.
- 2.5.2.2 The symptoms in the malingerer are usually overacted and exaggerated, when compared to a patient with hysteria.
- 2.5.2.3 When the malingerer is being observed the symptoms may be present and may disappear when he or she is alone.

2.5.2.4 The malingerer's symptoms are under voluntary control and tend to occur when needed.

2.5.2.5 In malingering many of the usual signs and symptoms associated with true illness, may be missing.

These items are difficult to apply in practice. The decision whether the motivation is conscious or unconscious and whether the symptoms are under voluntary control or not, depends on the diagnosis in the first place. In both the conditions of malingering and hysteria the symptoms may be exaggerated. The assessment of the degree of exaggeration may present a clinical problem. These items again are clinical impressions only.

Miller (1961) stated that differentiation between conscious and unconscious purpose is not susceptible to any form of scientific inquiry and depends on the fallible process of one man's assessment of what is going on in another man's mind. He continued to state in 1966 that the distinction between hysteria and malingering is not possible clinically and has no legal meaning. Studies are needed to statistically compare the presence or absence of these items in malingering and mentally ill patients.

Another mental syndrome that may be difficult to separate from malingering is post traumatic stress disorder (PTSD). PTSD occurs in forensic psychiatry following such things

as torture in order to get a prisoner to sign a false statement. The whole outcome of the trial may depend on this statement making the accurate assessment of post traumatic stress disorder very important in such cases.

Resnick (1984) stresses that the post traumatic stress disorder consists almost entirely of subjective symptoms such as dreams or thoughts about the event. He continues to state that the content of the patient's thoughts or dreams should be verified by others who have heard the claimant talk. Also, one needs a detailed history of the patient prior to the traumatic event, looking for the presence of such symptoms as insomnia and difficulties with concentration. He further regards as important such factors as the time elapsed between the stressor and symptom development together with the relationship between any prior psychiatric symptoms and current impairment.

Finally, van Rensburg and Harms (1983) concluded that the diagnosis of malingering depended on the whole clinical picture. The information of malingering is limited chiefly to a few specific conditions in the literature. This makes practical application of this knowledge difficult. Guidelines which give a general approach to all types of mental illnesses are needed.

2.6 ITEMS INDICATIVE OF MALINGERING THAT CONSIDER THE WHOLE CLINICAL PICTURE

The EEG has been studied to look at a wider range of

conditions in forensic cases. The use of the EEG in separating the types of illnesses in 64 prisoners facing charges of murder was studied by Stafford-Clark and Taylor in 1949.

Where the killing had been incidental to some other crime or in self defence 9% of EEGs were abnormal; where there was a clear motive for killing 25% were abnormal; where the crime was apparently motiveless 73% were abnormal; among those found unfit to plead or guilty but insane 86% were abnormal.

This suggests that a higher EEG abnormality occurs in insane patients. The sample is not very large and the statistical significance of the results in this study is not stated. The results are given as percentages. Most importantly as discussed above, an EEG may or may not be abnormal in epileptic and normal subjects.

In a local study van Rensburg and Harms (1983) looked for items indicative of malingering in six black patients. These patients were sent to a psychiatric hospital to be observed for thirty days. Four of these patients had the diagnosis of malingering, one was diagnosed as malingering with concomittant frontal lobe syndrome and one had psychosis only.

The presence or absence of items indicative of malingering in each case was agreed upon by two psychiatrists and a psychiatric nurse. This was done to increase reliability.

These items were obtained from clinical interviews with the patient and from observation of the patients' behaviour in the observation ward. Seventeen items indicative of malingering were identified. They were then arranged in alphabetical order as follows:-

- (a) Absurd (or nonsense) response.
- (b) Incongruence, e.g. frightening hallucinations do not upset the patient.
- (c) The patient gives a different story or changing history from day to day.
- (d) Denial or over denial concerning misdeed or lies about the misdeed.
- (e) Giving a feeling of being inauthentic and making up symptoms.
- (f) Normal behaviour when not under direct observation.
- (g) Very stupid answers or response.
- (h) Observer is not convinced whether the patient is psychiatrically ill or malingering.
- (i) Gives answers readily to leading questions and even to absurd leading questions that the accused thinks indicate mental illness.
- (j) No gross symptoms of mental illness.
- (k) Unapplicable answers that do not match the existing logical thinking.
- (l) Visible contractions of facial muscles.
- (m) Stops simulating after being confronted or becoming convinced that it would be better to face punishment rather than spend a long period held as a State

President's Detainee (SPD) in a psychiatric hospital.

- (n) Has normal thoughts and concentration in spite of having gross disorientation of the surroundings.
- (o) In spite of "psychiatric" symptoms one can see from the symptoms (especially non-verbal) that the accused has normal contact with reality.
- (p) Goal directed (non-pathological) negativism.
- (q) The form and content of the syndrome differs from the known syndrome of mental illness.

A comparison of the six cases was done in terms of similarity, differences and possible patterns of the items indicative of malingering. They concluded that the most valuable pointers to the diagnosis of malingering were exaggerated symptoms, contradictions, variation in clinical picture and the "pantomime" feeling experienced by the investigator.

This study is very useful, in that for the first time many of the criteria used by psychiatrists to diagnose malingering in everyday practice in Black patients in South Africa are listed. Also three symptoms were regarded as most valuable pointers toward malingering and could assist clinicians in everyday practice. Unfortunately the sample size of this study (six cases) is very small. This allows for a description of symptoms but one is not able to test statistical significance of any of these items.

Some of these items are very similar and different

clinicians may experience problems in applying them as separate items in every day practice. For example items (a), (g), (i) and (k) may all mean that the defendant is giving nonsense answers. Items (j) and (q) may both mean that the presentation is not in keeping with any known syndrome of mental illness. Item (m) needs the diagnosis of malingering first, before the item can be applied. Items (e) and (h) are the observers subjective feelings which may vary between different clinicians assessing the same case.

This study reflects the views of only two psychiatrists. Each person has his or her own views of how malingering should be diagnosed. This involves mainly exclusion of mental illness and the use of individual impression. A study of the common items of malingering used by many different psychiatrists is necessary.

Criminals and prisoners seldom malingering a neuroses because this diagnosis does not excuse legal responsibility (Boydston 1983). Neuroses may be used as mitigating factors. The distinction between malingering and neurosis in the forensic setting is important. Davidson (1965) gave the following items that suggest malingering and differentiate malingering from neurosis:

2.6.1.1 There is a past history of irresponsibility,
dishonesty or inadequacy.

2.6.1.2 Unwilling to accept alternate employment for
which capable.

- 2.6.1.3 Reluctant to have treatment such as psychiatric hospitalization, surgery etc.
- 2.6.1.4 Symptoms are present only when the patient knows he or she is being watched.
- 2.6.1.5 Patients resist re-examinations especially by groups of doctors.
- 2.6.1.6 Patients show poor compliance with therapy and symptoms are not influenced by suggestion.
- 2.6.1.7 There are typical results on psychological testing.
- 2.6.1.8 There is a lack of preoccupation with the events in dreams, thoughts or speech.
- 2.6.1.9 There is preserved capacity for play and there is enjoyment of entertainment.

Unlike the neuroses, the psychoses have received more attention in the literature dealing with malingering. The most comprehensive list of items that suggest malingering is given by Resnick (1984). This is a combination of the ideas of Resnick and other authors. He stated that the items were clues to malingered psychosis and listed these items as follows:

- 2.6.2.1 Malingerers may overact their part (Wachspress et al 1953).
- 2.6.2.2 Malingerers are eager to call attention to their illnesses, which is in contrast to schizophrenics, who are often reluctant to discuss their symptoms (Ritson & Forest 1970).

- 2.6.2.3 It is more difficult for malingerers to successfully imitate the form, rather than the content of schizophrenic thinking (Sherman et al. 1975). One of the common errors is the belief that nothing must be remembered correctly and that the more absurd and inconsistent account of events the better the deception. The psychotic's train of thought changes rapidly and is often abrupt; the malingerer may show premeditation and hesitation in presenting a succession of ideas (Ray 1871).
- 2.6.2.4 Malingerers' symptoms may fit no known diagnostic entity. Symptoms may have been selected from various psychoses.
- 2.6.2.5 Malingerers may claim the sudden onset of a delusion. Systematized delusions usually take several weeks to develop.
- 2.6.2.6 A malingerer's behaviour is unlikely to conform to his or her alleged delusions, whereas acute schizophrenic behaviour usually does. The "burned out" schizophrenic may no longer demonstrate agitation over his or her delusions.
- 2.6.2.7 A malingerer may tell a far-fetched story to fit the facts of his or her crimes into a disease model. One armed robber said that in response to a command hallucination he gave all the stolen money away.
- 2.6.2.8 Malingerers are likely to have contradictions in

their accounts of the crime. These may be evident within the story itself or between the defendant's version and the physical evidence.

2.6.2.9 Malingerers tend to present themselves as blameless within their feigned illness.

2.6.2.10 Malingerers are more likely to repeat questions or answer questions slowly to give themselves more time to make up an answer. There may be frequent replies of "I don't know".

2.6.2.11 Malingering should be suspected in defendants pleading insanity if a partner was involved in the crime. Most accomplices of normal intelligence will not participate in psychotically motivated crimes.

2.6.2.12 Malingerers are likely to have a clear motive for their crime. This is not related to the psychosis. A crime without apparent motive, such as killing a stranger suggests mental illness. Genuine psychotic explanations for rape, robbery or cheque forging are unusual.

2.6.2.13 It is rare for malingerers to show perseveration which usually indicates organic brain damage or a very well prepared malingerer.

2.6.2.14 Malingerers may describe the content of their auditory hallucinations in a stilted manner. A robber stated for example that voices kept shouting "Stick up, stick up".

2.6.2.15 Malingerers are unlikely to show the subtle signs

of residual schizophrenia such as blunted affect, impaired relatedness, concreteness or peculiar thinking.

2.6.2.16 Persons who have true schizophrenia may also malingering auditory hallucinations to escape criminal responsibility. These are the most difficult cases to accurately assess.

These items that indicate psychosis and neurosis are used by different psychiatrists in everyday clinical practice. There are no studies that test the validity of these items in malingering and mentally ill patients. Also, a study is needed to show which items are regarded as more important and used commonly by a number of psychiatrists.

2.7. THE PSYCHOPATH

No review of the literature on malingering in forensic psychiatry is complete without a discussion of the psychopath. Macdonald (1976 p.180) states that the psychopath or antisocial personality disorder may be one of the most difficult diagnosis to make in the forensic setting. Although not regarded as insane psychopaths are important in legal and medical situations.

Depending on the circumstances of the individual case the diagnosis of psychopathy may be regarded as a mitigating or extenuating factor. The diagnosis of psychopathy is also important in deciding on the prognosis of treatment and the rehabilitation of an accused. This in turn may

influence the type of punishment given. The prisons have many psychopaths although there are many outside who do not break the law.

The psychopath gives a false positive impression of himself or herself to fool the medical and legal profession. As most psychopaths are male the male gender will be used as from now.

Many writers have described the talented psychopath as a smooth talking faker with superficial charm who can be easily detected by the physician. Macdonald (1976 p.286) says that experience shows that this is not the case. Superficial charm for example cannot be easily separated from charm. The pitfalls of diagnosis have to be seen in terms of the classical clinical features of the psychopath as discussed by Macdonald (1976 p.p.280 - 283).

He states that classical features of a psychopath include disturbances of emotion or feelings, disturbances of thinking and disturbances of behaviour. Psychopaths lack the ability to feel with others and have no affection. They are callous and cynical. They have no guilt and show no remorse and therefore unable to use these feelings to control their behaviour. They are emotionally immature and self-centered or egocentric. Poor thinking may be shown by the fact that although they may have a very high intelligence, as shown in tests they show a marked and amazing lack of judgement and foresight in their daily

activities and criminal acts.

The emotional immaturity, the inability to tolerate frustration, the lack of feelings of guilt, together with poor judgement, may result in impulsive behaviour often in the form of repeated antisocial acts. They fail to conform to accepted social customs and laws. This may result in such problems as alcoholism, drug addiction, aggression with assault, homicide, murder, sexual promiscuity or perversions, theft, cheating and lying. They don't seem to learn from negative experiences and present inexplicable and self destructive behaviour.

Although all these clinical features of psychopathy described above are central to the diagnosis of psychopathy and figure prominently in most psychopaths they represent only the negative aspects. The positive aspects or so called paradoxical aspects of the psychopath contribute to diagnostic errors in assessment of these people. No person is all good or all bad.

Macdonald (1976 p.p.281 - 283) discusses the positive aspects of the psychopath and how these result in diagnostic difficulties for the clinician. He stated that the unreliability and irresponsibility do not show in every situation. The obligations are not all neglected. Promises are not all unfulfilled.

Although impulsive at most times it does not mean that there are no instances of self control and self restraint.

Although cruel at most times they may show compassion for the weak, the elderly, and the young. Their lack of guilt does not mean that they do not show remorse in all situations or are incapable of remorse.

Their lack of persistence does not exclude achievements that require much effort. They may become lawyers or doctors. Some psychopaths have a good work record. Henderson (1947) gives Lawrence of Arabia as an example of a creative psychopath who achieved in literature, war and administration.

The cruel and self-destructive traits which show a disregard for rules and society may result in much achievement but it will be limited to a brief span. Also if one looks at the ordinary daily situations of the life of an achieving psychopath, one sees the poor adaptations to ordinary life situations typical of a psychopath.

The psychopath does not lie in every situation. Macdonald (1976 p.283) states further that in his experience most psychopaths are truthful but within limitations. He continues to state that "Any discrepancy is explained with conviction and without hesitation". Seeing the psychopath as all bad all the time may lead to a misdiagnosis.

Macdonald (1976 p.p.283-284) discusses further the other factors that may mislead the physician in the diagnosis of psychopathy. These include the speech, manipulation of the clinician by the patient, the presence of neurotic

symptoms, the blaming of others, the charming mood, high position or rank in life and psychopathy in colleagues.

The psychopath carefully hides from the psychiatrist those thoughts and actions that might reveal his true characteristics. Often the claims of the patient are accepted at face value.

Speech, it has been said has been given to man to conceal his thoughts (Macdonald 1976 p.283). Macdonald (1976 p. 283) discusses the two main techniques the psychopath uses to hide relevant information. The psychopath responds to vague questions with vague answers. He also interprets questions in a very concrete manner and answers concretely. If asked if he has been in jail before, his response may be "no" and yet the answer may be "yes" if one asks about a particular jail.

The psychopath manipulates the physician by subtle or not so subtle praise of his skills together with clever criticism of other therapists. His charm and good mood makes the physician happy to be in his company and less likely to make a negative diagnosis. His sincerity inspires confidence in the physicians. Self - centered behaviour is hidden behind a mask of selflessness. Conventional expression of feeling for others may hide the immature and deceptive love, which can be recognized by the fact that it consists only of words or verbal expression.

There are no actions that suggest sustained affection.

Macdonald (1976p.285) stresses that the presence of anxiety and depression does not exclude the diagnosis of psychopathy, despite the fact that freedom from neurotic symptoms is a factor of the condition. Henderson (1947) states that a psychopathic background exists in many psychoneurotics. Although common clinical teaching separates psychopathy from neurosis both conditions are thought to be expressions of internal emotional problems. Bosselman (1964) states that the psychopath uses the environment for his internal struggles. Macdonald (1976p.299) states that the repressed impulses are expressed by acting as compared to phobias, conversions or other neurotic symptoms. He says the difference is "neurotic acting out" vs "neurotic symptoms".

All in all it may be easy to miss the diagnosis of psychopathy. As stated by Macdonald, the physician should be ever alert for the ever present possibility of psychopathy in the forensic setting. Macdonald's good clinical description of the psychopath emphasizes the difficulties in forensic psychiatry and therefore scientific studies are needed to validate certain items that may assist the clinician even when faced by the psychopath.

2.8. MEMORY DISORDERS OR AMNESIAS AND AUTOMATISMS

Amnesias and automatisms may be very difficult to separate from malingering and require a more detailed review.

Amnesias

Amnesia is a common symptom that has to be separated from malingering in forensic psychiatry. All the organic conditions such as metabolic disorders, trauma and substance abuse that affect the brain can cause amnesia. A closer look at the literature about the presentation, classification and assessment of amnesia is necessary, in order to see how true amnesia differs from malingered amnesia.

Lishman (1983 p.34) states that a memory disorder is a symptom of the utmost importance in psychiatric practice, in that it is often the single decisive factor which indicates the presence or absence of underlying cerebral disease. In fact he continues, it is one of the most sensitive indicators of brain damage or dysfunction regardless of the cause.

The common practice of the assessment of a memory disorder is given by Lishman (1983 p.39) as follows:

2.8.1.1 Immediate memory span is tested by the immediate reproduction of material such as a brief digit sequence or a sentence within the span of

attention. This tests whether the brain mechanism for registration of new information is intact.

2.8.1.2 Recent memory or current memorising is tested by assessing the ability to learn or retain information over a short period of time. Usually one asks the patient to repeat information after a few minutes, for example 2 - 5 minutes, have elapsed.

2.8.1.3 Remote memory tests test the ability to recall information that happened a long time ago before the onset of the memory difficulty. This includes such skills as speaking, writing and calculation. He states however that it is difficult to assess remote memory completely.

Saunders and Warrington (1971) also stated that it is difficult to assess personal memories far back in time. Lishman (1980 p.p.34-47) describes three classical memory disorders based on the above assessment.

2.8.2.1 Focal lesions which involve either the hypothalamic-diencephalic system or the hippocampal regions have impaired recent memory or current memorising with disorientation in time always occurring. If severe, current memorising or learning may be nil. If less severe uncertainty of events with gross omissions or condensations may occur. He states

careful testing in these problems shows that all types of material both verbal and non - verbal such as drawings and motor skills are affected . An important clinical feature is that there is a preservation of immediate memory.

- 2.8.2.2 Diffuse brain disease amnesic defects are commonly global affecting both recent and remote events. There is also a widespread impairment of intellectual functioning with the memory disorder being either the earliest or most prominent manifestation. Therefore the patients' general care, social and occupational functioning may be impaired.
- 2.8.2.3 Psychogenic amnesia presents with a combination of remote and short term memory defects. Total impairment of immediate memory also suggests psychogenic amnesia. Psychogenic amnesia is either dense and global or restricted to specific themes. When global, long periods of past life and personal identity may be blotted out. Therefore psychogenic amnesia is much more severe than organic caused amnesia unless severe disturbance of consciousness has occurred. Inconsistencies in the account may occur.

The classical classification of memory defects described above has been challenged by Warrington and Weiskrantz (1968, 1970) and Warrington (1971). By presenting

graded cues they showed learning and retention over a considerable period in severely amnesic patients. This suggests that the defect may have to do with standard methods of recall. These were limited studies and further studies are needed.

Lishman (1983 p.201) further defines amnesic defects surrounding head injury. This classification applies to other causes of brain injury such as infection, intoxication and other organic conditions that affect the brain.

2.8.3.1 Post - Traumatic Amnesia (PTA) is "the time from the moment of injury to the time of resumption of normal continuous memory". Characteristically the termination is abrupt. A patient who has been unconscious for several hours usually has complete and uneventful recovery within some days or weeks.

2.8.3.2 Retrograde Amnesia (RA) is "the time between the moment of injury and the last clear memory from before the injury which the patient can recall". The RA is much shorter than the PTA although rarely the reverse may be seen. RA may be long initially then shrink in days and weeks as normal orientation recurs.

Lishman (1983 p.40) also states that retrograde amnesia often covers a period of months or years before onset of a chronic illness such as tuberculous meningitis. Time

sense is characteristically disordered resulting in the mixing up of the sequence of events.

Confabulation or falsification of memory can be a striking feature in amnesic syndromes. It is more common in the early stages than the chronic stages of the disease but does not occur in every case (Victor et al. 1971 p.p. 41-42, 680-714). It may present as a fluctuating phenomena at times which may look like malingering. There is a need for research that considers all the above factors on amnesia and can provide guidelines for practical assessment of forensic patients.

2.8.4 . Amnesia and Epilepsy

Amnesia caused by epilepsy is commonly claimed by defendants in the forensic setting. Although epilepsy has been discussed above a more extensive look at the literature on epileptic amnesia with a special emphasis on malingering is needed because it is a vast subject. Lishman (1983 p.p.295 -305) explains how amnesia occurs in epilepsy. He states that the parts of the brain that keep one alert and conscious include the brain stem reticular formation and the nuclei of the thalamic system that project to all parts of the brain cortex. In generalized epileptics there is a disturbance of this system where abnormal discharges spread rapidly to involve all the areas of the cortex at virtually the same time. Consciousness is impaired immediately with no warning or

aura. The seizures are bilaterally symmetrical. There are two types of generalized epilepsies namely the petit mal and grand mal seizures. Merlis (1970) and Gastaut (1970) classified epilepsy into (1) generalized epilepsies; (2) focal epilepsies and (3) unclassifiable and mixed forms. A description of this classification follows below as given by Lishman (1983).

Petit mal epilepsy

This is commonly seen in children and only occasionally persisting into adulthood or later followed by grand mal seizures. The patient loses consciousness for a short period of four or five seconds. Occasionally this can last up to thirty seconds. Posture and balance are well maintained except that the head may slump forward.

Lishman (1983 p.297) states that the frequency of petit mal attacks is commonly five to ten per day. He continues to say that runs of attacks may continue in rapid succession. This will result in an extended period of amnesia which may have forensic significance, as the patient's version of events may be regarded as malingering. Fortunately the EEG is very characteristic, and consists of 3 per second wave and spike discharges.

Grand mal seizures

Classically there is sudden loss of consciousness with no warning or aura. Some patients though do have prodromata

such as irritability, tension, malaise, headaches or nausea, a few hours or days prior to the fit and that seem to get worse as the fit approaches. The patient falls to the ground and has the tonic and clonic phases, which involve all parts of the body and are symmetrical. The fit is followed by deep sleep then nausea, vomiting and headache. The sleep may be replaced by confusion.

On recovery there is total amnesia for the content of the attack and only several seconds extending in a retrograde direction. As part of the fit the patient may bite the tongue, urinate or soil themselves. Seizure activity limits the ability to commit an offence. The forensic significance of the details of the grand mal seizure is that the more symptoms spontaneously volunteered by a patient the greater the likelihood in most cases of the presence of a true grand mal seizure rather than malingering or other diagnosis.

The EEG may not be of much help as 20 % to 30 % of grand mal epileptics showed normal interseizure EEG's on a single routine record (Kiloh et al. 1972 p.p. 157-299, 506-532). They continue to say that 40 % showed non specific abnormalities and only about between 30% - 40% had definite specific abnormalities of wave and spike or polyspike and wave complexes. In a total of 29 cases Nair (1985) found only 21 % had specific EEG changes.

Focal epilepsies

The seizure discharge begins in some specific part of the cortex or a specific focus. Depending on the site of origin of the seizure a type of warning or aura occurs e.g. occipital cortex presents with visual disturbances. The auras start abruptly and last for a few seconds up to a minute although subjectively they may seem longer (Pond 1957).

Lishman (1983 p.311) states that although on recovery of consciousness the aura is usually remembered this is not invariably the case. However he warns that the auras may change with the passage of time and if proper records are not kept the patient may be regarded as having a psychogenic disorder. This may also look like malingering. The focal seizures may consist of simple or elementary symptoms e.g. motor Jacksonian epilepsy, or complex symptoms as seen in psychomotor seizures.

Focal epilepsies may lead to generalized convulsions, although these grand mal convulsions are often asymmetrical. Of special interest is the "psychomotor attack" where the focal discharge especially from the temporal lobe spreads to and is confined to the limbic system and does not spread to the centroencephalic system. Lishman (1983 p.311) maintains that in such cases consciousness is seriously impaired and yet complex behaviour which he describes as psychomotor attack can

still be carried out.

The aura of the psychomotor seizures commonly precedes the psychomotor seizure and is usually similar to those found in temporal lobe epilepsy Lishman (1983 p.317). Lishman (1983p.313) continues to describe the auras of temporal lobe epilepsy as follows :-

2.8.4.1 Autonomic effects and visceral sensations

The most common type of temporal lobe aura is the "epigastric aura" consisting of ill defined sensations rising from the epigastrium upwards towards the throat. Falconer and Taylor (1970) stated that typically this sensation was described as either churning, fear or even pain in the stomach. Lishman (1983 p.313) continues to state that other autonomic effects are experienced in the other systems as follows:

Gastrointestinal symptoms include salivation and borborygmi. Cardiovascular symptoms include flushing, tachycardia and precordial pain. Respiratory symptoms include cough and apnoea. Central nervous symptoms include odd feelings in the head, dizziness or true vertigo accompanied by tinnitus.

2.8.4.2 Altered perceptual experiences

These include distortions of perceptions and spontaneous hallucinations. Feelings of derealization and depersonalisation may be

prominent. Changes in recognition of things occur where strange things seem familiar called *deja vu* and where familiar things seem unfamiliar called *jamais vu*. The hallucinations involve all modalities. The gustatory hallucinations may be accompanied by chewing or swallowing movements. Classical visual hallucinations include complex hallucinations of scenes, faces or past experiences.

2.8.4.3 Cognitive abnormalities

The disturbances of speech and thought may consist of mixed-up thinking, thought intrusion or blocking, which is indistinguishable from schizophrenia. Memory disturbances include sudden difficulties in recall and the experience of time passing quickly or standing still.

2.8.4.4 Affective experiences

Any emotion can occur, the most common being anxiety and fear. Others are guilt, depression and anger, all of which may be extreme.

When faced with amnesia clinicians have to look carefully for features of a specific type of epilepsy having in mind the crime committed. The presence or absence of an aura may aid the clinician in making an accurate diagnosis.

Epileptic Automatisms

An epileptic automatism was defined by Fenton (1972) as

"a state of clouding of consciousness which occurs during or immediately after a seizure, and during which the individual retains control of posture and muscle tone but performs simple or complex movements and actions without being aware of what is happening".

Ictal automatisms are usually preceded by an aura, they are of brief duration, the majority are associated with other seizures, especially grand mal seizures, the behaviour is not entirely normal and is inappropriate for the situation (Lishman 1983 p.p. 317-319).

Feindel and Penfield (1954) found that 80 per cent of their patients with ictal automatisms, were preceded by an aura. The auras were usually those typical of temporal lobe epilepsy and consisted chiefly of epigastric sensations, confusion or difficulty with memory, feelings of strangeness or unreality, lightness or dizziness in the head and masticatory movements with salivation.

The longer the duration of the disturbance the less likely it is to be an ictal automatism. The great majority last from a few seconds to several minutes and only occasional examples last for up to an hour (Lishman 1983 p. 317). Knox (1968) found that 80 per cent lasted less than fifteen minutes.

While most patients that have ictal automatisms have other seizures especially grand mal seizures, occasionally the automatism may occur as the sole evidence of epilepsy

(Lishman 1983 p. 317).

The complexity of behaviour during an ictal automatism is important in deciding whether a particular crime is possible during an attack. Also important in forensic psychiatry is the extent to which witnesses are able to detect abnormality during an ictal automatism.

Lishman (1983 p.317) states that the pattern of the behaviour may change even in the same individual at different times. He continues to say that the subject may merely continue what he was doing and only a dazed expression or sudden inaccessibility may be observed. There may be a new regular stereotyped movement such as pulling at the clothes, passing a hand over the face or fumbling with objects within reach.

Examples of complex behaviour given by Lishman (1983 p. 317) are walking about the room, searching in drawers, moving articles and attempting to strip off clothes. The patient may continue on-going action in keeping with the current circumstances such as performing household tasks or even continuing to drive and obeying regulations with subsequent dense amnesia. Lishman did not state how well these patients did the more complex tasks such as driving.

However the behaviour at times is opposite to what should be done. Forster and Liske (1963) give an example of a patient who interrupted church music with three minutes of jazz music before returning to the exact bar of the hymn.

Although the acts can be quite complex, intentions are usually poorly conceived or executed and even though sometimes successfully carried through, they are inappropriate for the situation (Lishman 1983 p. 317). The automatisms described so far usually arise in the medial temporal lobe structure.

Lishman (1983 p.317) continues to state that petit mal status automatisms are similar but have characteristic runs of 3 per second spikes and wave discharges on the EEG and last longer. They may last from several minutes to several hours.

He continues to say the subject is markedly confused, incoordinated, slowed and perseverative. The episodes may discontinue but the normal periods are too brief for complete awareness. Of special significance to forensic psychiatry is that these patients are slowed down with limited voluntary action and may remain motionless. This diminishes the possibility of committing a crime that requires much action.

Fugues

Fugues are less common than automatisms and the consciousness is less severely impaired allowing more, complex, extended and integrated activity (Lishman 1983 p. 320). He continues to state that some experienced observers even doubt the existence of a fugue as a valid clinical entity. These observers say that fugues are all

psychogenic in origin.

Typically fugues last for many hours or even days with the patient wondering far from home and recovering spontaneously in a strange environment.

Lishman (1983 p. 320) stresses that the longer the fugue lasts and the more purposive the behaviour especially with antisocial acts, the less likely is it to be genuine. However history of grand mal epilepsy or typical brief automatisms will suggest the possibility of a true fugue. He says the actions are usually erratic and the subject appears drowsy or intoxicated with an untidy appearance.

Twilight states

This term may be used to describe automatisms, fugues or even brief psychotic episodes in epileptics (Lishman 1983 p. 321). He states however that the chief characteristics of twilight states are affective changes of terror, panic, anger, ecstasy together with marked hallucinations especially visual and delusions in a patient with impaired consciousness. Usually the behaviour is one of profound psychomotor retardation throughout the attack with marked perseveration in speech and action. Lishman (1983 p. 321) warns that they may be irritable and interference may result in an outburst of primitive rage.

Post - ictal automatisms

Lishman (1983 p. 322) states that the motor activity may

recover before full consciousness has occurred resulting in post-ictal automatic behaviour. This behaviour may follow a brief episode of epilepsy especially temporal lobe epilepsy. However the post-ictal automatism may be prolonged with complex semi-purposive behaviour. He continues to say that the post-ictal automatism may be indistinguishable from a psychomotor seizure if the preceding convulsion was not seen. Again agitation and irritability with paranoid ideas may be present. Lishman (1983 p. 323) says in a small minority of patients usually with gross brain damage there may be the dangerously aggressive behaviour called the "epileptic furore". In all these conditions there is amnesia for the events. The thoughts, comprehension, speech and actions are abnormal thus reducing the possibility of totally normal, complicated criminal acts.

2.9 PSYCHOMETRIC EVALUATIONS IN FORENSIC SETTINGS

Clinical psychologists are frequently required to assist the court in forensic issues, including the assessment of the mentally ill offenders (Blau, 1984; Green and Schaefer, 1984; Shapiro 1984.) Psychometric assessments of malingering are often used by psychologists to help decide whether the defendants are deliberately faking symptoms of psychopathology in order to avoid legal consequences or whether symptoms are genuine.

This review will now look at some of the important tests

used in psychometry, the usefulness of these tests and the research that has been done in the forensic setting. The role of the psychometric assessments as a whole in the court will also be examined.

2.9.1 MINNESOTA MULTIPHASIC PERSONALITY INVENTORY (MMPI)

The Minnesota Multiphasic Personality Inventory (MMPI; Hathaway and McKinley, 1943) is the best known and most widely researched test used by psychologists in forensic evaluations (Ziskin, 1981). Boydston (1983) stated that the psychological testing may reveal bizarre responses and inconsistencies throughout, casting doubt on the genuineness of the patient. He continued to state that the MMPI may reveal an elevated F Scale due to a few reasons. These are unco-operativeness, a scoring error, a lack of understanding of the items, a cry for help, a psychosis or malingering by attempting to present oneself in a bad light or by claiming emotional or mental symptoms falsely. He added there may be antisocial responses and where mental deficiency is feigned inconsistencies in age - appropriate responses suggest voluntary distortion of results.

Psychological tests such as the MMPI are not well established in the forensic setting. Moore and Finn (1986) stated that over an eleven year period ending in 1983 there was a scarcity of experimental research in forensic psychology.

Most research has been however conducted on experimental, non-clinical, non forensic samples (Wasyliw, Grossman, Haywood and Cavanaugh 1988).

The earliest and most common studies of the MMPI validity scale's sensitivity to malingering has taken the form "fake bad" or "fake good" that is, the subjects were given instructions to exaggerate or fabricate psychopathological symptoms (e.g., Anthony, 1971; Gendreau, Irvine and Knight, 1973.) These types of studies do not answer the question of how actual malingerers who are unco-operative may score on the MMPI.

Recently studies closer to the real life situations of malingerers have been done by Walters, White and Greene (1988). They examined the MMPI profiles of prison inmates who had showed signs of malingering in their daily behaviour. However behaviour ratings were not conducted at the same time as the MMPI's were administered. Long periods of seven months separated two assessments. Malingerers have difficulty in maintaining their faking and may present with different behaviour as time passes (Resnick, 1984; Rogers, 1984)

To overcome these problems Hawk and Cornell (1989) studied the immediate relationship between malingered behaviour and MMPI profiles in a clinical sample of diagnosed malingerers, and defendants diagnosed as presenting genuine psychotic symptoms in the course of the pretrial assessments for competency to stand trial or criminal

responsibility.

The malingerers were diagnosed by six experienced forensic clinical psychologists who reviewed consecutive cases that had been evaluated within the past six months. The examiners were not blind to the MMPI profiles but they were instructed to identify the malingerers for this study only on the basis of the accuseds' interview behaviour. The cases were classified as psychotic, malingering psychosis or non psychotic according to the Diagnostic and Statistical Manual of Mental Disorders (DSMIII) (American Psychiatric Association, 1980) They concluded that malingerers produce characteristic MMPI's that distinguished them from non-malingering defendants especially genuinely psychotics.

Interestingly, about half of both the malingerers and psychotic subjects who originally were identified either did not have MMPI data in their files or produced random or incomplete profiles. As the policy at the Forensic Centre was to administer MMPI's on all defendants the missing or incomplete MMPI were thought to be due to the individuals who were unco-operative or too disturbed. This limits the role of the use of the MMPI in the forensic setting.

Hawk and Cornell (1989) concluded by stating that the ideal MMPI malingering study would :"(1) examine the MMPI profiles of subjects with genuine motivation to malingering

rather than those instructed to malingering. (2) identify malingering subjects on the basis of independent, contemporaneous observation of behaviour and (3) have malingering diagnosed by clinicians blind to MMPI results."

They concede that their study was not blind to the MMPI because of practical limitations. In a similar but significantly different study Wasyliw, Grossman, Haywood and Cavanaugh (1988) assessed the effectiveness of the MMPI validity scales in differentiating between two demographically similar subgroups of forensic patients who differ primarily on whether they will benefit from being assessed as psychologically disturbed or not. The group thought to benefit were insanity defendants undergoing evaluation for fitness to stand trial and or sanity at the time of the crime. The second group of subjects were people who previously had been found not guilty by reason of insanity and did not stand to gain from such an assessment. Insanity defendants showed significantly more malingering than the second group previously found not guilty by reason of insanity.

The flaw of this study is that it has only looked at the motivation criteria in deciding on its malingering groups. There is no mention of the actual diagnostic criteria or composition of this group, that is how many were malingers and how many were psychotic.

The validity of the stereotype of insanity defendants as

malingeringers was investigated by Grossman and Wasyliw (1988). They analyzed the proportion of insanity defendants who exaggerate psychopathology at the pre- and post-acquittal stages of the legal process and by assessing the severity of psychopathology among pre-acquittal defendants. The MMPI was used to examine 49 insanity defendants evaluated for fitness to stand trial and or sanity at the time of the alleged crime and 52 subjects previously found not guilty by reason of insanity. They found that contrary to the stereotype, a minority (14% to 41%) of insanity defendants clearly malingered, whereas 22% to 39% showed evidence of minimizing psychopathology. 81% had a MMPI that suggested psychosis but few showed evidence of antisocial behaviour.

Finally Walters et al (1988) stated that the MMPI like all measures of self report, clearly presents the opportunity for deception. In addition in the South African context where black patients are being evaluated cultural, language and illiteracy create further difficulties in assessing the validity of the MMPI in this setting.

2.9.2 RORSCHACH TEST

The Rorschach test is often included in forensic psychological test batteries because it is believed to be resistant to intentional manipulation by the subject (Exner 1974, 1978, 1986; Fosberg, 1938, 1941, 1943).

Fosberg (1938, 1941, 1943) carried out all the early

studies. Fosberg (1938) asked two subjects to take the Rorschach under four conditions: "(a) standard instructions (b) instructions to make the best impression (c) instructions to make the worst impression and (d) instructions to find specific determinants. He applied the Chi-Square technique and concluded that manipulation of the Rorschach is not possible.

In 1941, Fosberg again used a test-retest design with similar instructions but involving 25 male and 25 female subjects. This time, however, he used pairwise correlations across four conditions. He again concluded that the Rorschach cannot be manipulated to give the wrong impression by malingerers. These tests had few subjects and were not in the real life situation where the motivation to malingering is strong. Furthermore Cronbach (1949) stated that Fosberg's statistical procedures were incorrect.

However Fosberg's findings strengthened the belief that the Rorschach test was unfakable as it involved the involuntary projection of unconscious personality traits.

Carp and Shavzin (1950) modified Fosberg's design. They used 20 male psychology students in a test - retest design counterbalanced on instructions to either give a "good impression" or a "bad impression". They concluded that some subjects can change their personality picture as shown by the Rorschach under instructions to make a good

or bad impression. Again the subjects were not true malingerers. Feldman and Graley (1954) administered the Rorschach to subjects in groups using the test-retest design. Their results were questionable because group administration of the Rorschach has been shown to measure a different set of underlying constructs than when administered to individuals (Shaffer, Duszynski and Thomas 1981).

Easton and Feigenbaum (1967) used a test-retest design with a control group. The experimental group received standard instructions for the first test and were instructed to mangle in the retest. The control group received standard instructions at both the retest and the test. They found changes on both the instructions to mangle and in the control group. They concluded that part of the variance in the results from the test-retest design seems to be a function of both the interaction of the repetition effects and the instruction effects.

Seamons et al. (1981) used a counterbalanced test-retest design with four cells of twelve prisoners from each of the following diagnostic categories : nonschizophrenic, latent-schizophrenic, residual schizophrenic and psychotic schizophrenic. At the first testing half of each group was given instructions to "appear as if you are a normal, well adjusted individual." and the other half was instructed to "appear as if you are mentally ill and psychotic." At the retest the instructions were reversed.

Judges were able to differentiate correctly between those who were asked to appear normal and those who were asked to fake psychosis. An interesting change in the studies of the 1980's was the shift from test-retest studies to multicell designs with control groups. (Albert, Fox and Khan 1980; Meisner, 1984; Mittman 1983; Overton, 1984) The assumption in these studies is that subjects could not easily fake conditions they knew little about. Some of these studies also tested the ability of judges to detect malingering on the Rorschach. The degree of agreement of the judges was looked at.

Albert et al. (1980) had four groups of patients : psychotic inpatients, uninformed fakers, role informed fakers and normals, all with standard instructions. The results were put into packets and sent to 261 Fellows of the Society of Personality Assessment with a request that they make a diagnosis on the Rorschach but were blind to the patient grouping. Forty six replied with the following results : (a) uninformed fakers were diagnosed psychotic as often as the actual psychotics, (b) the informed fakers were diagnosed psychotic at a higher rate than the actual psychotics and (c) judges were equally certain of the diagnosis across the experimental group. Mittman (1983) had similar results when she asked judges to interpret Rorschach protocols. These two studies show that the expert psychologists cannot always discriminate between actual psychosis and malingering on the Rorschach

test. Also all of these studies are not carried out on true malingerers in real life situations where motivation to mangle exists. There also has been criticism of the statistical methods used. Cronbach (1949) stated that because the errors and poor choices of statistical procedures are so widespread, few of the conclusions for the statistical studies of the Rorschach can be trusted. This brings us to the question, where do we use psychometric tests in the forensic setting?

2.9.3 The Role of Psychometric Assessments in the Court

Gillmer (1991) said that one should not speak of psychometric assessments in the courts but of the expected function. This is because the courts believe the tests can assist in ways which they are unable. The psychologists encourage this false belief (Gillmer 1991).

Gillmer (1991) further stated that psychology is a fictional science, which adopts an unexpected function "as if" it were a science. He argues that the psychometrists because of their mathematics, probability theory and statistical analysis are the closest to being scientists. They create and refine the tests that are used by the practicing or applied psychologists. However, the end-users like many practioners of arts who use scientifically derived instruments e.g. architects, are not scientists.

He quotes as an example the Intelligence Quotient tests (I

Q tests), which do not measure intelligence. They measure scholastic performance and are a good predictor of future scholastic performance. Gillmer (1991) continues to say that many intelligent people who for some reason or the other do not do well at school are very successful in later life as business - men, farmers, artists and even politicians.

He further criticises the South African version of the I Q test called the South African Adult Wechsler Intelligence Scale (SAWAIS), as outdated. He questions some of the items e.g. how many people below thirty years of age know or care to know how far it is by sea from Cape Town to London or that a ship by the name of Edinburgh Castle once sailed?

He not only questions the structure of the (SAWAIS) but its use. He says the SAWAIS does not tell anyone about psychopathy, personality functioning or "organic" conditions (unless in the latter sense incorporated into an appropriate neuro-psychological battery). It does not measure intelligence. However, he concludes the argument by saying that the SAWAIS continues to be used for just these purposes. He predicts that unless psychological testing is used appropriately the profession will lose credibility one day.

He states the appropriate use of psychometric tests is to generate hypotheses and to confirm hunches arising from

congent psycho-forensic questions. He gives an example of a standard nine pupil where there is clinical suspicion of under achievement and a compensatory element in the criminal motivation. If on testing he has a high IQ of 145 then the suspicion is confirmed. This is different to where the student who passed standard nine at school is just tested with the instrument and receives a certain IQ. It is meaningless.

Gillmer (1991) therefore continues to say that "bare faced psychometric assessments have no place in clinical practice, let alone the court. Specifically, there is no such thing as a psycho-forensic battery of tests."

He adds that the concept of competency to stand trial is a legal concept. It is economically achieved by a brief clinical interview, with little incremental validity available from psychometric assessment.

Overton (1984) concurred with this view. He said that malingering could best be identified in the context of extra test behaviour, history and possible motivation of the subject.

Bazelon (1982) a judge in the United States of America, said there were certain sins of non-disclosure concerning psychological assessments. He named the sins as :

(a) making conclusary statements without disclosing how it was reached that is, methods of inference.

(b) not disclosing the presuppositions of the value systems and models underlying the facts from which the

conclusions are drawn and

(c) not disclosing disagreements and divisions within the field.

Gillmer (1991) summed up the use of psychometric tests in forensic psychiatry by saying that they are part of an overall assessment and should be used very much like any other investigation such as an electro-encephalogram - (EEG) in the medical setting.

2.10 LEGAL POINT OF VIEW

2.10.1 Overview

Burchell and Milton (1994) give the legal perspective of forensic psychiatry.

They define insanity as follows :

"Mental illness or defect may deprive a person of the capacity to appreciate the wrongfulness of conduct. It may also deprive persons of the capacity to control their conduct. A person who suffers a mental condition that has such an effect is said to be 'insane.'"

The rationale for this definition is that people cannot be blamed for their conduct, resulting from illness that it beyond their control.

They state that the historical development of mental illness as an excuse was initially recognized by the Roman law where mentally ill persons were categorized together

with young children as lacking criminal capacity. This was followed by the Roman-Dutch laws which stated that mentally-ill persons should not be punished.

The English law used the criteria of whether the accused could distinguish between "good" and "evil" or "right" or "wrong" as used in the M'Naghten Rules 1843. The M'Naghten Rules were initially used in South Africa. However, they were extended beyond the ability to distinguish right from wrong to include the test of whether the mentally ill person had acted under an irresistible and uncontrollable impulse even though he or she was able to understand the nature of the act and appreciate its wrongfulness. This was called the irresistible impulse test.

Later the Rumpff Commission decided that the M'Naghten Rules were not satisfactory and recommended that the law be changed to provide that "an accused who in respect of an alleged crime was not capable on account of mental disease or mental defect in appreciating the wrongfulness of his act or of acting in accordance with such appreciation, shall be held not to be responsible." This is included in the Criminal Procedures Act 51 of 1977.

Burchell and Milton (1994) examined the various elements of the test of insanity. They state "The test of insanity is thus whether an accused (1) at the time of the offence (2) suffered from a mental illness or defect (3)

that deprived him or her of the capacity of insight or self control. It follows therefore that if the accused became insane subsequent to the crime it does not affect his liability. The concept of mental illness or defect for the defence of insanity is essentially a question of law rather than medical science. Thus the mental illness or defect must affect the cognitive (insight) and conative "self control" capacities. If the mental illness only impairs the affective capacity it is not regarded as insanity.

Burchell and Milton (1994 p. 207) define mental illness from a legal point of view as follows "a pathological disturbance of the accused's mental capacity and not a mere temporary mental confusion which is not attributable to a mental abnormality but rather to external stimuli such as alcohol, drugs and provocation." The mental illness therefore must be caused by disease (pathological) and must originate internally, that is, in the mind. A blow to the head resulting in concussion is not regarded as mental illness or disease because it is exogenous in its origin and not endogenous. Similarly conditions brought about by external stimuli, e.g. insulin, described by the doctor which result in hypoglycemia do not qualify as mental illness.

A list of mental illnesses according to DSM(III) that contributes to insanity is given by Burchell and Milton

(1994) below:

2.10.1.1 Organic Disorders

Organic disorders arise from injury or disease of the brain. They may be acute (temporary) or chronic. Acute causes include such things as ingestion of drugs or alcohol, fevers or chemical imbalances.

Chronic brain disease is damage to the brain tissue from such things as disease, tumours, drugs, repeated concussions that is "punch drunk," ageing or lesions that result in epilepsy. They present in the organic clinical syndromes which include delirium, dementia, amnesia, hallucinations, delusional disorders and personality change. The chronic organic disorders are diseases that involve the brain, are pathological and endogenous. Their severity determines whether they satisfy the legal definition of insanity because they may affect insight and self control.

2.10.1.2 Mental Retardation

This originates in early childhood and the causes include infection, trauma, malnutrition or genetic factors. It presents with a sub-normal intelligence and poor adaptive functioning. Mental retardation satisfies the concept of mental defect for the purposes of Section 78 (1) of the Criminal Procedures Act 1977.

2.10.1.3 Substance-use Disorders

The causes include the use or abuse of psychoactive (mind altering) drugs such as alcohol, cannabis (dagga),

barbiturates, amphetamines and heroin. Since these disorders are neither pathological nor endogenous nor permanent they do not satisfy the legal definition of insanity.

2.10.2 Psychological or Socio Cultural (Functional) Disorders

They are disorders that have no known disease of the brain. They are diseases of the mind and are diagnosed by clinical psychiatric assessments.

There are three main types which are the psychoses, the neuroses and personality disorders.

2.10.2.1 Psychoses

These are the conditions that are normally defined as madness by the lay public. There are two forms of psychoses, namely schizophrenia and depression with psychotic features. Both satisfy the legal definition of insanity.

2.10.2.2 Neuroses

They are characterized by exaggerated behaviour patterns for the avoidance of anxiety. They consist of the anxiety disorders and the 'dissociative' disorders. The anxiety disorders include obsessive-compulsive disorder and phobias. The dissociative disorders include amnesia, fugue states, multiple personality disorders and depersonalization 'out of body' experiences.

Anxiety neuroses do not affect the accused's insight or

self control and do not satisfy the legal definition of insanity.

2.10.2.3 Personality Disorders

These are characterized by immature or disturbed development of the personality resulting in maladaptive ways of perceiving, thinking, or relating to others and society. They are not as a result of disturbance or a psychic state as occurs in psychotic or neurotic conditions but rather abnormal learned behaviour during the formative years.

Personality disorders are not regarded as involving pathological diseases of the mind and do not qualify as mental illness for purposes of the insanity defence. The personality disorders include paranoid, schizoid, narcissistic and psychopathic (antisocial) disorders.

In particular the psychopathic personality is not regarded as constituting a mental illness because he knows what is and is not lawful and has the mental capacity to act accordingly. However what differentiates a psychopath from ordinary people is that his will-power to refrain from unethical deeds or crimes is less powerful than that of ordinary people. This is not to say that the psychopathic personality would result in diminished criminal responsibility and therefore lessen the sentence or possibly (though unlikely) even claim non-responsibility in all circumstances.

Burchell and Milton (1994) then examined the procedural

aspects of insanity.

2.10.3 Legal procedural aspects of insanity

The psychiatric assessments have been discussed above. When the accused goes back to court after the investigation the onus of proof is different from the general principle that in criminal cases the onus of proof rests on the prosecution. The South African law has followed the English law by stating "every man is presumed to be sane, and to possess a sufficient degree of reason to be responsible for his crimes, until the contrary is proved." Therefore the onus of proving insanity rests on the accused.

Fortunately proof of the balance of probabilities is enough with no need to establish insanity beyond reasonable doubt. In the case of non-pathological incapacity the onus of proof is on the prosecution like all other criminal cases.

2.10.3.1 PROVOCATION, EMOTIONAL STRESS AND OTHER FORMS OF NON-PATHOLOGICAL INCAPACITY

Burchell and Milton (1994) examined the issue of provocation, emotional stress and other forms of non-pathological incapacity in depriving the person of the capacity to appreciate the wrongfulness of his act or to act in accordance.

The emotions such as jealousy, mercy, anger or fear are the motivating factors as the result of the accused having been driven or provoked. The crimes include a husband who

shoots and kills a man he finds committing adultery with his wife; a son who killed his father who is experiencing severe pain from terminal cancer; a young man beats to death a man who had forcibly sodomized him and a wife who kills a sleeping, abusive husband.

The general rule in most legal systems is that provocation does not excuse one from criminal liability as people are expected to control their emotions. Also a fundamental principle of modern criminal justice is that vengeance for harm suffered must be sought through the law and not by personal self-help methods.

Burchell and Milton (1994) looked at the historical development of provocation and law. The Roman and Roman-Dutch Law did not regard anger, jealousy or other emotions as an excuse for criminal conduct. It was only a factor which might mitigate sentence if the anger was justified by provocation. It was felt that severe provocation might cause a person to act in the heat of the moment and thus without direct intention or premeditation.

The South African criminal law might have followed this lead had it not been for the introduction of the mandatory death penalty for murder in 1917. South Africa followed the Section 141 of the Transkeian Penal Code which read : "Homicide which would otherwise be murder may be reduced to culpable homicide if the person who causes the death does so in the heat of the passion occasioned by sudden provocation.

Any wrongful act or insult of such a nature as to be sufficient to deprive any ordinary person of the power of self control maybe provocation if the offender acts upon it on the sudden and before there has been time for his passion to cool.

Whether any particular wrongful act or insult, whatever may be its nature, amounts to provocation and whether the person provoked was actually deprived of the power of self control by the provocation which he received shall be a question of fact."

Section 4 envisages a type of partial excuse situation, even if the killing was intentional homicide which would otherwise be murder, (that is, intentional killing) may be reduced to culpable homicide. The classic example given would be a husband who surprised his wife in the act of adultery and who killed her lover.

By 1935, when the harshness of the mandatory death sentence for murder was reduced by the introduction of the extenuating circumstances rule, which relieved the judge of the obligation to impose the death sentence if extenuating circumstances attended the murder, support for the Section 4 of the Transkei Penal code declined.

Currently in South African law, provocation or severe emotional stress may deprive a person of the capacity to appreciate the wrongfulness of his or her conduct or to act in accordance with appreciation and for this reason

constitutes a complete defence to criminal liability.

Also unlike cases where a pathological mental illness or defect is raised as defence, the non-pathological condition leading to involuntary conduct or incapacity does not have to be proved on a balance of probabilities. It has to be proved beyond reasonable doubt by the state. If the defence of involuntary conduct or lack of capacity succeeds it leads to complete acquittal even in a homicide case because the inquiry into the voluntariness of conduct or criminal capacity is anterior to the examination of fault.

Finally, Burchell and Milton (1994 p. 238) define the term of emotional stress and provocation as follows: "Our courts have not yet drawn a clear distinction between provocation and emotional stress. Although a person can in principle be provoked by the force of surrounding circumstances, as opposed to human conduct, provocation is usually seen as being caused by human beings. Emotional stress which often involves an accumulation of events over a reasonable period of time, rather than an isolated event or events, can, and often is caused by human beings or surrounding circumstances. In principle the origin of the stressful condition in which the individual is placed does not matter, but it may affect the intensity of the ultimate condition. The stressful condition which causes an individual to lack criminal capacity could be caused by, for instance, insulting or oppressive conduct of

another person, by pre-menstrual stress suffered by a woman or by overwhelming and debilitating social conditions."

An example of such stress is wife-battering where the wife may shoot the husband and yet may be acquitted on the grounds of lack of criminal capacity.

In summing up the debate of non-pathological incapacity Burchell and Milton (1994) state that it can be argued that all sane human beings should be able to control a reasonable amount of emotional disturbance. However, if there was an excessive or unreasonable emotional stress, succumbing would be excusable.

At the other end of the spectrum is the argument that provocation of a sufficient degree ought to be able to exclude any of the elements of criminal liability - the insight and the voluntariness of criminal conduct.

Burchell and Milton (1994) conclude by looking at the future of the defence of incapacity. They ask a few questions. Could a firm and commonly-held belief in the super natural be regarded as a factor which affects the accused's criminal capacity? If the literacy is relevant for a crime that requires a fair degree of literacy then why should a superstitious belief not be regarded relevant? If literacy and superstitious belief (that is cultural) are both relevant to the inquiry into capacity then what about a firmly held belief, possibly taught from

youth based on racial prejudice? Why should a cultural superstitious belief be considered but not the belief based on indoctrination? The answer they conclude is that it is based in the central aspect of criminal responsibility which states that for a person to be held criminally accountable he or she must have adequate (fair) opportunity to exercise his or her capacities.

In South Africa it is very important because of the varied people and the different cultures. Also the factors relevant to criminal liability should consider the individual opportunities of the accused rather than be regarded as "carved in stone."

2.10.3.2 THE CASE OF THE STATE PATIENTS

John Milton (1989) reviews the law that applies to State Presidents Detainees now called state patients. He says "there is something so loony about the law that relegates mentally ill citizens accused of committing crimes to prisons or mental hospitals, there to be detained, as it is said 'pending the signification of the decision of the State President,' that the law ought to be reformed." He continues to state that the law assumes insane persons are so different to other citizens that it is necessary, proper and permissible to withhold from them the benefits and protection of fundamental procedural and substantive rights afforded to other people in the criminal courts of

the land.

He outlines the law Section 78 of the Criminal Procedure Act, 1977 which provides that a court may order that a person charged with a crime be subjected to psychiatric examination to determine whether, by reason of mental illness or defect, he is not criminally responsible for his criminal act. If he is found not responsible the law specifies that the court shall find the accused not guilty and direct that the accused be detained in a mental hospital or prison pending the signification of the decision of the State President. This law concerning state patients has changed over the last few years. Now a judge in chambers discharges the state patients who committed a serious crime and the hospital board discharges those without a serious crime.

Milton (1989) states "perhaps the most accurate explanation for the special verdict is that it reflects the legislature's belief that society must be outraged if a person who has committed a serious crime were simply to be allowed to go free. The detention order mollifies this outrage by treating the SPD (state patients) as a criminal while paying lip service to the law's notion that those lacking in criminal capacity are not liable to punishment. He supports this argument by quoting a survey carried out in South Africa, that revealed that in the substantial majority of cases the attorney-general does not consider it appropriate to recommend that the SPD (now called state

patients) be released until the period of detention undergone is roughly approximate to the period of imprisonment that would have been imposed for the crime of which the detainee has been found not guilty.

One of the main underlying reasons for the above handling of the SPD's now called state patients is the belief that they are dangerous. Therefore dangerousness and its assessment require a closer scrutiny.

2.11 DANGEROUSNESS

Deciding whether or not an individual is dangerous is very difficult. Trick and Tennant (1981 p 193) stated that it also includes the ability of psychiatrists or others to predict the likelihood of an individual carrying out dangerous behaviour in future. The psychiatrist has to work in the context of a strong ancient belief in society that mental disorder predisposes one to violent and dangerous behaviour (Mullen 1984).

Also psychiatrists are faced with ethical problems. The individual's interests are weighed up against the interests of the community (Mullen 1984). Studies of dangerousness have centred around the conviction rates of ex-psychiatric patients compared to conviction rates of normal people. Hafner and Baker (1982) who studied all crimes of violence committed by mentally ill people, over a ten year period concluded that in mentally ill people

dangerousness did not exceed the dangerousness of the equally responsible adult people.

However, Resnick (1994) stated up until 1990 there was a good deal of confusion in the literature about the epidemiological association between violence and mental illness. This paper of Resnick is given below as Appendix C. He said much depended on which groups were studied. Studies since 1990 have shown a clear association between mental illness and violence.

He quotes a study where a random sample of 10 000 ordinary people were given a questionnaire which contained the question "Did you perform a violent act in the past year?" Only 2% of normal people admitted to committing a violent act in the past year. A five-fold increase, that is 10%, of people suffering from a major mental illness such as schizophrenia or a bipolar disorder had committed a violent act. In alcoholics it was a twelve fold increase, that is, 24% and it was even higher for drug abuse.

Resnick (1994) concludes from this study that there is a clear relationship between mental illness and violence but that alcoholism and drug abuse are even more predictive of violence. In persons who are schizophrenic and substance abusers at the same time, the rate will be even higher. However, in terms of the law, drugs and alcohol are not regarded as mental illness. Also self report questionnaires are less reliable than actual incidences of

violence that have occurred. One wonders whether psychopaths or people with strong psychopathic tendencies will readily admit that they have been violent. Finally, people suffering from major mental disorders such as schizophrenia may have impaired thinking and their interpretations of violent acts may not be the same as normal people. Thus no clear answers on these issues exist.

The next area of importance to the psychiatrist concerning dangerousness is the assessment of dangerousness. Resnick (1994) stated that in assessing dangerousness there are four main factors.

(i) The magnitude of the possible harm is first. We need to establish whether people are likely to be slightly hurt or killed. We need to know whether the harm is to people or property. People are more important than property. When harm is being considered, both physical and psychological aspects have to be looked at.

(ii) The likelihood of the crime being committed is the second issue. Psychiatric prediction is not good at this. However, likelihood and magnitude are often combined. For example if hitting strangers with no likelihood of killing anyone then the likelihood is small. However, if there is even a 1% chance of killing someone then the risk becomes serious.

(iii) The third issue is imminence. If someone is going to be violent in the next five years it would not justify deprivation of liberty to the same extent as it would if

violence was likely in the next few hours or days.

(iv) Frequency is the fourth factor. Some crimes have a high frequency. An example is the average exhibitionist in the USA who is said to have 150 showings before his or her first arrest. This is therefore a high frequency, low-magnitude type of crime.

MacDonald's assessment of dangerousness has been described by Trick and Tennent (1981 p. 194) in terms of three features namely :

(i) Factors relating to the offence and behaviour at the time.

(ii) Environmental factors.

(iii) Internal factors or specific characteristics of the offender.

Other factors important in the assessment of dangerousness are specific signs and symptoms and psychiatric syndromes. These have been given by Hafner and Baker (1982) and Resnick (1994).

The paranoid individual with a predisposition to violence, whether due to schizophrenia or delusional disorder is the most likely to be violent in the community than other diagnostic categories.

A paranoid individual in the community has access to weapons and victims and is able to carry out his or her plan.

Once in hospital this individual is less assertive. Command hallucinations in which the patient is told to

carry out certain acts by voices is another dangerous symptom.

About two thirds of schizophrenics have auditory hallucinations. One third of these are command hallucinations. The problem facing the forensic psychiatrist is deciding when the patient will obey the orders.

Resnick (1994) stated that there are two statistically significant factors involved. The first is whether the voice is familiar or not familiar. The second is if the command hallucination is related to a delusion then it is more likely to be dangerous. If a familiar person issues the instruction it is more dangerous and also if the person is important such as the patient who hears God's voice.

Resnick (1994) then looked at other syndromes and dangerousness. Firstly, he looked at depression and violence. He stated that depression is more likely to be associated with suicide than harm to others. The exception he gave was the murder of young children by their mothers who had psychosis with depression.

One out of 26 cases of homicide in the USA involves the killing of a child by a parent. When a mother becomes psychotic or severely depressed with suicidal ideas, she may decide to take her children with her out of the cruel

uncaring world. Resnick (1994) concludes by stating that when assessing suicide risk in a mother the question should always be asked "What are your plans for your children?"

Resnick (1994) then looked at mania and violence. Manic patients have a substantial incidence of causing physical harm to others, but the harm is less severe than that caused by schizophrenics. There is less killing and severe hurting. Manic patients tend to hit out at others when they are being restrained or limits are being placed on them.

Personality traits and violence was the next area examined. Resnick (1994) stated that there are personality traits that are predictive of violence. These include impulsivity with an absence of reflective delay, low frustration tolerance, inability to tolerate criticism, repetitive antisocial acts and driving cars recklessly.

These people may be very self-centred, tend to have superficial relationships and tend to dehumanise others. They lack introspection and blame other people for all their difficulties and problems.

Childhood antecedent factors were given by Resnick 1994 as yet another area to be considered when assessing violence.

A major factor is the battered child who has suffered parental brutality. Girls are more likely to repeat the victimisation by having a higher incidence of being raped and marrying abusive men. Boys who are sexually or physically abused are likely to repeat the victimising on others less powerful than themselves, such as smaller children in boarding schools or their own children.

As the child becomes an adolescent delinquency becomes manifested as adult violence. Resnick (1994) continues to state that tattoos are bumperstickers of the soul and one which states "Born to Kill" has to be taken seriously. Also a classic childhood trait of fire-setting, cruelty to animals and bed wetting may predict adult violence.

However Resnick (1994) emphasised "the best single predictor of future violence is past violence and it pays to examine closely patterns of past violence in terms of the type of violence and what the trigger factors were." Family members could assist with this especially if they had been afraid of the patient in the past.

Another highly potent factor in violence is alcohol. In the USA 60% of people arrested for crimes of violence have detectable blood alcohol. Drugs especially amphetamines and cocaine are also major factors. They act by disinhibiting and raising the level of paranoia.

Yet another factor in the prediction of violence is the availability of weapons. In the USA 25% of the households

have a firearm. Patients who are likely to be violent show anger, fear or helplessness. Adequate security should be provided when these patients are being assessed.

Resnick (1994) concludes by looking at the pattern of violence in society as a whole but with special reference to the United States. Males are ten times more violent than females. The lower the intelligence quotient or IQ the greater the likelihood of violence. The lower the social class the greater the street violence. Substance abuse leads to a much higher incidence of violence. Less education, frequent changes of jobs and changes of homes are all factors that predispose to violent behaviour.

In the review above it is obvious that the factors indicative of malingering need to be put together and their validity statistically tested in both malingering and mentally ill patients.

A study which will look at items used in the diagnosis of malingering patients and state patients that have been in hospital for many years may assist with these problems. Light may be thrown on a number of questions. An example is when the diagnosis of psychosis is made, does the longitudinal follow up of these patients as state patients confirm the psychosis diagnosis? The study will also give guidelines that separate malingering from such varied psychiatric conditions such as neurosis, psychosis, epilepsies, automatisms and post traumatic stress disorder. The psychopath will also be considered in such

a study. Finally, research of the psychometric tests may be assisted by scientifically tested criteria that separate malingering from mental illness.

CHAPTER THREE

PATIENTS AND METHODS

ETHICS

This study was approved by the ethics committee of the medical school of the University of Natal. Permission to perform this study was obtained from the superintendent of Fort Napier Hospital. Informed consent for the participation was obtained from the patients. They signed a consent form and fingerprints were used for those who could not write.

RATING SCALES

The study investigated items indicative of malingering. The author obtained these items from three sources, namely the literature, the author's personal clinical experience and from forensic clinical meetings.

These forensic clinical meetings were held twice a month. These meetings were attended by a number of psychiatrists, psychologists, psychiatric community nurses, psychiatric nurses, social workers and students from all these disciplines. At these meetings different forensic psychiatrists presented observation cases to allow other psychiatric consultants and other members of the multidisciplinary team to express their opinions and assist in reaching a final diagnosis. Those present considered the type of crime, how it was committed and the condition of the accused as seen by the witnesses and recorded in the court

records.

The reports of the patients' behaviour and mental condition in the observation ward were given by trained psychiatric nurses. Social workers' and psychologists' reports were also made available for the meetings.

One of the main purposes of the clinical meetings was to decide whether the patients were mentally disordered or malingering. Items indicative of mental illness and those indicative of malingering were discussed and weighed against each other for each case.

The author selected those items that would normally be recorded in most cases and therefore could later be collected from patients' files for statistical analysis. Also, the items had to be objective so that they could be repeated by future researchers. Subjective items such as "the examiner feels that the patient is authentic" were not used since this could not be tested easily by different people. Different clinicians may have different feelings about a patient with a specific symptom. These items tested in this study are given in Appendix A. Each item consists of two parts. The first part is the item written in a way that it indicates malingering. The second part is the same item when it indicates mental disorder or sickness.

PATIENTS

Two groups of patients were used. A sample of fifty malingering African forensic patients, male and female were used for this study. The control group consisted of fifty

African forensic patients who were mentally disordered or sick and who were classified as the state patients.

The fifty malingering patients were taken from accused people who had been referred to Fort Napier Hospital, which is a psychiatric hospital. They were referred by the courts for thirty days observation. All patients had thorough physical status assessments utilizing history, physical examination and appropriate investigations by the doctors who included a psychiatric registrar and a consultant psychiatrist at this hospital. The following investigations were carried out routinely : full blood count, blood sugar, Wasserman reaction, X-rays of the chest, skull and thigh and urinalysis. Electroencephalograms (EEGs) were done on most patients. Some patients had other blood tests such as liver function tests and computerised tomography (CT Scan) when indicated. Organic factors other than dagga and alcohol were thus excluded.

The court records called J15, which included the charge sheet, court proceedings and previous charges were also scrutinized in order to obtain as much information as possible before a final decision was made. Patients with one or more signs of malingering and found not to be mentally ill by at least two psychiatrists were regarded as malingering. There were patients who were diagnosed as not mentally ill who were also not malingering. These were sent in for observation by the court, only on the basis of an unusual crime. For example, one patient cut off his

girlfriend's head and put it in the bin of his employer. He was trying to hide his crime. These patients who were not sick and not malingering were excluded from the study by the researcher, leaving a sample of only malingering patients for the testing of the items.

When the malingering patients had been diagnosed by the psychiatrists, they were referred to the researcher by the psychiatric registrar who worked in the forensic unit.

Inclusion Criteria for patients selected were as follows :

1. They had to be diagnosed as not mentally ill by two psychiatrists.
2. They had to be Zulu speaking in an effort to limit variables and also because the investigator is fluent in Zulu.
3. They had to give an adequate history for a psychiatric assessment.
4. They had to be willing to co-operate in the study.

Exclusion Criteria were as follows :

1. Non Zulu speaking patients e.g. Sotho speaking patients.
2. Patients unable to give an adequate history for a psychiatric assessment. These include mute patients even though the muteness was regarded as malingering.
3. Unco-operative patients.

The selection of patients for the control group or state patients was done in a different way to that of the malingering group. There are over a hundred mentally

disordered state patients in Fort Napier Hospital at any one time. These form a good control group as they consist of people with proven mental disorder, that remained present after the court's verdict had been given. The gain of avoiding the punishment no longer existed for these patients and any disorder was genuine.

The state patients were selected by the researcher. The state patients files were in alphabetical order. Every second patient's file was selected to ensure an adequate spread of the sample. The observation and hospital files were examined for the presence and absence of the items as given in Appendix A, that were to be tested. The researcher had to be convinced that the patients were or had been mentally ill in the past and after the court case.

The inclusion and exclusion criteria for the state patients group were the same as those for the malingering patients with one exception. In the selection of malingering patients all had to be diagnosed as not mentally ill by two psychiatrists whereas in the case of the state patients' all had to be mentally ill either in the past or in the present.

METHODS

It is an experimental, cross-sectional study. Each patient from the malingering sample and the control group were assessed by the researcher. The researcher as stated above is fluent in Zulu and is experienced in Zulu cultural phenomena, having translated the Structured Clinical

Interview for the Diagnostic and Statistical Manual of Mental Disorders (SCID) and the Present State Examination (PSE) into Zulu taking into account transcultural phenomena (Buntting and Wessels 1991).

The items that indicate malingering that is Appendix A were looked for in the background court records, observation case notes and in the final psychiatric reports that were sent to the courts. The psychiatric assessment on admission was regarded as very important as the patient had not been exposed to other psychiatric inmates who may have had more knowledge of psychiatry which they may have imparted to the new arrival. People who have been interviewed in the past for example may know the kind of questions psychiatrists ask. Also, the first psychiatric assessment was a good base against which subsequent interviews could be compared.

Finally the researcher interviewed each patient. A complete psychiatric history and mental status assessment was done with questions about past symptoms that were present at the time of the crime as well as any current symptoms. Once again the presence of the items that indicate malingering were looked for in these interviews.

The study then looked at the patterns of response that predict malingering in Black forensic patients. The outcome of malingering as apposed to mental illness becomes clear in the course of time, generally after the court's decision has been made. The study therefore looked at the items or

patterns of response indicative of malingering from a group of fifty malingering patients and correlated these with the outcome from the control group of fifty mentally disordered non-malingering state patients.

The items that were found to be statistically significant were regarded as the valid items that separate malingering from mental illness.

The study then tested these items to see how good they were at diagnosing malingering or sickness.

DATA ANALYSIS AND THE USE OF STATISTICS

3.1 DETERMINATION OF STATISTICAL SIGNIFICANCE

The sample size of fifty malingering and fifty SPD's was determined from the table by Goldsmith (1978) for $\alpha = 0.05$ and $\beta = 0.10$. where, an increase from close to zero positivity, associated with the malingering population, to 10% positivity associated with the state patient population, in any one of the criteria is regarded as clinically significant. Since the data is categorical, that is, the outcome is either positive or negative, groups were compared by employing methods such as the chi-square test and the Fisher's exact test. In order to classify a patient a classification function was determined using logistic regression. The statistics used for all the items are given in Appendix B.

3.2 EFFECTIVENESS OF THE ITEMS

As this study concerns the diagnosis of malingering it is a

study of a diagnostic test. The method used in the evaluation of diagnostic tests described by Browner et al. (1988) has been used in this study. The structure of diagnostic tests is such that the tests have a predictor variable (the test result) which in this study is the malingering response or the sick response. The tests also have an outcome variable (the presence or absence of the disease) which in this study is the malingering group or the sick group.

In evaluating how good these diagnostic items are in separating malingering from mental illness four situations are possible : (a) a true-positive (TP) result : the test is positive and the accused is malingering : (b) a false-positive (FP) result : the test is positive but the accused is sick : (c) a false-negative (FN) result: the test is negative but the accused is malingering : and (d) a true negative (TN) result : the test is negative and the accused is sick.

The best diagnostic tests are those with few false-positives and false-negatives. In this study the false-positives and false-negatives are expressed as rates, that is false-positive rate and false-negative rate. To evaluate how good the items are in diagnosing malingering their sensitivity, specificity and predictive values were calculated. Sensitivity - the proportion of subjects with the malingering diagnosis who have a positive test - indicates how good the item or test is at identifying malingering. It

equals $TP/(TP+FN)$. Specificity - the proportion of subjects who are not malingering but are sick who have a negative test - indicates how good the item or test is at identifying the sick group. How the sensitivity or specificity are determined is shown in Table I below.

TABLE I

DETERMINING SENSITIVITY AND SPECIFICITY

Test Result	Malingering	
	Present	Absent
Malingering response	True Positive (TP)	False Positive (FP)
Negative	False-negatives (FN)	True-negatives (TN)
	<u>TP+FN</u>	<u>FP+TN</u>

Sensitivity equals $TP/TP+FN$. Specificity equals $TN/(FP+TN)$.

False Positives were calculated by the formula :

1 - Specificity

False Negatives were calculated by the formula :

1 - Sensitivity

Finally the following practical question "If my patient's test is positive or negative how likely is it that he or she really is malingering, in regard to the positive result or really sick in regard to the negative test result?" has to be answered. This is done by the use of the positive and negative predictive values.

The positive predictive value gives the proportion of people

who are actually malingering when the test is positive. It is calculated as follows :

$$\text{Positive Predictive Value} = \frac{A}{A + B}$$

The negative predictive value gives the proportion of people who are actually sick when the test is positive. It is calculated as follows :

$$\text{Negative Predictive Value} = \frac{D}{C + D}$$

The Overall Accuracy of the test, that is agreement between the test and the Gold Standard is expressed as the ratio of the true positives and true negatives to the total number tested and is calculated as follows :

$$\text{Overall Accuracy} = \frac{(A + D)}{(A + B + C + D)}$$

CLINICAL APPLICATIONS

There are at least four uses of having scientifically validated criteria that separate malingering from mental illness in forensic Zulu speaking African patients.

1. They will assist the forensic psychiatrist in assessing everyday clinical observation cases especially where decisions concerning malingering are difficult in the absence of good collateral information.

2. They will increase the forensic psychiatrist's confidence in dealing with the legal profession in court when the issue of malingering is raised or challenged.

3. They will assist in the teaching of forensic psychiatry.

4. They will form a basis for future research of malingering in the forensic setting.

CHAPTER FOUR

RESULTS

The results are in the form of a two by two table for each as follows :

	ITEM	CRITERIA
	No. of malingering cases	No. of sick cases
No. of +ve malingering responses	True-Positive (TP) A	False-Positive (FP) B
No. of -ve malingering responses	False-Negatives (FN) C	True-Negatives (TN) D

Two aspects of each item are shown. The first is the sensitivity (Se) which is the proportion of true cases identified by each item, which is calculated as follows :

$$Se = A / A + C$$

The second is the specificity (Sp) which is the proportion of non cases identified by each item which is calculated as follows :

$$Sp = \frac{D}{B + D}$$

The false-positives are when the test is positive but the patient is sick.

False-Positive Rate is given by the formula :

$$\text{One minus specificity or } 1 - Sp$$

The false-negatives are given when the test is negative but the patient is malingering.

False-Negative Rate is given by the formula :

One minus sensitivity or

$$1 - Se$$

The false-negatives and false-positives are given as false-positive or false-negative rates. Next we answer the

practical question of if a test is positive how likely is it that the patient really has the condition? This is given by the positive and negative predictive values. The Positive Predictive Value is the number of actual patients who are malingering when the test is positive. It is calculated as follows :

$\frac{A}{A + B}$ The Negative Predictive Value is the number of actual patients who are not malingering when the test is negative. It is calculated as follows : $\frac{D}{C + D}$

Finally the overall accuracy of the test which gives the agreement between the test and the Gold Standard is given. It is expressed as the ratio of true-positives and false-negatives to the total number tested as follows :

$$\frac{A + D}{(A + B + C + D)}$$

ITEM IDEFINITION

- Malingering : The accused claims mental illness by word or deed at the time of the offence, in court or during the time of observation.
- Sick : The accused denies or does not claim mental illness by word or deed at the time of the offence, in court or during the time of the observation.

TABLE OF ITEM I

	=====	
	+ve malingering patients	-ve sick patients
	=====	
Malingering positive reponses	A 48	B 5
	=====	
Sick or negative responses	C 2	D 45
	=====	

Chi-square is significant at $P < .05$

Chi-square for Item I is $P < 0.0005$, that is highly significant.

Sensitivity

The sensitivity or the proportion of malingering cases identified by Item I is :

$$Se = \frac{A}{A + C} = \frac{48}{48+2} = 96\%$$

Specificity

The Specificity or proportion of sick cases identified by Item I are :

$$Sp = \frac{D}{B + D} = \frac{45}{5+45} = 90\%$$

False Positive Rate

The False Positive Rate of Item 1 is :

$$\text{False-Positive Rate} = 1 - \text{Sensitivity}$$

$$= 1 - 90\%$$

$$= 10\%$$

False Negative Rate

The False Negative Rate of Item 1 is :

$$\text{False-Negative Rate} = 1 - \text{Sensitivity}$$

$$= 1 - 96\%$$

$$= 4\%$$

Positive Predictive Value

The Positive Predictive Value of Item 1

$$= \frac{A}{A + B} = \frac{48}{48 + 5}$$

$$= 91\%$$

Negative Predictive Value

The Negative Predictive Value of Item 1

$$= \frac{D}{C + D} = \frac{95}{2 + 45}$$

$$= 98\%$$

Overall Accuracy

The Overall Accuracy of Item 1 is :

$$\begin{array}{r}
 A + D \\
 \hline
 (A + B + C + D) \\
 \\
 = \frac{48 + 45}{(48 + 5 + 2 + 45)}
 \end{array}$$

$$\begin{array}{r}
 93 \\
 \hline
 100
 \end{array}$$

$$= 93\%$$

ITEM 2

DEFINITION

- Malingering : Wrong answers, many of them silly are given over a wide range of the items of the psychiatric history and mental state interviews.
- Sick : Correct answers are given over a wide range of the items of the psychiatric history and mental state interviews.

TABLE OF ITEM 2

	=====	
	+ve malingering	-ve sick
	patients	patients
	=====	
Malingering	A	B
positive	2	21
responses		
	=====	
Sick or	C	D
negative	48	29
responses		
	=====	

The Chi-square is significant at $P<0.05$
Chi-square for Item 2 is $P<0.0005$ in the opposite direction.
This item is not significant.

ITEM 3DEFINITION

Malingering : There is a marked discrepancy in the performance of the same specific intellectual task on two different occasions and/or the intellectual performance is not in keeping with the education.

Sick : There is no discrepancy in the performance of the same specific intellectual task on two different occasions and/or the intellectual performance is in keeping with the education.

TABLE OF ITEM 3

	=====	
	+ve malingering	-ve sick
	patients	patients
	=====	
Malingering	A	B
positive	11	0
responses		
	=====	
Sick or	C	D
negative	39	50
responses		
	=====	

The Chi-square is significant at $P < 0.05$

The Chi-square for Item 3 is $P < 0.0005$.

Sensitivity

The sensitivity or proportion of malingering cases identified by Item 3 is :

$$Se = \frac{A}{A + C} = \frac{11}{11+39} = 22\%$$

Specificity

The specificity or proportion of sick cases identified by Item 3 is :

$$Sp = \frac{D}{B + D} = \frac{50}{50+0} = 100\%$$

False-Positive Rate

The False-Positive Rate of Item 3 is :

$$\text{False-Positive Rate} = 1 - \text{Specificity}$$

$$= 1 - 100\%$$

$$= 0\%$$

False-Negative Rate

The False-Negative Rate of item 3 is :

$$\text{False-Negative Rate} = 1 - \text{Sensitivity}$$

$$= 1 - 22\%$$

$$= 78\%$$

Positive Predictive Value

The Positive Predictive Value of Item 3

$$= \frac{A}{A + B} = \frac{11}{11 + 0}$$

$$= 100\%$$

Negative Predictive Value

The Negative Predictive Value of Item 3

$$= \frac{D}{C + D} = \frac{50}{39 + 50}$$

$$= 56\%$$

Overall Accuracy

The Overall Accuracy of Item 3 is :

$$\begin{aligned}
 & \frac{A + D}{(A + B + C + D)} \\
 = & \frac{11 + 50}{(11 + 0 + 39 + 50)} \\
 = & \frac{61}{100} \\
 = & 61\%
 \end{aligned}$$

ITEM 4DEFINITION

Malingering : The accused has altered consciousness with subsequent amnesia for the event and yet was able to defend himself or herself during the event.

Sick : The accused did not have altered consciousness nor subsequent amnesia for the events in the case where the accused was able to defend himself or herself.

TABLE OF ITEM 4

	+ve malingering patients		-ve sick patients	
Malingering positive responses	A	5	B	0
Sick or negative responses	C	2	D	8

75% of the cells have expected counts of less than 5. Chi-square may not be a valid test. Therefore Fisher's exact test was done. $P < .007$

Sensitivity

The sensitivity or proportion of malingering cases identified by Item 4 is :

$$Se = \frac{A}{A + C} = \frac{5}{5+2} = 71.4\%$$

Specificity

The specificity or proportion of sick cases identified by Item 4 is :

$$Sp = \frac{D}{B + D} = \frac{8}{8} = 100\%$$

False-Positive Rate

The False-Positive Rate of Item 4 is :

$$\text{False-Positive Rate} = 1 - \text{Specificity}$$

$$= 1 - 100\%$$

$$= 0\%$$

False-Negative Rate

The False-Negative Rate of Item 4 is :

$$\text{False-Negative Rate} = 1 - \text{Sensitivity}$$

$$= 1 - 71\%$$

$$= 29\%$$

Positive Predictive Value

The Positive Predictive Value of Item 4

$$= \frac{A}{A + B} = \frac{5}{5 + 0}$$

$$= 100\%$$

Negative Predictive Value

The Negative Predictive Value of Item 4

$$= \frac{D}{C + D} = \frac{8}{2 + 8}$$

$$= 80\%$$

Overall Accuracy

The Overall Accuracy of Item 4 is :

$$\begin{aligned}
 & \frac{A + D}{(A + B + C + D)} \\
 = & \frac{5 + 8}{(5 + 0 + 2 + 8)} \\
 = & \frac{13}{15} \\
 = & 87\%
 \end{aligned}$$

ITEM 5DEFINITION

Malingering : There is a motive for the crime which is found in the court records and psychiatric assessments.

Sick : There is no motive for the crime from the court records and psychiatric assessments.

TABLE OF ITEM 5

	+ve malingering patients		-ve sick patients	
	A		B	
Malingering positive responses	45		9	
	C		D	
Sick or negative responses	2		41	

The Chi-square is significant at $P < 0.05$.

The Chi-square for Item 5 is $P < 0.005$.

Sensitivity

The sensitivity or proportion of malingering cases identified by Item 5 is :

$$Se = \frac{A}{A + C} = \frac{45}{45+2} = 95.74\%$$

Specificity

The specificity or proportion of sick cases identified by Item 5 is :

$$Sp = \frac{D}{B + D} = \frac{41}{9+41} = 82\%$$

False-Positive Rate

The False-Positive Rate of Item 5 is :

$$\text{False-Positive Rate} = 1 - \text{Specificity}$$

$$= 1 - 82\%$$

$$= 18\%$$

False-Negative Rate

The False-Negative Rate of Item 5 is :

$$\text{False-Negative Rate} = 1 - \text{Sensitivity}$$

$$= 1 - 96\%$$

$$= 4\%$$

Positive Predictive Value

The Positive Predictive Value of Item 5

$$= \frac{A}{A + B} = \frac{45}{45 + 9}$$

$$= 83\%$$

Negative Predictive Value

The Negative Predictive Value of Item 5

$$= \frac{D}{C + D} = \frac{41}{2 + 41}$$

$$= 95\%$$

Overall Accuracy

The Overall Accuracy of Item 5 is :

$$\begin{aligned}
 & \frac{A + D}{(A + B + C + D)} \\
 = & \frac{45 + 41}{(45 + 9 + 2 + 41)} \\
 = & \frac{86}{97} \\
 = & 89\%
 \end{aligned}$$

ITEM 6DEFINITION

Malingering : A complicated crime committed while the accused experienced altered consciousness.

Sick : A simple crime committed while the accused experienced altered consciousness.

TABLE OF ITEM 6

	+ve malingering patients	-ve sick patients
Malingering positive responses.	A 12	B 1
Sick or negative responses	C 7	D 8

The Chi-square is significant at $P < 0.05$

The Chi-square for Item 6 is $P < 0.010$.

50% of the cells have expected counts less than 5. Chi-square may not be a valid test, therefore Fisher's exact test was done.

Sensitivity

The sensitivity or proportion of malingering cases identified by Item 6 is :

$$Se = \frac{A}{A + C} = \frac{12}{12+7} = 63.16\%$$

Specificity

The specificity or proportion of sick cases identified by Item 6 is :

$$Sp = \frac{D}{B + D} = \frac{8}{8+1} = 88.89\%$$

False-Positive Rate

The False-Positive Rate of Item 6 is :

$$\begin{aligned}\text{False-Positive Rate} &= 1 - \text{Specificity} \\ &= 1 - 89\% \\ &= 11\%\end{aligned}$$

False-Negative Rate

The False-Negative Rate for Item 6 is :

$$\begin{aligned}\text{False-Negative Rate} &= 1 - \text{Sensitivity} \\ &= 1 - 63\% \\ &= 77\%\end{aligned}$$

Positive Predictive Value

The Positive Predictive Value of Item 6

$$\begin{aligned}&= \frac{A}{A + B} = \frac{12}{12 + 1} \\ &= 92\%\end{aligned}$$

Negative Predictive Value

The Negative Predictive Value of Item 6

$$\begin{aligned}&= \frac{D}{C + D} = \frac{8}{7 + 8} \\ &= 53\%\end{aligned}$$

Overall Accuracy

The Overall Accuracy of Item 6 is :

$$\begin{aligned}
 & \frac{A + D}{(A + B + C + D)} \\
 = & \frac{12 + 8}{(12 + 1 + 7 + 8)} \\
 = & \frac{20}{28}
 \end{aligned}$$

= 71%

ITEM 7DEFINITION

- Malingering : There is no past history of a similar type of mental illness that required admission to a psychiatric unit.
- Sick : There is a past history of a similar type of mental illness that required admission to a psychiatric unit.

TABLE OF ITEM 7

	+ve malingering patients	-ve sick patients
Malingering positive responses	A 47	B 24
Sick or negative responses	C 3	D 26

Chi-square is significant at $P < 0.05$.
The Chi-square of Item 7 is $P < 0.0005$.

Sensitivity

The sensitivity or proportion of malingering cases identified by Item 7 is :

$$Se = \frac{A}{A + C} = \frac{47}{47+3} = 94\%$$

Specificity

The specificity or proportion of sick cases identified by item 7 is :

$$Sp = \frac{D}{B + D} = \frac{26}{26+24} = 52\%$$

False-Positive Rate

The False-Positive Rate of Item 7 is :

$$\text{False-Positive Rate} = 1 - \text{Specificity}$$

$$= 1 - 52\%$$

$$= 48\%$$

False-Negative Rate

The False-Negative Rate of Item 7 is :

$$\text{False-Negative Rate} = 1 - \text{Sensitivity}$$

$$= 1 - 94\%$$

$$= 6\%$$

Positive Predictive Value

The Positive Predictive Value of Item 7

$$= \frac{A}{A + B} = \frac{47}{47 + 24}$$

$$= 66\%$$

Negative Predictive Value

The Negative Predictive Value of Item 7

$$= \frac{D}{C + D} = \frac{26}{3 + 26}$$

$$= 90\%$$

Overall Accuracy

The Overall Accuracy of Item 7 is :

$$\begin{aligned}
 & \frac{A + D}{(A + B + C + D)} \\
 = & \frac{47 + 26}{(47 + 24 + 3 + 26)} \\
 = & \frac{73}{100} \\
 = & 73\%
 \end{aligned}$$

ITEM 8

DEFINITION

- Malingering : Family members claim mental illness in court with no admission to a psychiatric unit.
- Sick : No family members claim mental illness in court.

TABLE OF ITEM 8

	=====	
	+ve malingering	-ve sick
	patients	patients
	=====	
Malingering positive responses	A	B
	23	18
	=====	
Sick or negative responses	C	D
	25	32
	=====	

Chi-square is significant at $P<0.05$
The Chi-square for Item 8 is $P<0.232$.
Not Significant.

ITEM 9

DEFINITION

- Malingering : The illness is not fitting in with a known psychiatric syndrome.
- Sick : The illness is in keeping with a known psychiatric syndrome.

TABLE OF ITEM 9

	=====	
	+ve malingering	-ve sick
	patients	patients
	=====	
Malingering	A	B
positive	49	4
responses		
	=====	
Sick or	C	D
negative	1	46
patients		
	=====	

The Chi-square is significant at $P<0.05$.
The Chi-square of Item 9 is $P<0.0005$.

Sensitivity

The sensitivity or proportion of malingering cases identified by Item 9 is :

$$Se = \frac{A}{A + C} = \frac{49}{50} = 98\%$$

Specificity

The specificity or proportion of sick cases identified by Item 9 is

$$Sp = \frac{D}{B + D} = \frac{46}{46+4} = 92\%$$

False-Positive Rate

The False-Positive Rate of Item 9 is :

$$\text{False-Positive Rate} = 1 - \text{Specificity}$$

$$= 1 - 92\%$$

$$= 8\%$$

False-Negative Rate

The False-Negative Rate of Item 9 is :

$$\text{False-Negative Rate} = 1 - \text{Sensitivity}$$

$$= 1 - 98\%$$

$$= 2\%$$

Positive Predictive Value

The Positive Predictive Value of Item 9

$$= \frac{A}{A + B} = \frac{49}{49 + 4}$$

$$= 92\%$$

Negative Predictive Value

The Negative Predictive Value of Item 9

$$= \frac{D}{C + D} = \frac{46}{1 + 46}$$

$$= 98\%$$

Overall Accuracy

The Overall Accuracy of Item 9 is :

$$\begin{aligned}
 & \frac{A + D}{(A + B + C + D)} \\
 = & \frac{49 + 46}{(49 + 4 + 1 + 46)} \\
 = & \frac{95}{100} \\
 = & 95\%
 \end{aligned}$$

ITEM 10DEFINITION

Malingering : There is a change in the description of the crime and the events surrounding it at different times, e.g. in court, and at the different psychiatric assessments.

Sick : There is the same description of the crime and the events surrounding it at different times e.g. in court and at different psychiatric assessments.

TABLE OF ITEM 10

	=====	
	+ve malingering patients	-ve sick patients
	=====	
Malingering	A	B
positive	34	4
responses		
	=====	
Sick or	C	D
negative	16	46
responses		
	=====	

The Chi-square is significant at $P < 0.05$.
Chi-square for Item 10 is $P < 0.0005$.

Sensitivity

The sensitivity or proportion of malingering cases identified by Item 10 is :

$$Se = \frac{A}{A + C} = \frac{34}{34 + 16} = 68\%$$

Specificity

The specificity or proportion of sick cases identified by Item 10 is :

$$Sp = \frac{D}{B + D} = \frac{46}{4+46} = 92\%$$

False-Positive Rate

The False-Positive Rate of Item 10 is :

$$\text{False-Positive Rate} = 1 - \text{Specificity}$$

$$= 1 - 92\%$$

$$= 8\%$$

False-Negative Rate

The False-Negative Rate of Item 10 is :

$$\text{False-Negative Rate} = 1 - \text{Sensitivity}$$

$$= 1 - 68\%$$

$$= 32\%$$

Positive Predictive Value

The Positive Predictive Value of Item 10

$$= \frac{A}{A + B} = \frac{34}{34 + 4}$$

$$= 89\%$$

Negative Predictive Value

The Negative Predictive Value of Item 10

$$= \frac{D}{C + D} = \frac{46}{16 + 46}$$

$$= 74\%$$

Overall Accuracy

The Overall Accuracy of Item 10 is :

$$\begin{aligned}
 & \frac{A + D}{(A + B + C + D)} \\
 = & \frac{34 + 46}{(34 + 4 + 16 + 46)} \\
 = & \frac{80}{100} \\
 = & 80\%
 \end{aligned}$$

ITEM 11

DEFINITION

- Malingering : There is an exaggeration of symptoms when the accused is aware of being observed.
- Sick : There is no change in the symptoms whether the accused is observed or not being aware of being observed by staff.

TABLE OF ITEM 11

	=====	
	+ve malingering	-ve sick
	patients	patients
	=====	
Malingering	A	B
positive	1	0
responses		
	=====	
Sick or	C	D
negative	49	50
responses		
	=====	

The Chi-square is significant at $P < 0.05$.
Chi-square for Item 11 is $P < 0.315$.
Item 11 is not significant.

ITEM 12

DEFINITION

Malingering : The crime is not against a close family member such as one's parents or one's own child.

Sick : The crime is against a close family member such as one's parent or one's own child.

TABLE OF ITEM 12

	=====	
	+ve malingering patients	-ve sick patients
=====		
Malingering positive responses	A 47	B 23
=====		
Sick or negative responses	C 3	D 27
=====		

The Chi-square is significant at $P < 0.05$.
The Chi-square for Item 12 is $P < 0.005$.

Sensitivity

The sensitivity or proportion of malingering cases identified by Item 12 is :

$$Se = \frac{A}{A + C} = \frac{47}{47+3} = 94\%$$

Specificity

The specificity or proportion of sick cases identified by Item 12 is :

$$Sp = \frac{D}{B + D} = \frac{27}{27+23} = 54\%$$

False-Positive Rate

The False-Positive Rate of Item 12 is :

$$\text{False-Positive Rate} = 1 - \text{Specificity}$$

$$= 1 - 54\%$$

$$= 46\%$$

False-Negative Rate

The False-Negative Rate of Item 12 is :

$$\text{False-Negative Rate} = 1 - \text{Sensitivity}$$

$$= 1 - 94\%$$

$$= 6\%$$

Positive Predictive Value

The Positive Predictive Value of Item 12

$$= \frac{A}{A + B} = \frac{47}{47 + 23}$$

$$= 67\%$$

Negative Predictive Value

The Negative Predictive Value of Item 12

$$= \frac{D}{C + D} = \frac{27}{3 + 27}$$

$$= 90\%$$

Overall Accuracy

The Overall Accuracy of Item 12 is :

$$\begin{aligned} & \frac{A + D}{(A + B + C + D)} \\ = & \frac{47 + 27}{(47 + 23 + 3 + 27)} \\ = & \frac{74}{100} \\ = & 74\% \end{aligned}$$

ITEM 13DEFINITION

Malingering : There is no subtle signs of residual schizophrenia such as blunted affect and withdrawal.

Sick : There are subtle signs of residual schizophrenia such as blunted affect and withdrawal.

TABLE OF ITEM 13

	=====	
	+ve malingering patients	-ve sick patients
=====		
Malingering positive responses	A 47	B 13
=====		
Sick or negative responses	C 3	D 37
=====		

The Chi-square is signiificant at $P < 0.05$.

The Chi-square for Item 13 is $P < 0.0005$.

Sensitivity

The sensitivity or proportion of malingering cases identified by Item 13 is :

$$Se = \frac{A}{A + C} = \frac{47}{47+3} = 94\%$$

Specificity

The specificity or proportion of sick cases identified by Item 13 is :

$$Sp = \frac{D}{B + D} = \frac{37}{37+13} = 74\%$$

False-Positive Rate

The False-Positive Rate of Item 13 is :

$$\text{False-Positive Rate} = 1 - \text{Specificity}$$

$$= 1 - 74\%$$

$$= 26\%$$

False-Negative Rate

The False-Negative Rate of Item 13 is :

$$\text{False-Negative Rate} = 1 - \text{Sensitivity}$$

$$= 1 - 94\%$$

$$= 6\%$$

Positive Predictive Value

The Positive Predictive Value of Item 13

$$= \frac{A}{A + B} = \frac{47}{47 + 13}$$

$$= 78\%$$

Negative Predictive Value

The Negative Predictive Value of Item 13

$$= \frac{D}{C + D} = \frac{37}{3 + 37}$$

$$= 93\%$$

Overall Accuracy

The Overall Accuracy of Item 13 is :

$$\begin{aligned}
 & \frac{A + D}{(A + B + C + D)} \\
 = & \frac{47 + 37}{(47 + 13 + 3 + 37)} \\
 = & \frac{84}{100} \\
 = & 84\%
 \end{aligned}$$

ITEM 14DEFINITION

Malingering : The EEG is normal.

Sick : The EEG is abnormal.

TABLE OF ITEM 14

	=====	
	+ve malingering patients	-ve sick patients
=====		
Malingering positive responses	A 26	B 15
=====		
Sick or negative responses	C 12	D 25
=====		

The Chi-square is significant at $P < 0.05$.

The Chi-square for Item 14 is $P < 0.006$.

Sensitivity

The sensitivity or proportion of malingering cases identified by Item 14 is

$$Se = \frac{A}{A + C} = \frac{26}{26 + 12} = 68.42\%$$

Specificity

The specificity or proportion of non cases identified by Item 14 is :

$$Sp = \frac{D}{B + D} = \frac{25}{25 + 15} = 62.5\%$$

False-Positive Rate

The False-Positive Rate of Item 14 is :

$$\text{False-Positive Rate} = 1 - \text{Specificity}$$

$$= 1 - 67$$

$$= 38\%$$

False-Negative Rate

The False-Negative Rate of Item 14 is :

$$\text{False-Negative Rate} = 1 - \text{Sensitivity}$$

$$= 1 - 68\%$$

$$= 32\%$$

Positive Predictive Value

The Positive Predictive Value of Item 14

$$= \frac{A}{A + B} = \frac{26}{26 + 15}$$

$$= 63\%$$

Negative Predictive Value

The Negative Predictive Value of Item 14

$$= \frac{D}{C + D} = \frac{25}{12 + 25}$$

$$= 68\%$$

Overall Accuracy

The Overall Accuracy of Item 14 is :

$$\begin{aligned}
 & \frac{A + D}{(A + B + C + D)} \\
 = & \frac{26 + 25}{(26 + 15 + 12 + 25)} \\
 = & \frac{51}{78} \\
 = & 65\%
 \end{aligned}$$

ITEM 15DEFINITION

Malingering : There is a history of criminal behaviour as shown by one or more periods of imprisonment and/or having faced criminal charges on at least two occasions in the past.

Sick : There is no past history of criminal behaviour as shown by one or more periods of imprisonment and/or having face criminal charges on at least two occasions, in the past.

TABLE OF ITEM 15

	+ve malingering patients		-ve sick patients	
Malingering positive responses	A	15	B	21
Sick or negative responses	C	4	D	25

The Chi-square is significant at $P < 0.05$.
The Chi-square for Item 15 is $P < 0.014$.

Sensitivity

The sensitivity or proportion of malingering cases identified by Item 15 is :

$$Se = \frac{A}{A + C} = \frac{15}{15+4} = 78.95\%$$

Specificity

The specificity or proportion of sick cases identified by Item 15 is :

$$Sp = \frac{D}{B + D} = \frac{25}{25+21} = 54.35\%$$

False-Positive Rate

The False-Positive Rate of Item 15 is :

$$\text{False-Positive Rate} = 1 - \text{Specificity}$$

$$= 1 - 54$$

$$= 46\%$$

False-Negative Rate

The False-Negative Rate of Item 15 is :

$$\text{False-Negative Rate} = 1 - \text{Sensitivity}$$

$$= 1 - 79\%$$

$$= 21\%$$

Positive Predictive Value

The Positive Predictive Value of Item 15

$$= \frac{A}{A + B} = \frac{15}{15 + 21}$$

$$= 42\%$$

Negative Predictive Value

The Negative Predictive Value of Item 15

$$= \frac{D}{C + D} = \frac{25}{4 + 25}$$

$$= 86\%$$

Overall Accuracy

The Overall Accuracy of Item 15 is :

$$\begin{aligned}
 & \frac{A + D}{(A + B + C + D)} \\
 = & \frac{15 + 25}{(15 + 21 + 4 + 25)} \\
 = & \frac{40}{65} \\
 = & 62\%
 \end{aligned}$$

ITEM 16DEFINITION

Malingering : The accused denies the crime directly by saying : "I was not there" or "I don't know" on many occasions.

Sick : The accused does not deny the crime directly by saying "I was not there" or "I don't know" ie. "ungasi" on many occasions.

TABLE OF ITEM 16

	=====	
	+ve malingering patients	-ve sick patients
=====		
Malingering positive responses	A 18	B 4
=====		
Sick or negative responses	C 32	D 46
=====		

The Chi-square is significant when $P < 0.05$.

The Chi-square for Item 16 is $P < 0.001$.

Sensitivity

The sensitivity or proportion of true cases identified by Item 16 is :

$$Se = \frac{A}{A + C} = \frac{18}{18+32} = 36\%$$

Specificity

The specificity or proportion of non cases identified by Item 16 is :

$$Sp = \frac{D}{B + D} = \frac{46}{4+46} = 92\%$$

False-Positive Rate

The False-Positive Rate of Item 16 is :

$$\text{False-Positive Rate} = 1 - \text{Specificity}$$

$$= 1 - 92\%$$

$$= 8\%$$

False-Negative Rate

The False-Negative Rate of Item 16 is :

$$\text{False-Negative Rate} = 1 - \text{Sensitivity}$$

$$= 1 - 36\%$$

$$= 64\%$$

Positive Predictive Value

The Positive Predictive Value of Item 16

$$= \frac{A}{A + B} = \frac{18}{18 + 4}$$

$$= 82\%$$

Negative Predictive Value

The Negative Predictive Value of Item 16

$$= \frac{D}{C + D} = \frac{46}{32 + 46}$$

$$= 59\%$$

Overall Accuracy

The Overall Accuracy of Item 16 is :

$$\begin{aligned}
 & \frac{A + D}{(A + B + C + D)} \\
 = & \frac{18 + 46}{(18 + 4 + 32 + 46)} \\
 = & \frac{64}{100} \\
 = & 64\%
 \end{aligned}$$

ITEM 17

DEFINITION

Malingering : The accused presents for the first time at the medicolegal team at a relatively young age i.e. below 30 years.

Sick : The accused presents for the first time at the medicolegal team at an older age i.e. above 30 years.

TABLE OF ITEM 17

	+ve malingering patients	-ve sick patients
Malingering positive responses	A 38	B 24
Sick or negative responses	C 12	D 26

The Chi-square is significant when $P < 0.05$.
The Chi-square for Item 17 is $P < 0.004$.

Sensitivity

The sensitivity or proportion of malingering cases identified by Item 17 is :

$$Se = \frac{A}{A + C} = \frac{38}{38+12} = 76\%$$

Specificity

The specificity or proportion of sick cases identified by Item 17 is :

$$Sp = \frac{D}{B + D} = \frac{26}{26+24} = 52\%$$

False-Positive Rate

The False-Positive Rate of Item 17 is :

$$\text{False Positive Rate} = 1 - \text{Specificity}$$

$$= 1 - 52\%$$

$$= 48\%$$

False-Negative Rate

The False-Negative Rate of Item 17 is :

$$\text{False-Negative Rate} = 1 - \text{Sensitivity}$$

$$= 1 - 76\%$$

$$= 24\%$$

Positive Predictive Value

The Positive Predictive Value of Item 17

$$= \frac{A}{A + B} = \frac{38}{38 + 24}$$

$$= 61\%$$

Negative Predictive Value

The Negative Predictive Value of Item 17

$$= \frac{D}{C + D} = \frac{26}{12 + 26}$$

$$= 68\%$$

Overall Accuracy

The Overall Accuracy of Item 17 is :

$$\begin{aligned}
 & \frac{A + D}{(A + B + C + D)} \\
 = & \frac{38 + 26}{(38 + 24 + 12 + 26)} \\
 = & \frac{64}{100} \\
 = & 64\%
 \end{aligned}$$

ITEM 18

DEFINITION

Malingering : The weapon used requires skill. The most important example of such a weapon is a gun.

Sick : The weapon used requires no skill. Some examples of these weapons are stones, sticks, knives and bushknives.

TABLE OF ITEM 18

	=====	
	+ve malingering patients	-ve sick patients
=====		
Malingering positive responses	A 10	B 0
=====		
Sick or negative responses	C 17	D 41
=====		

The Chi-square is significant at $P < 0.05$.
The Chi-square for Item 18 is $P < 0.0005$.

Sensitivity

The sensitivity or proportion of malingering cases identified by Item 18 is :

$$Se = \frac{A}{A + C} = \frac{10}{10+17} = 37.04\%$$

Specificity

The specificity or proportion of sick cases identified by Item 18 is :

$$Sp = \frac{D}{B + D} = \frac{41}{41} = 100\%$$

False-Positive Rate

The False-Positive Rate of Item 18 is :

$$\text{False-Positive Rate} = 1 - \text{Specificity}$$

$$= 1 - 100\%$$

$$= 0\%$$

False-Negative Rate

The False-Negative Rate of Item 18 is :

$$\text{False-Negative Rate} = 1 - \text{Sensitivity}$$

$$= 1 - 37\%$$

$$= 63\%$$

Positive Predictive Value

The Positive Predictive Value of Item 18

$$= \frac{A}{A + B} = \frac{10}{10 + 0}$$

$$= 100\%$$

Negative Predictive Value

The Negative Predictive Value of Item 18

$$= \frac{D}{C + D} = \frac{41}{17 + 41}$$

$$= 71\%$$

Overall Accuracy

The Overall Accuracy of Item 18 is :

$$\begin{aligned}
 & \frac{A + D}{(A + B + C + D)} \\
 = & \frac{10 + 41}{(10 + 0 + 17 + 41)} \\
 = & \frac{51}{68} \\
 = & 75\%
 \end{aligned}$$

ITEM 19

DEFINITION

Malingering : The accused gives a far-fetched story or gives a set of circumstances that are extremely unlikely.

Sick : The accused does not give a far-fetched story or a set of circumstances that are extremely unlikely.

TABLE OF ITEM 19

	+ve malingering patients	-ve sick patients
Malingering positive responses	A 10	B 0
Sick or negative responses	C 40	D 50

Chi-square is significant at $P < 0.05$.
The Chi-square for Item 19 is $P < 0.001$.

Sensitivity

The sensitivity or proportion of malingering cases identified by Item 19 is :

$$Se = \frac{A}{A + C} = \frac{10}{10+40} = 20\%$$

Specificity

The specificity or proportion of sick cases identified by Item 19 is :

$$Sp = \frac{D}{B + D} = \frac{50}{50} = 100\%$$

False-Positive Rate

The False-Positive Rate of Item 19 is :

$$\text{False-Positive Rate} = 1 - \text{Specificity}$$

$$= 1 - 100\%$$

$$= 0\%$$

False-Negative Rate

The False-Negative Rate of Item 19 is :

$$\text{False-Negative Rate} = 1 - \text{Sensitivity}$$

$$= 1 - 20\%$$

$$= 80\%$$

Positive Predictive Value

The Positive Predictive Value of Item 19

$$= \frac{A}{A + B} = \frac{10}{10 + 0}$$

$$= 100\%$$

Negative Predictive Value

The Negative Predictive Value of Item 19

$$= \frac{D}{C + D} = \frac{50}{40 + 50}$$

$$= 56\%$$

Overall Accuracy

The Overall Accuracy of Item 19 is :

$$\begin{aligned}
 & \frac{A + D}{(A + B + C + D)} \\
 = & \frac{10 + 50}{(10 + 0 + 40 + 50)} \\
 = & \frac{60}{100} \\
 = & 60\%
 \end{aligned}$$

ITEM 20DEFINITION

Malingering : The accused is an accomplice in a crime committed by two or more people.

Sick : The accused is not an accomplice in a crime committed by two or more people.

TABLE OF ITEM 20

	=====	
	+ve malingering patients	-ve sick patients
=====		
Malingering positive responses	A 13	B 2
=====		
Sick or negative responses	C 36	D 48
=====		

Chi-square is significant at $P < 0.05$.
The Chi-square for item 20 is $P < 0.002$.

Sensitivity

The sensitivity or proportion of malingering cases identified by Item 20 is :

$$Se = \frac{A}{A + C} = \frac{13}{13+36} = 26.53\%$$

Specificity

The specificity or proportion of sick cases identified by Item 20 is :

$$Sp = \frac{D}{B + D} = \frac{48}{48+2} = 96\%$$

False-Positive Rate

The False-Positive Rate of Item 20 is :

$$\text{False-Positive Rate} = 1 - \text{Specificity}$$

$$= 1 - 96\%$$

$$= 4\%$$

False-Negative Rate

The False-Negative Rate of Item 20 is :

$$\text{False Negative Rate} = 1 - \text{Sensitivity}$$

$$= 1 - 27\%$$

$$= 73\%$$

Positive Predictive Value

The Positive Predictive Value of Item 20

$$= \frac{A}{A + B} = \frac{13}{13 + 2}$$

$$= 87\%$$

Negative Predictive Value

The Negative Predictive Value of Item 20

$$= \frac{D}{C + D} = \frac{48}{36 + 48}$$

$$= 57\%$$

Overall Accuracy

The Overall Accuracy of Item 20 is

$$\begin{aligned}
 & \frac{A + D}{(A + B + C + D)} \\
 = & \frac{13 + 48}{(13 + 2 + 36 + 48)} \\
 = & \frac{61}{99} \\
 = & 62\%
 \end{aligned}$$

TABLE I

SUMMARY OF RESULTS

ITEM	SENSITIVITY ie prop. of malingering cases	SPECIFICITY ie prop. of sick cases	FALSE POSTIVES ie sick cases identified as malingering	FALSE NEGATIVES ie positive cases identified as sick
1	96%	90%	10%	4%
2	-	-	-	-
3	22%	100%	0%	78%
4	71%	100%	0%	29%
5	95.74%	82%	18%	4%
6	63%	88.9%	11.11%	37%
7	94%	52%	48%	6
8	-	-	-	-
9	98%	92%	8%	2%
10	68%	92%	8%	32%
11	-	-	-	-
12	94%	54%	46%	6%
13	94%	74%	26%	6%
14	68.42%	62.5%	37.5%	32%

TABLE I ... CONTINUED

SUMMARY OF RESULTS

ITEM	SENSITIVITY ie prop. of malingerers cases	SPECIFICITY ie prop. of sick cases	FALSE POSITIVES ie sick cases identified as malingering	FALSE NEGATIVES ie positives cases identified as sick
15	78.95%	54.35%	45.65%	21%
16	36%	92%	8%	64%
17	76%	52%	48%	24%
18	37.04%	100%	0%	63%
19	20%	100%	0%	80%
20	26.53%	96%	4%	64%

TABLE II
SUMMARY OF RESULTS

Item	Positive Predictive Value i.e. prop. of malingerers when the test is positive	Negative Predictive Value i.e. prop. of sick people when the test is negative	Overall Accuracy - Agreement between test and Gold Standard
1	91%	96%	93%
2	-	-	-
3	100%	56%	61%
4	100%	80%	87%
5	83%	95%	89%
6	92%	53%	71%
7	66%	90%	73%
8	-	-	-
9	92%	98%	95%
10	89%	74%	80%
11	-	-	-
12	67%	90%	74%
13	78%	93%	84%
14	63%	68%	65%
15	43%	86%	62%
16	82%	59%	64%
17	61%	93%	64%
18	100%	71%	75%
19	100%	56%	60%
20	87%	57%	62%

CHAPTER FIVE

DISCUSSION

In evaluating the items which showed statistical significance with a Chi-square of $P < 0.05$, four situations are possible: (a) a true-positive (TP): the test is positive and the patient is malingering; (b) a false-positive (FP): the test is positive but the patient is not malingering but sick; (c) a false-negative result (FN): the test is negative but the patient is malingering; and (d) a true negative result (TN): the test is negative and the patient does not have the disease.

The results of this study were expressed in terms of sensitivity, specificity, false-negatives, false-positives, positive predictive values and negative predictive values. The sensitivity, that is, the proportion of malingering subjects with a positive test indicates how good that test or item is at identifying malingering. It equals $TP/(TP+FN)$. The specificity, that is, the proportion of subjects who are not malingering or sick or who have a negative test, indicates how good that test or item is at identifying the non-malingering or sick patients. It equals $TN/(TN+FP)$.

Also, the fewer the false-positives and false-negatives there are in a particular item, the better the item. The positive predictive value gives the proportion of the people who are actually malingering when the test is positive. This also

indicates how good the test is at diagnosing malingering. The negative predictive value gives the proportion of the people who are actually sick when the test is negative. This indicates how good the test is at diagnosing sickness. Finally overall accuracy of the test gives the agreement between the test and the Gold Standard. It is expressed as the ratio of true positives and true negatives to the total number tested.

The items in this study fall into four categories or groups. Group I are those items with a high sensitivity, a high specificity and with a few false-positives and few false-negatives. They have a high positive predictive value and a high negative predictive value. They are able to diagnose both malingering and sickness with a high degree of accuracy hence they have a very high overall accuracy.

Group II items are those with a high specificity, a moderate to high sensitivity, a high positive predictive value and a few false-positives. These items diagnose malingering patients easily and are relatively good in the diagnosis of sickness directly hence they have a relatively high overall accuracy.

Group III items are those with a high sensitivity, a few false-negatives and high negative predictive values. They are also relatively good in the diagnosis of malingering patients but have a lower overall accuracy than the Group II items.

Therefore all three groups are useful in the diagnosis of malingering. Group I and Group II diagnose malingering directly while Group III items can be used to diagnose malingering indirectly by identifying the sick group. Group IV items do not separate malingering from mental illness to a statistically significant extent.

5.1

GROUP I ITEMS

These items are extremely good at identifying both malingering and sickness and are given in the Table III (A) and Table III (B) below.

TABLE III (A)

GROUP I ITEMS

Item	Sensitivity ie prop. of malingerers cases	Specificity ie prop. of sick cases	False Positives i.e.sick cases identified as malingerers	False Negatives i.e.malingerers cases identified as sick
1	96%	90%	10%	4%
9	98%	92%	8%	2%
5	96%	82%	18%	4%

TABLE III (B)

Item	Positive Predictive Value i.e. prop. of malingerers when the test is positive	Negative Predictive Value i.e. prop. of sick people when the test is negative	Overall Accuracy- Agreement between test and Gold Standard
1	91%	96%	93%
9	92%	98%	95%
5	83%	95%	89%

5.1.1 ITEM 1

The definition of item 1 is as follows :

Malingering : The accused claims mental illness by word or deed at the time of the offence, in court or during the period of observation.

Sick : The accused denies or does not claim mental illness by word or deed at the time of the offence, in court or during the period of observation.

With a sensitivity of 96%, a specificity of 90% a positive predictive value of 91%, a negative predictive value of 96% and an overall accuracy of 93% this item is one of the two best items that diagnosed malingering and mental sickness with a very high degree of accuracy. The results are in keeping with what happens in everyday psychiatric practice outside the forensic arena. In ordinary psychiatric practice, patients that are mentally ill to the extent that they are not legally liable for their actions usually lack insight into their condition, hence the need for

certification to enable management of these patients. In most cases they do not regard themselves as being mentally ill. Why then should these very ill patients, who would ordinarily lack insight and deny the presence of mental illness, suddenly admit mental illness when facing prosecution for crimes committed?

Item 1 is similar to that given by Ritson and Forest (1970) and which is included in Resnick's 1984 comprehensive list of items that suggest malingering. They stated that malingerers are eager to call attention to their illnesses, which is in contrast to schizophrenics, who are often reluctant to discuss their symptoms.

Also Item (f) given by van Rensburg and Harms (1983) which stated that "the accused had normal behaviour when not under direct observation" is similar to item 1. The accused used abnormal behaviour to give the impression of mental illness when in fact he or she was malingering.

Therefore item 1 has been used clinically before in one way or another. This study makes the definition of item one more clear and also validates the use of item 1. Since information had to be obtained after many years had passed especially in the case of SPD's much effort was needed in this study to decide about item 1. In some cases it was not stated specifically and had to be inferred from the patients observation records, what the patient said in court and what transpired during the observation period and during the test

interview conducted for this study.

The Chi-square of item 1 is $P < 0.0005$. It is highly significant.

5.1.2 ITEM 9

The definition of the item is as follows :

Malingering : The illness is not fitting in with a known psychiatric syndrome.

Sick : The illness is in keeping with a known psychiatric syndrome.

A sensitivity of 98%, a specificity of 92%, a positive predictive value of 92%, a negative predictive value of 98% and an overall accuracy of 95% makes this item one of the best in diagnosing both malingering and mental illness accurately. Incidence studies show that mental illness in the forensic setting falls into specific categories. Gunn (1977) analysed all the hospital cases collected over a previous ten year period. This study showed that about 41% were diagnosed schizophrenic, 35% subnormal, 12% personality disorder and 8% affectively disordered.

Van Rensburg (1979), when relating specific diagnoses to the type of crime committed found, out of 78 patients 41 had schizophrenia, 16 were mentally retarded, 11 had epilepsy, 4 had alcohol psychosis, 3 had chronic organic brain syndrome and 3 were diagnosed as miscellaneous. Similar findings were reported by Nair in 1985. Therefore ill patients show specific syndromes which malingering patients have

difficulty in imitating in all the different aspects.

One of the reasons that malingerers have difficulty in imitating mental illness completely is their lack of knowledge of the syndromes. Macdonald (1976 p.267) states that: the faker of insanity usually has a poor knowledge of an insane person, there are no textbooks of psychiatry in the jail library and the ethical defence attorney provides no hints. Jones and Llewellyn (1917) say the malingerer shows a greater number of symptoms of mental illness and these symptoms are more marked. As an example they state "He sees less than the blind, he hears less than the deaf and he is more lame than the paralyzed."

Prins (1980 p.74) stated that in malingering many of the usual signs and symptoms associated with true illness may be missing.

Van Rensburg and Harms (1983) when giving their items that suggested malingering gave two items that are similar to item 9. They stated in item (j) that there were no gross symptoms of mental illness. Item (q) stated that the form and content of the syndrome differs from the known syndrome of mental illness.

Four items from Resnick's (1984) list of malingering items are also similar to and support the findings of item 9. These are stated in the review above as the following:

2.6.2.1 Malingerers may overact their part (Wachspress et al. 1953).

2.6.2.4 Malingerers' symptoms may fit no diagnostic entity. Symptoms may have been selected from various psychoses.

2.6.2.5 Malingerers may claim the sudden onset of a delusion. Systemized delusions usually take several weeks to develop.

2.6.2.6 A malingerer's behaviour is unlikely to conform to his or her alleged delusion, whereas acute schizophrenic behaviour usually does. The "burnt out" schizophrenic may no longer demonstrate agitation over his or her delusions.

Although it is difficult for the patient to fake all the aspects of psychiatric illness it is difficult clinically to diagnose malingering in actual practice as stated by van Rensburg and Harms (1983), MacDonald (1976 p. 268), and Lishman (1983 p. 369). In this study item 9 scored very high possibly because the malingering group was separated from the sick group by the nature of the study. Even then some patients were not picked up by this criteria, that is, some patients were able to malingering a psychiatric illness. This is an extremely good item in separating malingering from true mental illness. The disadvantage of its use is that one has to make a clinical diagnosis first before one can apply this item. The chi-square of item 9 is $P < 0.0005$. This is highly significant.

5.1.3 ITEM 5

The definition of item 5 is :

Malingering : There is a motive for the crime which is found

in the court records and psychiatric assessments.

Sick : There is no motive for the crime from the court records and from psychiatric assessments.

The chi-square for item 5 is $P < 0.0005$. It is highly significant. The specificity of item 5 is 82% and the false positives are 18%. The positive predictive value is 83%, the negative predictive value is 95% and the overall accuracy is 89%. This is a very good item in the diagnosis of malingering and sickness. However, 18% false positives means that 18% of sick people had a motive, that is, out of 50 sick patients 9 gave a malingering response.

Mentally ill patients do commit a crime such as stealing where a clear motive is present. However, these cases were few. In this study 9 out of 50 patients gave a malingering response. The question of motive was assessed from court records and statements given by the police, the accused and witnesses. Therefore to a certain extent this item depended heavily on the legal and police departments rather than on the psychiatric assessment. When one was not able to find reference to motive it was scored as negative.

There were cases where motive is easy to understand but there were cases where it was difficult to score. In rape, for example, is sexual satisfaction the motive? Has one to look a little deeper into the condition of the accused? A psychotic who rapes under a delusion and a psychopath who rapes out of aggression may present different motives. Despite some difficulties item 5 is clear in most of the

cases in practice as shown by this study.

Item 5 is similar to two items given by Lishman (1980 p.346) as follows :

- (1) The crime will always have been sudden and motiveless with no evidence of planning and premeditation. And
- (2) The crime will always appear to be senseless and not entirely appropriate to the circumstances.

When item 5 was positive in this study, the crime was invariably motiveless with no planning or premeditation and often sudden. It was often inappropriate for the circumstances and often senseless. These crimes included the sudden attacking of an old loved grandmother by the accused or an attack on an employer where a good relationship existed and there was no quarrel. One man, while walking in town broke into a shop by breaking the glass window and helped himself, right under the eyes of the police who were watching him.

Item 5 or presence of a motive was found to be related to abnormal EEG's in murder cases by Stafford-Clark and Taylor in (1949). They found out of 64 prisoners facing murder where there was a clear motive for killing 25% of the EEG's were abnormal but where the crime was apparently motiveless, 73% of the EEG's were abnormal. This correlation between item 5 (motive) and abnormal EEG's, that is item 14 below, was also confirmed by this study.

By scientifically validating item 5 this study once again proves for the first time another item that has been in clinical use as stated by Resnick in 1984. As part of the item that suggested malingering he stated that malingerers are likely to have a clear motive for their crime. This is not related to the psychoses. He continued to say that a crime without apparent motive such as killing a stranger suggests mental illness, but genuine psychotic explanations for rape, robbery or cheque forging are unusual. These findings were all confirmed in this study. Therefore the clinical item can be used with much more confidence having been scientifically validated. Item 5 will also be useful in the difficult area of automatism sane or insane. If item 5 is positive it would support malingering.

5.2 GROUP II ITEMS

These items are extremely good at diagnosing malingering patients positively but less effective in diagnosing mental sickness directly in the forensic setting. These items are shown in the Table IV below in order of how efficient they are in diagnosing malingering and mental illness.

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TABLE IV (A)

GROUP II ITEMS

Item	Sensitivity ie prop. of malingerers cases	Specificity ie prop. of sick cases	False- Positives ie sick cases identified as malingerers	False- Negatives ie malingerers cases identified as sick
3	22%	100%	0%	78%
4	71%	100%	0%	29%
18	37%	100%	0%	63%
19	20%	100%	0%	80%
6	63%	88.9%	11%	37%
10	68%	92%	8%	32%
16	36%	92%	8%	64%
20	26.5%	96%	4%	73%

TABLE IV (B)

Item	Positive Predictive Value i.e. prop. of malingerers when the test is positive	Negative Predictive Value i.e. prop. of sick people when the test is negative	Overall Accuracy- Agreement between test and Gold Standard
3	100%	56%	61%
4	100%	80%	87%
18	100%	71%	75%
19	100%	56%	60%
6	92%	53%	71%
10	89%	74%	80%
16	82%	59%	64%
20	87%	57%	62%

These items have a zero or a very low false positive rate. They have a very high predictive positive value some reaching 100%. It means that if the item diagnoses malingering we can be pretty sure that the patient is malingering. Each item selects only malingering and none or very few sick patients when it is positive. Therefore they will be very useful in everyday clinical forensic practice. If any one of the four items - 3, 4, 18 and 19 from this study is positive one can be hundred percent sure that the patient is from the malingering group as shown by the positive predictive value of 100%.

Items 6,10,16 and 20 all give very low false-positive rates

of less than 10% except for item 6 which gives a false positive rate of 11%. They all have very high positive predictive values. Again if any one of these items is positive one can almost be certain that the person is malingering. These items also have a relatively high negative predictive value which means they can also diagnose sickness directly but not as effectively as they diagnose malingering. They therefore have a relatively high overall accuracy as well but not as high as group I items. The Chi-Square is significant for all these items at $P < 0.05$. A closer look at all the specific items now follows.

5.2.1 ITEM 3

The definition of item 3 is as follows :

Malingering : There is a marked discrepancy in the performance of the same specific intellectual task on two different occasions and/or the intellectual performance is not in keeping with the education.

Sick : There is no discrepancy in the performance of the same specific intellectual task on two different occasions and/or the intellectual performance is in keeping with the education.

The Chi-square of item 3 is $P < 0.0005$. The separation of the malingering from mental illness by item 3 is highly significant. Item 3 has a specificity of 100% and a false positive rate of 0%. The positive predictive value is 100%. This means that no sick cases were diagnosed as malingering. Therefore if the item diagnosed malingering it

is 100% certain that the person is malingering. It is a very good item in the diagnosis of malingering. The only disadvantage of this item is that with a sensitivity of only 22% a low proportion of malingering cases was picked up. It is not good in diagnosing sickness directly because of the relatively low negative predictive value of 56%. The overall accuracy of 61% reflects the very high positive predictive value together with the low negative predictive value.

The existence and use of item 3 is stated by different authors in the literature. Boydston (1983) said where mental deficiency is feigned on the MMPI, inconsistencies in age-appropriate responses, suggest voluntary distortion of results.

Van Rensburg and Harms (1983) included in their list of seventeen items three items that are similar to item 3. These are :

- (a) Absurd (or nonsense) response.
- (g) Very stupid answer or response.
- (k) Inapplicable answers that do not match the existing logical thinking.

5.2.2 ITEM 4

The definition of item 4 is :

Malingering : The accused has altered consciousness with subsequent amnesia for the event and yet was able to defend himself or herself during the event.

Sick : The accused did not have altered consciousness nor subsequent amnesia for the events, in the case where the

TABLE IV (B)

Item	Positive Predictive Value i.e. prop. of malingerers when the test is positive	Negative Predictive Value i.e. prop. of sick people when the test is negative	Overall Accuracy-Agreement between test and Gold Standard
3	100%	56%	61%
4	100%	80%	87%
18	100%	71%	75%
19	100%	56%	60%
6	92%	53%	71%
10	89%	74%	80%
16	82%	59%	64%
20	87%	57%	62%

These items have a zero or a very low false positive rate. They have a very high predictive positive value some reaching 100%. It means that if the item diagnoses malingering we can be pretty sure that the patient is malingering. Each item selects only malingering and none or very few sick patients when it is positive. Therefore they will be very useful in everyday clinical forensic practice. If any one of the four items - 3, 4, 18 and 19 from this study is positive one can be hundred percent sure that the patient is from the malingering group as shown by the positive predictive value of 100%.

Items 6,10,16 and 20 all give very low false-positive rates

accused was able to defend himself or herself.

The Chi-square of item 4 is $P < 0.003$ which is highly significant.

With a specificity of 100%, a false-positive of 0% and a positive predictive value of 100% it is 100% certain that all patients diagnosed by this item were malingering. No sick patients were diagnosed as malingering by this item. However this item did not apply to all malingering patients because the sensitivity or proportion of malingering cases correctly identified by this item was 71%. This is still relatively high making this a very good item in identifying malingering patients. The negative predictive value of 80% is relatively high. This item is therefore relatively good in diagnosing sick patients directly thus giving a high overall accuracy of 87%.

Amnesia is an important symptom in forensic psychiatry and is mentioned frequently in the literature. Guojonsson et al. (1980) stated that possible faking in criminal trials occurs in three areas namely; the faking of a deficit in psychometric tests, the faking of amnesia and the faking of psychological and psychiatric symptoms. They concluded that amnesia was almost always associated with alcohol intoxication. However alcohol intoxication is not regarded as a defence in law as stated by Burchell and Milton (1991).

Two forensic areas where amnesia features, are, in relation to insane automatism during the post-ictal state and secondly sane automatism which is primarily a legal

creation. Sane automatism is caused by severe stress and provocation.

The severe turmoil caused by such emotions such as anger, jealousy, mercy and fear has been used as a complete acquittal by the South African courts. There is much controversy when such a verdict is passed resulting in two large camps namely those who agree and those who disagree with the judge's decision. Item 4 together with item 5 and 6 of this study will be of great use in these areas.

Item 4 incorporated some of the criteria given by Lishman (1980 p. 346) as guidelines assessing the probability that the offence was committed during an automatism. In most cases when item 4 was positive the crimes were sudden and senseless. However, information allowing one to decide whether a crime was sudden or senseless was often not found in court records. Also assessing the degree of how sudden is sudden or how senseless is senseless concerning a crime is difficult in clinical practice. Hence item 4 a scientifically tested item, can assist even with these finer clinical decisions.

If item 4 is positive then the crime is more likely to be sudden and senseless, although not in all cases. Thus item 4 can be easily used in everyday clinical forensic psychiatric practice together with the criteria in the existing literature as given by Lishman (1980 p. 346).

In spite of a high specificity of 100% there were relatively few patients in this study where amnesia was used as a defence. This is in keeping with normal clinical

experience. Also this is in keeping with the statement by Lishman (1980 p. 345) that murder or lesser crimes of violence occurring during seizures or post-ictal automatisms are very rare. Seventy five percent of the cells had expected counts of less than 5. Therefore the statistics involved the use of Fisher's exact test for item 4 as chi-square may not have been valid because of the low numbers.

5.2.3 ITEM 18

The definition of item 18 is :

Malingering : The weapon used requires skill. The most important example of such a weapon is a gun.

Sick : The weapon used requires no skill. Some examples of these weapons are stones, sticks, knives or bushknives.

The chi-square for item 18 is $P < 0.0005$. It is highly significant. With a specificity of 100%, a false-positive of 0% and a positive predictive value of 100% there was a 100% certainty that all patients diagnosed as malingering by this item were malingering. This item did not apply to many cases as weapons were not used in many crimes. Hence sensitivity or proportion of malingering cases identified by item 18 was 37.04%. As 75% of the cells had expected counts of less than 5, Fisher's Exact Test was performed as the chi-square may not have been a valid test. The negative predictive value of 71% means that this item is also relatively good in identifying sickness directly hence has a relatively high overall accuracy of 75%.

Guns are very valuable for self-defence as well as committing crimes. Also many of the guns are illegal that is, they are either stolen or home made. Hence it is easier for a true criminal to obtain a gun than a mentally ill person. Also, a mentally ill person is likely to be less careful and have his or her gun stolen. However, more guns both legal and illegal are said to be entering post-apartheid South Africa by the lay press. Therefore item 18 may change with time and a few sick people may use guns if more guns become available in the country.

In this study no crime where amnesia was a valid defence, involved the use of a gun. However the case described by Burchell and Milton (1991) where sane automatism was used as a defence, guns were frequent weapons. In some of these cases the accused was acquitted. This resulted in much controversy with many people disagreeing with the judges decision. Item 18, 4, 5 and 6 of this study will assist greatly in this area. When applied together one would have a much clearer picture of whether there is insane automatism or whether it is malingering.

5.2.4 ITEM 19

The definition of item 19 is :

Malingering : The accused gives a far-fetched story or gives a set of circumstances that are extremely unlikely.

Sick : The accused does not give a far-fetched story or a set of circumstances that are extremely unlikely. The chi-square for item 19 is $P < 0.001$. It is significant. With a

specificity of 100%, a false positive rate of 0% and a positive predictive value of 100% it is 100% certain that all patients diagnosed by this item as malingering were true malingerers. No sick patient was diagnosed as malingering by this item.

However this item did not pick up all the malingering cases. In fact only ten of the 40 malingerers gave the malingering response. This gave a sensitivity or proportion of malingering cases correctly identified by this item of 20%. This is a very good item in the diagnosis of malingering because when it occurs one is sure of the diagnosis. The negative predictive value of 56% means that this item is not good at diagnosing sickness directly. The combination of a high positive predictive value and a low negative predictive value gives an overall accuracy of 60%.

Item 19 is similar to the criterion given by Resnick (1984) which stated that malingerers may tell a far-fetched story to fit the facts of his or her crime into a disease model. He gave the example of an armed robber who said that he gave all the stolen money away in response to a command hallucination. Hence item 19 is another item that is in use in everyday practice that has been scientifically validated for the first time by this study.

The practical difficulty of using item 19 is that it is a very subjective item. The clinician has to decide that the story is far-fetched. It is particularly difficult in the

case of the true psychopath who are experts at faking. As stated by MacDonald (1976 p. 268) the diagnosis of malingering in a psychopath is difficult. Hence every clinician working in forensic psychiatry should have thorough knowledge of the psychopath. One must always be on the look out for signs of the psychopath in every case. In this way the diagnosis will be missed less often. Nevertheless, item 9 will assist in the diagnosis of malingering in the psychopath. One just has to be more careful.

Another case where one has to apply item 19 with care is in the case of the amnesic syndromes. Confabulation or falsification of memory can be a striking feature in amnesic syndromes (Lishman 1983 p. 41). It may present a fluctuating phenomenon at times. This may look like malingering, that is, there may be a change in story, which is item 10 which will be discussed later. It is more common in the early stages than the chronic stages of the disease but does not occur in every case. (Victor et al. 1971).

Examples of item 19 from this study included a man who stated that he pulled so hard on the cow's udder while milking it, that the cow broke its leg. Another man accused of murdering his brother stated that his brother turned into a "tikoloshe" for two hours only. Another man stated that the ancestors told him to rob someone so that he could get bus fare to travel to town. Ancestors always protect their families and will not get them into trouble.

Item 19 is very effective in diagnosing malingering when the

item is present. Item 19, 18, 4 and 3 are the best items in the diagnosis of malingering with false positives of 0% and a positive predictive value of 100%. The next group of items 5, 6, 1 and 20 have some false-positives but these are very few. They also have high positive predictive values. These items are also very good at diagnosing malingering.

5.2.5 ITEM 6

Item 6 is defined as follows :

Malingering : A complicated crime committed while the accused experienced altered consciousness.

Sick : A simple crime committed while the accused experienced altered consciousness.

The chi-square of item 6 is $P < 0.01$. It is significant.

However item 6 applied to a few cases. There were 19 malingering patients, 12 of which gave a malingering response. There were 9 sick patients and 8 of these gave a sick response. Therefore 72% of the data for statistics was missing. Also 50% of the cells had expected counts of less than 5. The chi-square may have not been a valid test for the low numbers. Hence Fisher's Exact Test was used.

The cases where item 6 was applicable were few because it was a very specific item requiring both altered consciousness and a complicated crime. Most crimes committed under altered consciousness were simple and hence this item did not apply.

With a specificity of 89%, a false-positives of 11% and a positive predictive value of 92% one is almost always certain that all patients diagnosed by this item as malingering, were true malingerers. This item is not as good as the other items above which have a lower false-positive rate. However, 11% false-positives is not many cases in the study. Out of 13 malingering responses given 12 were malingering patients and only 1 was sick. It shows this is a very good item in diagnosing malingering. However with a negative predictive value of 53% it was not good in diagnosing sickness. It is only because there is a high positive predictive value that the overall accuracy is reasonably high at 71%.

The term complicated is a subjective term and different clinicians may use it differently. In this study simple activity, was brief and consisted of gross acting out in a disorganised way e.g. a sudden assault of a person. The complicated actions were those that last longer, often consisting of different activities, which were organised and integrated different functions of the body such as fine muscle movements together with vision.

An example was an epileptic who was charged for theft but claimed that he had altered consciousness with amnesia. On closer examination of his action it was found to be complicated. He walked into a large shop, went straight to a shoe counter, took of his old shoes and put on a new pair

of running shoes. The shoes were the correct size and matching colour. He tied his laces and walked out. Although he was a known epileptic he was scored as malingering on item 6.

The only case which was regarded as complicated but where item 6 scored negative or sick, involved a man who hijacked his employer. He was a known epileptic who had been a faithful servant for many years. One day as his employer was about to drive off, he jumped into the car and pushed his employer into the back seat. He then drove. The description of the ride was given by the employer.

He drove on the wrong side of the road, through red robots and knocked a motor cyclist over. Although the driving was regarded as complicated in this study the quality of the driving showed that something was wrong. Therefore, a complicated action that is carried out properly will always indicate malingering.

An area where item 6 will be of the greatest benefit is that of insane and sane automatism. Epileptic automatism was defined by Fenton (1972) as "a state of clouding of consciousness that occurs during or immediately after a seizure and during which the individual retains control of posture and muscle tone but performs simple or complex action." If one looks at some of the cases that used sane automatism successfully as a defence it is clear that the actions were too complicated to be in keeping with a brain

that was not functioning continuously.

The case of state versus Arnold 1984 (Burchell and Milton 1991 p. 235-236). The accused not only shot his wife accurately but reloaded his pistol during this period of automatism. This case would have been scored as malingering on item 6. The integration of different human functions such as vision and fine skilled motor activity of reloading and shooting would require consciousness to be present.

Item 6 in this study was found to be in keeping with certain items given by Lishman (1980 p. 346). These items that indicated epileptic automatism are :

- (i) The crime will appear to be senseless and not entirely appropriate to the circumstances.
- (ii) The abnormal behaviour would have been of short duration lasting minutes rather than hours.
- (iii) Witnesses may have noted impairment of awareness.

When item 6 was negative the above items applied frequently to the cases.

The complexity of behaviour and altered consciousness have been discussed in the literature. The examples of complex behaviour given by Lishman (1983 p. 317) are walking about the room, searching in drawers, moving articles and attempting to strip off clothes. Also the patient may continue on-going action in keeping with the current circumstances such as performing current household tasks or even continuing to drive and obeying regulations with subsequent dense amnesia. These actions with the exception

of driving although classified as complex by Lishman are in fact relatively simple. Item 6 should be a very useful clinical item for future clinical work.

5.2.6 ITEM 10

Item 10 is defined as :

Malingering: There is a change in the description of the crime and the events surrounding it at different times, e.g. in court and the different psychiatric assessments.

Sick : There is the same description of the crime and the events surrounding it at different times, e.g. in court and at different psychiatric assessments.

The chi-square for item 10 is $P < 0.0005$. It is highly significant. The specificity for item 10 is 92%, the false-positives are only 8% and the positive predictive value is 89%. Therefore almost all cases diagnosed as malingering by this item or giving a malingering response, were in fact malingerers. Out of 38 malingering responses 34 were true malingerers and only 4 were sick. The false-positives of 8% indicates that some sick patients changed their story. This item was less effective although still reasonably good in the diagnosis of sickness as shown by the negative predictive value of 74%. The overall accuracy of item 10 is quite high at 80%.

The sensitivity or proportion of true malingering cases identified by item 10 is 68% which is high. Therefore, it is a good item in picking up malingering in everyday

practice. One of the reasons for false positives is the case of epileptics who have amnesia for events but confabulate to try to make sense of things.

Item 10 is similar to an item indicating malingering that was given by van Rensburg and Harms (1983). They stated their item (c) as follows "The patients gives a different story or changing history from day to day." However, in this study people did change their story but did not change it from day to day. Most only gave one or two changes.

Also, item 10 is similar to Resnick's (1984) item indicating malingering. He stated that malingerers are likely to have contradictions in their account of the crime. These may be evident within the story itself or between the defendant's version and the physical evidence. Once again an existing clinical item has been proven to be true by this scientific study. In the case of the psychopath one has to be careful of the subtle change in their story. Macdonald (1976 p. 283) states that most psychopaths are truthful within limitation." He continued " Any discrepancy is explained with conviction and without hesitation." Therefore when the clinicians scores item 10 as positive he or she should be careful of the psychopath's counter arguments.

5.2.7 ITEM 16

Item 16 is defined as follows :

Malingering : The accused denies the crime directly by

saying "I was not there" or "I don't know" on many occasions.

Sick : The accused does not deny the crime directly by saying "I was not there" or "I don't know" that is "ungasi" on many occasions.

The chi-square for item 16 is $P < 0.001$. (Chi-square is positive when $P < 0.05$). Chi-square for item 16 is therefore significant.

The specificity or proportion of non cases identified by item 16 is 92%, and the false-positives are 8%. The positive predictive value is 82%. Therefore if malingering is diagnosed according to this item it is likely to be true malingering. The chances of a positive malingering response given by a sick person is small as shown by the low false-positive rate of 8%. In this study out of the total of 22 malingering responses 18 were true malingering patients and only 4 were sick. However item 16 was less effective in the diagnosis of sickness with a negative predictive value of 59%. The overall accuracy is 64%.

The sensitivity of item 16 or proportion of true cases identified by item 16 is 36%. This means a low proportion of malingering cases was picked by this item. This means that although the item is very good at diagnosing malingering when it applied, there were many cases where it did not apply.

Item 16 has scientifically proven the item (d) given by van Rensburg and Harms (1983) when they stated "Denial or over

denial concerning misdeed or lies about the misdeed." The accused can also deny the crime by his behaviour. This was given by van Rensburg and Harms (1983) as item (p) which is "goal directed (non-pathological) negativism."

Item 16 also incorporates two malingering items given by Resnick (1984) as indicators of malingering. These items were :

(i) Malingerers tend to present themselves as blameless within their feigned illness.

(ii) Malingerers are more likely to repeat questions or answer questions slowly to make up an answer. There may be frequent replies of "I don't know."

In the case of the psychopath one should be aware of the high level of deceit that is possible. As Macdonald (1976 p. 283) stated they are truthful within limitation and they do not lie in every situation. They may therefore give the impression of being honest and truthful and yet convincingly deny the crimes.

Item 16 is yet another item that has been in clinical use that has been scientifically validated for the first time by this study. Clinicians can now use it with greater confidence.

5.2.8 ITEM 20

The definition of item 20 is :

Malingering : The accused is an accomplice in a crime committed by two or more people.

Sick : The accused is not an accomplice in a crime committed by two or more people.

The chi-square for item 20 is $P < 0.002$. This is significant as chi-square is regarded as significant at $P < 0.05$.

The specificity or proportion of sick cases identified by item 20 is 96% and the false-positives are 4%. The positive predictive value is 87%. Therefore if malingering is diagnosed by this item it is highly likely that the person is a true malingerer. The chances of a positive malingering response being given by a sick person is very small as indicated by the low false-positives of 4%. It is less effective in the diagnosis of sickness as shown by the negative predictive value of 57%. The overall accuracy is 62%.

In this study out of a total of 15 malingering positive responses 13 patients were true malingerers and only 2 were from the sick group. This shows how good this item is in diagnosing malingering cases.

The sensitivity or proportion of malingering cases identified by item 20 is 26.53%. This means that item 20 did not apply to many cases. However, where an accomplice was involved, this item proved to be very good in diagnosing malingering as discussed above.

Item 20 is included in the list of items of malingering given by Resnick (1984). He stated that malingering should be suspected in defendants pleading insanity if a partner

was involved in the crime. He further said most accomplices of normal intelligence will not participate in psychotically motivated crimes.

The only possible exception to this is the religious followers of cults who practise religion in a fanatical way. A religious leader who is disturbed may influence his followers to commit crimes such as killing their children and themselves in a mass suicide.

Once again this study has successfully validated a clinical item that has been in use but never tested in the past. We have not been aware of how good or bad this item was in the diagnosis of malingering. Just as one would not expect normal people to participate in psychotically motivated crimes, one would not expect normal people to take a mentally disturbed person as an accomplice for a planned crime. The mentally disturbed person may upset their plans and expose them to unnecessary risks. However, severley mentally disturbed or retarded people have been left at the scene of the crime after the crime was committed. The police then find the mentally ill person at the scene of the crime.

Up to now the discussion was about items that separate malingering from mental illness in a very effective way as shown by high positive predictive values, few false positives and in some cases high negative predictive values as well as few false negatives. The following groups of

item or group III items separate malingering from mental illness to a statistically significant extent but have a high false-positive rate in all cases and high false-negative rate as well in a few cases. They have a low positive predictive value. This means that even if one diagnoses malingering with this group one cannot be certain that the accused is malingering because many ill patients are also diagnosed as malingering. However those with a low false negative rate have a high negative predictive value and are able to diagnose malingering indirectly by being able to pick up sick patients. They will be of greater clinical use. Those with both high false positives and false negatives will be less useful. These items are given in Table V below

5.3

TABLE V (A)

GROUP III ITEMS

Item	Sensitivity ie prop. of malingering cases	Specificity ie prop. of sick cases	False Positives ie sick cases diagnosed as malingering	False Negatives ie malingering cases identified as sick
7	94%	52%	48%	6%
12	94%	54%	46%	6%
13	94%	74%	26%	6%
14	68.42%	62.5%	37.5%	32%
15	78.95%	54.35%	46.65%	21%
17	76%	52%	64%	48%

TABLE V (B)

Item	Positive Predictive Value i.e. prop. of malingerers when the test is positive	Negative Predictive Value i.e. prop. of sick people when the test is negative	Overall Accuracy
7	66%	90%	73%
12	67%	90%	74%
13	78%	93%	84%
14	63%	68%	65%
15	43%	86%	62%
17	61%	93%	64%

5.3.1 ITEM 7

Item 7 is defined as follows :

Malingering : There is no past history of a similar type of mental illness that required admission to a psychiatric unit.

Sick : There is a past history of a similar type of mental illness that required admission to a psychiatric unit.

The chi-square of item 7 is $P < 0.0005$. It is highly significant.

The specificity or proportion of sick cases identified by item 7 is 52% and the false-positives are 48%. The positive predictive value is relatively low at 66%. Therefore when the item gives a malingering response one is not sure of the diagnosis because many of these are sick cases identified as malingering. There is a high false-positive rate. In fact

with a false positive rate of 48% if one gets a malingering response there is almost an equal chance or 50% chance of the case being malingering or sick. Therefore, item 7 is not good at diagnosing malingering directly.

However, with a sensitivity or proportion of malingering cases identified by item 7 of 94% and false-negatives of 6% few sick cases are identified as malingering. The negative predictive value is 90%. Out of a total of 29 patients that gave a sick response 26 were truly sick. Therefore if item 7 is negative or indicates sickness it is almost certain that the person is sick. This high negative predictive value can be used as an indirect way of using item 7 to diagnose malingering, that is, if it is negative or there is a past history then the accused is more likely to be ill. Used in this way item 7 is also a very good item in separating malingering from mental illness. The overall accuracy is 73%

This study confirms the findings of Pasewark et al. (1979) who found that a high number of patients who were found not guilty by reason of insanity in New York during the period of 1971-1976 had a previous psychiatric hospitalization. They found that out of 109 people 87 had been hospitalized.

Lishman (1980 p.346) in giving guidelines for assessing the probability that an offence was committed during a period of epileptic automatism or post-ictal confusion stated that a past history of unequivocal epileptic attacks in the

majority of cases of grandmal seizures or partial epileptic seizures together with automatic behaviour was important. This study supports these clinical impressions. Davidson (1965) in separating malingering from neurosis also gave past history as an item. He said there is a past history of irresponsibility, dishonesty or inadequacy. This past history suggested malingering. Thus by scientifically testing item 7 this study gives credibility to an item that existed in the literature and that has been used clinically in the past.

5.3.2 ITEM 12

Item 12 is defined as :

Malingering : The crime is not against a close family member such as one's parents or one's own child.

Sick : The crime is against a close family member such as one's parents or one's own child.

The chi-square for item 12 is $P < 0.005$. (Chi-square is significant at $P < 0.05$.) Chi-square is significant for item 12.

The specificity or proportion of sick cases identified by item 12 is 54% and the false-positives are 46%. Hence if the item diagnoses malingering one cannot be certain because 46% of the malingering responses are given by sick patients. Therefore item 12 is a poor item in diagnosing malingering by using the malingering positive response.

The sensitivity or proportion of malingering cases identified by item 12 is 94%. The false-negative rate is only 6%. The positive predictive value is relatively low at 67%. The negative predictive value on the other hand is high at 90%. Therefore if one gets a sick or negative response one is almost certain that the patient is sick. Item 12 can therefore be used to diagnose malingering by exclusion, that is, if a patient gives a sick response it is more likely that he or she is sick and not malingering. In this study of the 30 patients that gave sick or negative responses 27 were sick and only 3 were malingering patients. The overall accuracy of item 12 is 74%.

Item 12 has not been given in the literature that has been reviewed in this study. In fact quite the opposite has been stated by Resnick (1984). He said that crime without an apparent motive, such as killing a stranger suggests mental illness. This study shows that the killing of a close relative suggests mental illness. This item is based on the thinking that the majority of normal people would not easily kill such close loved ones as parents or children.

In the South African situation the majority of mentally ill people are looked after by close relatives. Often the mother or grandmother lives alone with the schizophrenic or mentally retarded son while the father is away working. Also dangerous weapons such as assegais, spears, knobkerries, choppers and bushknives are part of almost every traditional home. Therefore, the danger of a mentally

disturbed patient killing close relatives is frequently present.

The killing of one's children is usually related to the post-parturient psychosis syndrome. Typically a woman who was previously normal gives birth to a baby. The trauma of the pregnancy and birth precipitates a psychosis. The woman is then likely to kill her child if the diagnosis is missed and she is sent home. Item 12 is a completely new scientifically tested item that assists in the diagnosis of malingering.

5.3.3 ITEM 13

Item 13 is defined as :

Malingering : There are no subtle signs of residual schizophrenia such as blunted affect and withdrawal.

Sick : There are subtle signs of residual schizophrenia such as blunted affect and withdrawal.

The Chi-square for item 13 is $P < 0.0005$. It is highly significant.

The specificity or proportion of sick cases identified by item 13 is 74%, the positive predictive value is 78% and the false-positives are 26%. Therefore one is not certain whether a person who gives a malingering response is in fact malingering as about one in four of the malingering responses is given by a sick person. Therefore it is a better item than item 12 above because of a higher positive predictive value but it is still not very good at diagnosing

malingerer directly.

The sensitivity or proportion of malingering cases diagnosed by item 13 is 94% and the false-negatives are only 6%. It has a high negative predictive value of 93%. Therefore, if one gets a sick or negative response, one is almost certain that the person is sick. Item 13 like item 12 above, can be used to diagnose malingering indirectly by exclusion. Thus if a patient gives a sick response it is most likely that he or she is sick and not malingering. In this study of the 40 patients that gave a sick or negative response 37 were sick patients and only three were malingering. The overall accuracy of item 13 is relatively high at 84%.

Item 13 is more or less similar to the item given by Resnick (1984) as one of the items that suggest malingering. He stated that malingerers are unlikely to show the subtle signs of residual schizophrenia such as blunted affect, impaired relatedness, concreteness or peculiar thinking. However, in this study although the item was able to diagnose malingering there was a relatively low positive predictive value and a high false-positive rate.

It is very good at diagnosing sick patients as shown by the high negative predictive value of 93%. These differences are probably related to the fact that item 13 depends on clinicians' subjective assessments rather than strictly objective criteria. Therefore if there are other psychotic symptoms such as auditory hallucinations the clinicians are

more likely to rate these subtle signs as present.

Another reason for the failure to diagnose malingering directly by item 13 is the transcultural and language barriers as described by Buntting and Wessels (1988). They found that respect or "ukuhlonipha," which involves the lack of display of affect or emotion in the presence of strangers together with poor eye-contact, especially in married women could easily be mistaken for depression or blunted affect.

Also bearing in mind that the item only deals with one syndrome namely schizophrenia and the patients of the study consisted of all types of psychiatric illnesses the item may have scored higher if one looked at a sample of schizophrenic patients only.

Another item that was originally given by Sherman (et al. 1975) was included in Resnick's (1984) compiled list of malingering items which concerns the thinking form of schizophrenics. They stated that it is more difficult for malingerers to successfully imitate the form rather than the content of schizophrenic thinking. They said one of the common errors is the belief that nothing must be remembered correctly and that the more absurd and inconsistent account of events the better the deception. Ray (1971) stated that the psychotic's train of thought changes rapidly and is often abrupt. The malingerer may also show premeditation and hesitation in presenting a succession of ideas. Again these are subjective assessments by the clinician.

Fortunately the researcher in this study is fluent in Zulu and therefore spoke directly to the patients. Where an interpreter is needed as is the case in the majority of psychiatric assessments in South Africa at the moment, then assessments of the form of thought can become very difficult. The interpreters often tidy up the translation as discussed by Buntting and Wessels (1988).

5.3.4 ITEM 14

The definition of item 14 is :

Malingering : The EEG is normal.

Sick : The EEG is abnormal.

The Chi-square for item 14 is $P < 0.006$. This is significant because chi-square is regarded as significant when $P < 0.05$.

The specificity or proportion of sick cases identified by item 14 is 62.5% and the false-positives are 37.5%. This item is also not very good in the diagnosis of malingering. The positive predictive value is 63%. If malingering is diagnosed by this item 37.5% of the cases are not true malingerers but sick people. Therefore although it separates malingering from sickness, one cannot be too sure that one's diagnosis is correct.

In this study 15 malingering responses were given by sick patients. The total number of malingering responses is 41.

The sensitivity or proportion of malingering cases identified by item 14 is 68.42% and the false-negatives are

32%. The negative predictive value is 68% which is low compared to the other group III items. The overall accuracy is also relatively low at 65%. This item did not apply to all the malingering cases as EEGs were not done in all the cases. In fact 22% of the data was missing and the statistics had to take this into consideration.

The reason that item 14 is not a very good item in the diagnosis of malingering with a relatively low positive predictive value and high false positive rate is because normal people with no psychiatric syndromes may have an abnormal non specific EEG. Also psychotic patients may have a normal EEG.

The EEG may not be of much help as 20% - 30% of grand mal epileptics showed normal interseizures EEG's on a single routine record (Kiloh et al 1972). They stated that 40% showed non specific abnormalities and only 30% to 40% had definite specific abnormalities of wave and spike or polyspike and wave complexes. In a total of 29 cases Nair (1985) found only 21% had specific EEG changes.

The definition of what is normal and abnormal on an EEG is sometimes difficult because some of the results are given in very vague terms. After reading it one is not sure if it is normal or abnormal. If there was any doubt the EEG was scored as negative in this study.

This study confirms the findings of Stafford-Clark and Taylor (1949) who found a higher incidence of abnormal EEG

in sick accused patients. They studied 64 prisoners facing murder charges. They found where there was a clear motive for killing 25% of EEG were abnormal. Where the crime was apparently motiveless 73% were abnormal. Among those found unfit to plead or guilty but insane, 86% were abnormal.

Lishman (1980 p.346) in giving the guidelines for assessing the probability that the offence was committed during a period of epileptic automatism or post-ictal confusion states that an epileptic may have a negative EEG. He said the diagnosis must be based on clinical evidence as an abnormal EEG only lends support but does not establish a diagnosis.

Petit mal attacks commonly occur five to ten per day as stated by Lishman (1983 p. 297). He states that runs of attacks may continue in rapid succession with an external period of amnesia which may have forensic significance. In these cases the incidence of the abnormal EEG is much higher. The characteristic EEG is the three per second wave and spike discharges.

Once again this study has successfully scientifically tested an item that has existed in the literature and has been in clinical use. It can now be used with greater confidence in the future.

5.3.5 ITEM 15

Item 15 is defined as follows :

Malingering : There is a past history of criminal behaviour

as shown by one or more periods of imprisonment and / or having faced criminal charges on at least two occasions in the past.

Sick : There is no past history of criminal behaviour as shown by one or more periods of imprisonment and / or having faced criminal charges on at least two occasions in the past. The chi-square for item 15 is $P < 0.014$. This is significant as chi-square is significant at $P < 0.05$.

The specificity or proportion of sick cases diagnosed by item 15 is 54% and the false-positives are 46%. It has the lowest positive predictive value of the group III items with a value of 43%. Therefore although it works in separating malingering patients from those who are sick when malingering is diagnosed it is not very certain because of the high false-positive rate. A malingering response could mean either malingering or a sick patient.

The sensitivity or proportion of malingering cases diagnosed by item 15 is 79% and the false-negative rate is 21%. The negative predictive value of 86% is reasonably good. If the patient was diagnosed as sick by this item then the person was likely to be sick as the false-negative rate, that is malingering cases identified as sick is relatively low. Therefore this item can be used to identify malingering indirectly. If it is negative or one gives a sick response one is unlikely to be malingering. The overall accuracy is 62%.

The low positive predictive rate and the high false-positive rate, that is, sick cases identified as malingering is because both mentally ill patients and malingerers may commit crimes for different reasons. The mentally ill may commit crime in response to hallucinations or delusions or as a result of impaired judgement. The crime of the mentally ill person tended to be more simple, silly and open, an example is that of one man who smoked cannabis openly and offered a policeman.

Also, because of the shortage of psychiatrists in South Africa together with financial constraints it is not possible to have a psychiatrist look at all prisoners that may or may not be mentally ill. This together with the high incidence of malingering in the prison population which has many psychopaths discourages the warders from calling in a psychiatrist for minor psychiatric problems.

All these reasons contribute to the fact that mentally ill people may be sent to prison and serve their sentence without being seen to be mentally ill. Hence item 15 would probably be even more effective in separating malingering from mental illness in the more advanced countries with better human and financial resources.

The psychopath gives a false impression of himself or herself to fool the medical and legal profession. Therefore they may say that they have never been to prison when that is a lie. This would result in fewer malingerers scoring positive on item 15. Item 15 did not apply to all patients.

The police records of previous convictions were missing hence 35% of the data was missing. This was taken into account when the statistics were calculated.

5.3.6 ITEM 17

Item 17 is defined as follows:

Malingering : The accused presents for the first time to the medico-legal team at a relatively young age, that is, below the age of thirty years.

Sick : The accused presents for the first time to the medico-legal time at an older age, that is, above thirty years.

The chi-square is significant when $P < 0.05$. The chi-square for item 17 is $P < 0.004$. It is significant.

This item is not very good in diagnosing malingering with a positive predictive value of 61%. The specificity or proportion of sick cases identified is 52% and the false positives, that is, sick cases identified as malingering is 48%. Therefore when item 17 is positive one is not certain whether a patient is malingering or is a false-positive of a sick patient. In this study of 62 malingering responses 38 were given by true malingerers and 24 by sick people.

Item 17 is good in the diagnosis of mental illness with a negative predictive value of 93%. The sensitivity or proportion of malingering cases diagnosed as sick is 76% and the false-negatives or malingering cases diagnosed as sick

is 24%. Therefore if a person gave a sick response one is more certain that the person is sick as compared to the malingering response above. Out of 38 sick or negative responses 12 were given by malingering patients and 26 by sick patients. The overall accuracy is 64%

Again this item 17 is not good in diagnosing malingering directly as shown by a relatively low positive predictive value but is good in diagnosing it indirectly, as shown by the high negative predictive value. This means that if item 17 is negative the person is more likely to belong to the sick group and hence is not malingering. However because of the high false-positives and false-negatives this item is not very good at diagnosing malingering.

This occurs probably because both mental illnesses and psychopathy presents for the first time in young adults.

The age cut of thirty years was used in this study because the majority of patients were young patients. South Africa is said to have younger people compared to more advanced countries. If the cut off was higher then the item would not have worked here. Maybe in more advanced countries a higher age such as 45 could be used for this item.

5.4 GROUP IV items - NON STATISTICALLY SIGNIFICANT ITEMS

The discussion up to this point had been about the items that are able to separate mental illness from malingering to a statistically significant extent. However, three items 2, 8 and 11 do not separate malingering from mental illness to

a statistically significant extent. Therefore these items do not work in separating malingering from mental illness in this study.

5.4.1 ITEM 2

Item is defined as follows :

Malingering : Wrong answers, many of them silly given over a wide range of the items of the psychiatric history and mental state interviews.

Sick : Correct answers are given over a wide range of the items of the psychiatric history and mental state interviews.

The Chi-square is significant at $P < 0.05$.

Chi-square for item 2 is $P < 0.005$ but in the opposite direction. Therefore the chi-square for item 2 is not significant.

Many writers in the literature believe that inconsistencies are a sign of malingering. Boydstun (1983) stated that psychological testing may reveal bizarre responses and inconsistencies throughout, casting doubt on the genuineness of the patient.

Van Rensburg and Harms (1983) gave three items that indicated malingering and that were similar to item 2. These are (a) absurd or nonsense response (g) very stupid answers or response and (i) gives answers readily to leading questions and even to absurd leading questions that the accused thinks indicate mental illness.

Resnick (1984) stated that one of the common errors in

malingerers who tried to imitate the form of schizophrenic thinking, was the belief that nothing must be remembered correctly and that the more absurd and inconsistent account of events the better the description. This was not found in this study.

These have not been scientific studies where statistics were looked at. They are clinical impressions which would have to be looked at in the face of this study. This shows the need for scientific studies to examine the effectiveness of clinical items.

Also MacDonald (1976 p.283) stated that the psychopath does not lie in every situation. This finding is supported by this study. In this case the wrong answers were given more by the sick patients, that is the sick patients gave most of the positive malingering responses. This is probably because severely thought disordered patients gave wrong answers throughout the interview.

5.4.2 ITEM 8

The definition of item 8 is :

Malingering : Family members claim mental illness in court with no admission to a psychiatric unit.

Sick : No family members claim mental illness in court.

Chi-square is significant at $P < 0.05$. The chi-square for item 8 is $P < 0.232$. Item 8 is not significant.

The reasoning behind this item was that the family members would try to help family members who malingered by falsely claiming that they were mentally ill. This study proved that family members did not claim mental illness unnecessarily in order to protect family members. In quite a few cases family members did not attend court at all. Where the person had been mentally ill family members stated that they had been mentally ill. Therefore this item was not able to separate malingering from mental illness.

5.4.3 ITEM 11

The definition of item 11 is :

Malingering : There is an exaggeration of symptoms when the accused is aware of being observed by staff.

Sick : There is no change in the symptoms whether the accused is observed or not being aware of being observed by staff.

The chi-square is significant at $P < 0.05$. The chi-square for item 11 is $P < 0.315$. Therefore item 11 is not significant.

This finding is not in keeping with the opinion of some authors in the literature. For example, Jones and Llewellyn (1917) stated that malingerers show a greater number of symptoms of mental illness. They stated that these symptoms were more marked than in the case of mental illness. Prins (1980 pg. 73-74) stated that when a malingerer is being observed the symptoms may be present and may disappear when he or she is alone. In a similar vein van Rensburg and

Harms (1983) stated that a malingerer showed normal behaviour when not under direct observation. Davidson (1965) also stated that the malingerer's symptoms are present only when he or she knows that they are being watched.

These are clinical impressions which have not been scientifically studied. The great difficulty in assessing this item is that one needs continuous close observation of the patients. This should occur when they are aware of being watched and also when they are not aware of being watched.

This depended on psychiatric nurses in this study. The nurses were not able to report on this item because of the large number of patients each nurse has to observe. Also, with the changing shifts of nurses often one was given the answer "I have just come on duty I don't know the patient well." Bearing in mind the nature of the wards it would have been difficult for the nurse to observe the patients without them becoming aware of it.

5.5 INCIDENTAL FINDINGS

Many problems encountered during this study need to be highlighted with the aim of improving patient care.

Difficulties In Finding Files

It was difficult to find files for the research. This was a result of a very poor filing system. Patients were filed in

alphabetical order but according to their first names and not their surnames. Many patients had many different first names. Patients were also filed according to the month of the commission of the crime irrespective of the year. An example is all patients who committed a crime in January, irrespective of the year, were put in one draw in alphabetical order according to their first names. Some patients presented with different names on different admissions.

A second reason for the difficulties in finding files was that doctors and other multidisciplinary staff members took files out of the ward without making a note of doing so on the board. At times one was not certain who had taken out the files.

Illegible Writing In Files

Many of the doctors' hand writings were illegible in certain areas. There were pages of lost information since it could only be understood by the original writer who had in most cases subsequently left the department. Not only was the writing illegible but the doctors' signatures were also illegible. To make matters worse many doctors wrote in the same files.

Therefore, there were many varieties of mainly illegible handwritings over the many years. At times even when the author was able to decipher one hand writing the following

entry by another person was illegible. The end result of this illegible hand writing is that one has difficulty in following the progress and events of the patients' stay.

No Clear Follow Up Criteria

There were no clear indications of what has been followed up to assess improvement in the individual patient. Some patients had been SPD's for over 15 years and yet one could not easily see from the notes whether these had progressed or not.

Excessive Correspondence Between Attorney-General And Hospital

There were large amounts of communication between the attorney-general's office and the hospital. It was difficult to follow this correspondence. Many letters were written. There were many replies but it was difficult to decide which reply referred to which letter.

In addition there were letters and test results from other people such as the laboratory, the EEG department, social workers, community psychiatric nurses and psychologists. Most of these were mixed up in a different order as many people went through the files over the many years.

Some of the requirements for discharge by the attorney-general were unrealistic. These included such things as, was there enough accomodation for the patient, how many people lived in that accomodation, was there a man in the house who was able to restrain the patient? Bearing in mind

that these people are followed up by community nurses and social workers, who see that they continue to attend their local psychiatric clinics after discharge the additional demands were ways of keeping the patient in hospital.

This supports the statement made by Milton (1989) that there are other reasons for keeping SPD's in hospital other than for treatment. These include undue prejudice, fear of mental illness, punishment and for a deterrent effect. Again as J Milton (1989) recommended these laws are in need of urgent revision bearing in mind that ordinary prisoners including murderers are let out of jail after a short stay with no set conditions for the security of society.

What is also interesting in forensic psychiatry is that in the assessment of fitness to stand trial and mental illness at the time of the crime the psychiatrist's word is more or less final. When it comes to the discharging of SPD's non-psychiatrically qualified people such as the superintendent of the hospital and the lawyers have the main say in the matter.

As a result almost a quarter or more of Fort Napier Hospital consists of SPD's many of whom should no longer be in the hospital. They cause problems in the hospital and many abscond anyway. This is a heavy load on nursing staff and taxpayers' money.

Too Many Nursing Forms And Books

There is a list of about thirty two books and forms that the nursing staff of one ward, have to fill in concerning the state patients. This clearly shows that there is confusion as far as the nursing management of these cases is concerned. One wonders how accurate this information is considering the few nurses and the many patients.

Recommendations

The following are the recommendations of the author to help overcome these problems.

1. Computers

Computers are necessary to control the vast pool of information over many years in an organised way.

Information for the computers should be selected by forensic psychiatrists. Only important limited and essential information should be used as follows :

(i) The specific signs and symptoms of the patient's behaviour, thought form, thought content, hallucinations, delusions, affect, memory or fits should be recorded.

(ii) The diagnostic syndrome e.g. schizophrenia, major depression, paranoid disorder should also be recorded.

(iii) Social and occupational functioning taking into account cultural factors and education should be recorded.

(Buntting and Wessels 1988)

alphabetical order but according to their first names and not their surnames. Many patients had many different first names. Patients were also filed according to the month of the commission of the crime irrespective of the year. An example is all patients who committed a crime in January, irrespective of the year, were put in one draw in alphabetical order according to their first names. Some patients presented with different names on different admissions.

A second reason for the difficulties in finding files was that doctors and other multidisciplinary staff members took files out of the ward without making a note of doing so on the board. At times one was not certain who had taken out the files.

Illegible Writing In Files

Many of the doctors' hand writings were illegible in certain areas. There were pages of lost information since it could only be understood by the original writer who had in most cases subsequently left the department. Not only was the writing illegible but the doctors' signatures were also illegible. To make matters worse many doctors wrote in the same files.

Therefore, there were many varieties of mainly illegible handwritings over the many years. At times even when the author was able to decipher one hand writing the following

(iv) Exacerbation of the symptoms or illness or fit frequency should be recorded.

(v) Improvement in the specific signs and symptoms of mental illness given in item (i) above should be recorded.

(vi) Abnormal behaviour indicating mental illness as opposed to just bad behaviour for other reasons should be recorded.

(vii) Correspondence Summaries, that is, letters to and from the attorney-general and other letters and social workers reports should also be recorded.

Computers will solve the problems of lost files, illegible hand writing and allow easy follow up of patients.

2. Simple Nursing Management Plan

One needs to throw out most of those books and forms and have only one or two books or forms for efficient management. There needs to be a discussion between the psychiatrists and nursing managers as to what is important from both the nursing side and psychiatrists.

3. Psychiatrists should discharge state patients on clinical grounds. Psychiatrists should have an important say when it comes to the discharging of the state patients. As things stand the hospital board, who may or may not have psychiatrically trained people, and the Judge in chambers decide who should be discharged. By converting the state patients problem into a clinical problem the huge numbers of state patients would be reduced. This will save the patient unnecessary stay in hospital, it will save the state money

and it will also reduce the work load on the staff of the psychiatric hospitals.

CHAPTER SIX

CONCLUSIONS

There are two conclusions of this study. Firstly seventeen items separate malingering from mental illness to a statistically significant extent where chi-square was significant at $P < 0.05$.

Secondly the items were very effective in separating mental illness from malingering.

Group I items diagnosed both malingering and sickness with positive predictive values and negative predictive values of above 90% with the exception of one item which had a positive predictive value of 83%.

Group II items diagnosed malingering with extremely high positive predictive values. Four items had positive predictive values of 100%, three above 90% and one at 89%.

Group III items diagnosed sickness with high negative predictive values and therefore were able to diagnose malingering indirectly. Four items had a negative predictive value above 90%, one had 68% and one scored 86%.

This study now makes available for the first time scientifically validated items that separate malingering and mental illness in Zulu speaking black forensic patients. They have at least four applications.

1. They will assist the forensic psychiatrist in assessing

everyday clinical observation cases especially where decisions concerning malingering are difficult in the absence of good collateral information.

2. They will increase the forensic psychiatrist's confidence in dealing with the legal profession in court when the issue of malingering is raised or challenged.

3. They will assist in the teaching of forensic psychiatry.

4. They will form a basis for future research of malingering in the forensic setting.

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APPENDIX A

TABLE 1

ITEMS THAT SUGGEST MALINGERING AND MENTAL ILLNESS

M = Malingering

S = Sick

1. M. The accused claims mental illness by word or deed at the time of the offence, in court or during the time of observation.
1. S. The accused denies or does not claim mental illness by word or deed at the time of the offence, in court or during the time of observation.
2. M. Wrong answers, many of them silly, are given over a wide range of the items of the psychiatric history and mental state interviews.
2. S. Correct answers are given over a wide range of the items of the psychiatric history and mental state interviews.
3. M. There is a marked discrepancy in the performance of the same specific intellectual task on two different occasions and/or the intellectual performance is not in keeping with the education.
3. S. There is no discrepancy in the performance of the same specific intellectual task on two different occasions and/or the intellectual performance is in keeping with the education.
4. M. The accused has altered consciousness with subsequent amnesia for the event and yet was able to defend himself or herself during the event.
4. S. The accused did not have altered consciousness nor subsequent amnesia for the events in the case where the accused was able to defend himself or herself.
5. M. There is a motive for the crime which is found in the court records and psychiatric assessments.
5. S. There is no motive for the crime from the court records and psychiatric assessments.

- 6. M. A complicated crime committed while the accused experienced altered consciousness.
- 6. S. A simple crime committed while the accused experienced altered consciousness.
- 7. M. There is no past history of a similar type of mental illness that required admission to a psychiatric unit.
- 7. S. There is a past history of a similar type of mental illness that required admission to a psychiatric unit.
- 8. M. Family members claim mental illness in court but with no admission to a psychiatric unit.
- 8. S. No family members claim mental illness in court.
- 9. M. The illness is not fitting in with a known psychiatric syndrome.
- 9. S. The illness is in keeping with a known psychiatric syndrome.
- 10. M. There is a change in the description of the crime and the events surrounding it at different times, e.g. in court, and at the different psychiatric assessments.
- 10. S. There is the same description of the crime and the events surrounding it at different times, e.g. in court and the different psychiatric assessments.
- 11. M. There is an exaggeration of symptoms when the accused is aware of being observed.
- 11. S. There is no change in the symptoms whether the accused is observed or not being aware of being observed by staff.
- 12. M. The crime is not against a close family member such as one's parent or one's own child.
- 12. S. The crime is against a close family member such as one's parent or one's own child.

13. M. There are no subtle signs of residual schizophrenia such as blunted affect and withdrawal.
13. S. There are subtle signs of residual schizophrenia such as blunted affect and withdrawal.
14. M. The EEG is normal.
14. S. The EEG is abnormal.
15. M. There is a past history of criminal behaviour as shown by one or more periods of imprisonment and/or having faced criminal charges on at least two occasions in the past.
15. S. There is no past history of criminal behaviour as shown by one or more periods of imprisonment and/or having faced criminal charges on at least two occasions, in the past.
16. M. The accused denies the crime directly by saying "I was not there" or "I don't know" on many occasions.
16. S. The accused does not deny the crime directly by saying "I was not there" or "I don't know" i.e. "ungasi" on many occasions.
17. M. The accused presents for the first time to the medico-legal team at a relatively young age i.e. below 30 years.
17. S. The accused presents for the first time to the medico-legal team at an older age i.e. above 30 years.
18. M. The weapon used requires skill. The most important example of such a weapon is a gun.
18. S. The weapon used requires no skill. Some examples of these weapons are stones, sticks, knives and bushknives.
19. M. The accused gives a far-fetched story or gives a set of circumstances that are extremely unlikely.
19. S. The accused does not give a far-fetched story or a set of circumstances that are extremely unlikely.
20. M. The accused is an accomplice in a crime committed

by two or more people.

20. S. The accused is not an accomplice in a crime committed by more than one person.

APPENDIX B

TABLE OF GROUP BY ITEM 1

Frequency Percent Row Pct Col Pct	1	2	Total
M	48 48.00 96.00 90.57	2 2.00 4.00 4.26	50 50.00
S	5 5.00 10.00 9.43	45 45.00 90.00 95.74	50 50.00
Total	53 53.00	47 47.00	100 100.00

STATISTICS FOR TABLE OF GROUP BY ITEM 1

Statistics	DF	Value	Prob
Chi-Square	1	74.227	0.000
Likelihood Ratio Chi-Square	1	88.967	0.000
Continuity Adj. Chi-Square	1	70.815	0.000
Mantel-Haenszel Chi-Square	1	73.485	0.000
Fisher's Exact Test (Left)			1.000
(Right)			3.09E-20
(2-Tail)			6.18E-20
Phi Coefficient		0.862	
Contingency Coefficient		0.653	
Cramer's V		0.862	

Sample Size = 100

TABLE OF GROUP BY ITEM 2

Frequency			
Percent			
Row Pct			
Col Pct	1	2	Total
=====			
M	2	48	50
	2.00	48.00	50.00
	4.00	96.00	
	8.70	62.34	
=====			
S	21	29	50
	21.00	29.00	50.00
	42.00	58.00	
	91.30	37.66	
=====			
Total	23	77	100
	23.00	17.00	100.00

STATISTICS FOR TABLE OF GROUP BY ITEM 2

Statistics	DF	Value	Prob

Chi-Square	1	20.384	0.000
Likelihood Ratio Chi-Square	1	23.032	0.000
Continuity Adj. Chi-Square	1	18.295	0.000
Mantel-Haenszel Chi-Square	1	20.180	0.000
Fisher's Exact Test (Left)			3.50E-06
(Right)			1.000
(2-Tail)			7.00E-06
Phi Coefficient		-0.451	
Contingency Coefficient		0.411	
Cramer's V		-0.451	

Sample Size = 100

TABLE OF GROUP BY ITEM 3

Frequency			
Percent			
Row Pct			
Col Pct	1	2	Total
=====			
M	11	39	50
	11.00	39.00	50.00
	22.00	78.00	
	100.00	43.82	
=====			
S	0	50	50
	0.00	50.00	50.00
	0.00	100.00	
	0.00	56.18	
=====			
Total	11	89	100
	11.00	89.00	100.00

STATISTICS FOR TABLE OF GROUP BY ITEM 3

Statistics	DF	Value	Prob

Chi-Square	1	12.360	0.000
Likelihood Ratio Chi-Square	1	16.612	0.000
Continuity Adj. Chi-Square	1	10.215	0.001
Mantel-Haenszel Chi-Square	1	12.236	0.000
Fisher's Exact Test (Left)			1.000
(Right)			2.64E-04
(2-Tail)			5.27E-04
Phi-Coefficient		0.352	
Contingency Coefficient		0.332	
Cramer's V		0.352	

Sample Size = 100

TABLE OF GROUP BY ITEM 4

Frequency			
Percent			
Row Pct			
Col Pct	1	2	Total
=====			
M	5	2	7
	33.33	13.33	46.67
	71.43	28.57	
	100.00	20.00	
=====			
S	0	8	8
	0.00	53.33	53.33
	0.00	100.00	
	0.00	80.00	
=====			
Total	5	10	15
	33.33	66.67	100.00

STATISTICS FOR TABLE OF GROUP BY ITEM 4

Statistics	DF	Value	Prob

Chi-Square	1	8.571	0.003
Likelihood Ratio Chi-Square	1	10.720	0.001
Continuity Adj. Chi-Square	1	5.658	0.017
Mantel-Haenszel Chi-Square	1	8.000	0.005
Fisher's Exact Test (Left)			1.000
(Right)			6.99E-03
(2-Tail)			6.99E-03
Phi Coefficient		0.756	
Contingency Coefficient		0.603	
Cramer's V		0.756	

Effective Sample Size = 15

Frequency Missing = 85

WARNING : 85% of the data are missing.

Warning : 75% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF GROUP BY ITEM 5

Frequency			
Percent			
Row Pct			
Col Pct	1	2	Total
=====			
M	45	2	47
	46.39	2.06	48.45
	95.74	4.26	
	83.33	4.65	
=====			
S	9	41	50
	9.28	42.27	51.55
	18.00	82.00	
	16.67	95.35	
=====			
Total	54	43	97
	55.67	44.33	100.00

STATISTICS FOR TABLE OF GROUP BY ITEM 5

Statistics	DF	Value	Prob

Chi-Square	1	59.336	0.000
Likelihood Ratio Chi-Square	1	69.539	0.000
Continuity Adj. Chi-Square	1	56.228	0.000
Mantel-Haenszel Chi-Square	1	58.724	0.000
Fisher's Exact Test (Left)			1.000
(Right)			3.96E-16
(2-Tail)			5.77E-16
Phi Coefficient		0.782	
Contingency Coefficient		0.616	
Cramer's V		0.782	

Effective Sample Size = 97
Frequency Missing = 3

TABLE OF GROUP BY ITEM 6

Frequency			
Percent			
Row Pct			
Col Pct	1	2	Total
=====			
M	12	7	19
	42.86	25.00	67.86
	63.16	36.84	
	92.31	46.67	
=====			
S	1	8	8
	3.57	28.57	32.14
	11.11	88.89	
	7.69	53.33	
=====			
Total	13	15	28
	46.43	53.57	100.00

STATISTICS FOR TABLE OF GROUP BY ITEM 6

Statistics	DF	Value	Prob

Chi-Square	1	6.651	0.010
Likelihood Ratio Chi-Square	1	7.386	0.007
Continuity Adj. Chi-Square	1	4.723	0.030
Mantel-Haenszel Chi-Square	1	6.414	0.011
Fisher's Exact Test (Left)			0.9999
(Right)			1.28E-02
(2-Tail)			1.57E-02
Phi Coefficient		0.487	
Contingency Coefficient		0.438	
Cramer's V		0.487	

Effective Sample Size = 28

Frequency Missing = 72

WARNING : 72% of the data are missing.

WARNING : 50% of the cell have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF GROUP BY ITEM 7

Frequency			
Percent			
Row Pct			
Col Pct	1	2	Total
=====			
M	47	3	50
	47.00	3.00	50.00
	94.00	6.00	
	66.20	10.34	
=====			
S	24	26	50
	24.00	26.00	50.00
	48.00	52.00	
	33.80	89.66	
=====			
Total	71	29	100
	71.00	29.00	100.00

STATISTICS FOR TABLE OF GROUP BY ITEM 7

Statistics	DF	Value	Prob

Chi-Square	1	25.692	0.000
Likelihood Ratio Chi-Square	1	28.499	0.000
Continuity Adj. Chi-Square	1	23.507	0.000
Mantel-Haenszel Chi-Square	1	25.435	0.000
Fisher's Exact Test (Left)			1.000
(Right)			2.03E-07
(2-Tail)			4.06E-07
Phi Coefficient		0.507	
Contingency Coefficient		0.452	
Cramer's V		0.507	

Sample Size = 100

TABLE OF GROUP BY ITEM 8

Frequency			
Percent			
Row Pct			
Col Pct	1	2	Total
=====			
M	23	25	48
	23.47	25.51	48.98
	47.92	52.08	
	56.10	43.86	
=====			
S	18	32	50
	18.37	32.65	51.02
	36.00	64.00	
	43.90	56.14	
=====			
Total	41	57	98
	41.84	58.16	100.00

Frequency Missing = 2

STATISTICS FOR TABLE OF GROUP BY ITEM 8

Statistics	DF	Value	Prob

Chi-Square	1	1.429	0.232
Likelihood Ratio Chi-Square	1	1.432	0.231
Continuity Adj. Chi-Square	1	0.981	0.322
Mantel-Haenszel Chi-Square	1	1.415	0.234
Fisher's Exact Test (Left)			0.919
(Right)			0.161
(2-Tail)			0.306
Phi Coefficient		0.121	
Contingency Coefficient		0.120	
Cramer's V		0.121	

Effective Sample size = 98
Frequency Missing = 2

TABLE OF GROUP BY ITEM 9

Frequency			
Percent			
Row Pct			
Col Pct	1	2	Total
=====			
M	49	1	50
	49.00	1.00	50.00
	98.00	2.00	
	92.45	2.13	
=====			
S	4	46	50
	4.00	46.00	50.00
	8.00	92.00	
	7.55	97.87	
=====			
Total	53	47	100
	53.00	47.00	100.00

STATISTICS FOR TABLE OF GROUP BY ITEM 9

Statistics	DF	Value	Prob

Chi-Square	1	81.293	0.000
Likelihood Ratio Chi-Square	1	100.588	0.000
Continuity Adj. Chi-Square	1	77.720	0.000
Mantel-Haenszel Chi-Square	1	80.480	0.000
Fisher's Exact Test (Left)			1.000
(Right)			1.37E-22
(2-Tail)			2.73E-22
Phi Coefficient		0.902	
Contingency Coefficient		0.670	
Cramer's V		0.902	

Sample Size = 100

TABLE OF GROUP BY ITEM 10

Frequency			
Percent			
Row Pct			
Col Pct	1	2	Total
=====			
M	34	16	50
	34.00	16.00	50.00
	68.00	32.00	
	89.47	25.81	
=====			
S	4	46	50
	4.00	46.00	50.00
	8.00	92.00	
	10.53	74.19	
=====			
Total	38	62	100
	38.00	62.00	100.00

STATISTICS FOR TABLE OF GROUP BY ITEM 10

Statistics	DF	Value	Prob

Chi-Square	1	38.200	0.000
Likelihood Ratio Chi-Square	1	42.249	0.000
Continuity Adj. Chi-Square	1	35.696	0.000
Mantel-Haenszel Chi-Square	1	37.818	0.000
Fisher's Exact Test (Left)			1.000
(Right)			2.08E-10
(2-Tail)			4.16E-10
Phi Coefficient		0.618	
Contingency Coefficient		0.526	
Cramer's V		0.618	

Sample Size = 100

TABLE OF GROUP BY ITEM 11

Frequency			
Percent			
Row Pct			
Col Pct	1	2	Total
=====			
M	1	49	50
	1.00	49.00	50.00
	2.00	98.00	
	100.00	49.49	
=====			
S	0	50	50
	0.00	50.00	50.00
	0.00	100.00	
	0.00	50.51	
=====			
Total	1	99	100
	1.00	99.00	100.00

STATISTICS FOR TABLE OF GROUP BY ITEM 11

Statistics	DF	Value	Prob

Chi-Square	1	1.010	0.315
Likelihood Ratio Chi-Square	1	1.396	0.237
Continuity Adj. Chi-Square	1	0.000	1.000
Mantel-Haenszel Chi-Square	1	1.000	0.317
Fisher's Exact Test (Left)			1.000
(Right)			0.500
(2-Tail)			1.000
Phi Coefficient		0.101	
Contingency Coefficient		0.100	
Cramer's V		0.101	

Sample Size = 100

WARNING : 50% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF GROUP BY ITEM 12

Frequency			
Percent			
Row Pct			
Col Pct	1	2	Total
=====			
M	47	3	50
	47.00	3.00	50.00
	94.00	6.00	
	67.14	10.00	
=====			
S	23	27	50
	23.00	27.00	50.00
	46.00	54.00	
	32.86	90.00	
=====			
Total	70	30	100
	70.00	30.00	100.00

STATISTICS FOR TABLE OF GROUP BY ITEM 12

Statistics	DF	Value	Prob

Chi-Square	1	27.429	0.000
Likelihood Ratio Chi-Square	1	30.482	0.000
Continuity Adj. Chi-Square	1	25.190	0.000
Mantel-Haenszel Chi-Square	1	27.154	0.000
Fisher's Exact Test (Left)			1.000
(Right)			7.59E-08
(2-Tail)			1.52E-07
Phi Coefficient		0.524	
Contingency Coefficient		0.464	
Cramer's V		0.524	

Sample Size = 100

TABLE OF GROUP BY ITEM 13

Frequency			
Percent			
Row Pct			
Col Pct	1	2	Total
=====			
M	47	3	50
	47.00	3.00	50.00
	94.00	6.00	
	78.33	7.50	
=====			
S	13	37	50
	13.00	37.00	50.00
	26.00	74.00	
	21.67	92.50	
=====			
Total	60	40	100
	60.00	40.00	100.00

STATISTICS FOR TABLE OF GROUP BY ITEM 13

Statistics	DF	Value	Prob

Chi-Square	1	48.167	0.000
Likelihood Ratio Chi-Square	1	54.600	0.000
Continuity Adj. Chi-Square	1	45.375	0.000
Mantel-Haenszel Chi-Square	1	47.685	0.000
Fisher's Exact Test (Left)			1.000
(Right)			5.17E-13
(2-Tail)			1.03E-12
Phi Coefficient		0.694	
Contingency Coefficient		0.570	
Cramer's V		0.694	

Sample Size = 100

TABLE OF GROUP BY ITEM 14

Frequency			
Percent			
Row Pct			
Col Pct	1	2	Total
=====			
M	26	12	38
	33.33	15.38	48.72
	68.42	31.58	
	63.41	32.43	
=====			
S	15	25	40
	19.23	32.05	51.28
	37.50	62.50	
	36.59	67.57	
=====			
Total	41	37	78
	52.56	47.44	100.00

Frequency Missing = 22

STATISTICS FOR TABLE OF GROUP BY ITEM 14

Statistics	DF	Value	Prob

Chi-Square	1	7.472	0.006
Likelihood Ratio Chi-Square	1	7.603	0.006
Continuity Adj. Chi-Square	1	6.284	0.012
Mantel-Haenszel Chi-Square	1	7.377	0.007
Fisher's Exact test (Left)			0.999
(Right)			5.84E-03
(2-Tail)			7.37E-03
Phi Coefficient		0.310	
Contingency Coefficient		0.296	
Cramer's V		0.310	

Effective Sample Size = 78
Frequency Missing = 22
WARNING : 22% of the data is missing.

TABLE OF GROUP BY ITEM 15

Frequency			
Percent			
Row Pct			
Col Pct	1	2	Total
=====			
M	15	4	19
	23.08	6.15	29.23
	78.95	21.05	
	41.67	13.79	
=====			
S	21	25	46
	32.31	38.46	70.77
	45.65	54.35	
	58.33	86.21	
=====			
Total	36	29	65
	55.38	44.62	100.00

Frequency Missing = 35

STATISTICS FOR TABLE OF GROUP BY ITEM 15

Statistic	DF	Value	Prob

Chi-Square	1	6.032	0.014
Likelihood Ratio Chi-Square	1	6.376	0.012
Continuity Adj. Chi-Square	1	4.760	0.029
Mantel-Haenszel Chi-Square	1	5.940	0.015
Fisher's Exact Test (Left)			0.998
(Right)			1.32E-02
(2-Tail)			2.67E-02
Phi Coefficient		0.305	
Contingency Coefficient		0.291	
Cramer's V		0.305	

Effective Sample Size = 65

Frequency Missing = 35

WARNING : 35% of the data are missing.

TABLE OF GROUP BY ITEM 16

Frequency			
Percent			
Row Pct			
Col Pct	1	2	Total
=====			
M	18	32	50
	18.00	32.00	50.00
	36.00	64.00	
	81.82	41.03	
=====			
S	4	46	50
	4.00	46.00	50.00
	8.00	92.00	
	18.18	58.97	
=====			
Total	22	78	100
	22.00	78.00	100.00

STATISTICS FOR TABLE OF GROUP BY ITEM 16

Statistics	DF	Value	Prob

Chi-Square	1	11.422	0.001
Likelihood Ratio Chi-Square	1	12.163	0.000
Continuity Adj. Chi-Square	1	9.848	0.002
Mantel-Haenszel Chi-Square	1	11.308	0.001
Fisher's Exact Test (Left)			1.000
(Right)			6.57E-04
(2-Tail)			1.31E-03
Phi Coefficient		0.338	
Contingency Coefficient		0.320	
Cramer's V		0.338	

Sample Size = 100

TABLE OF GROUP BY ITEM 17

Frequency			
Percent			
Row Pct			
Col Pct	1	2	Total
=====			
M	38	12	50
	38.00	12.00	50.00
	76.00	24.00	
	61.29	31.58	
=====			
S	24	26	50
	24.00	26.00	50.00
	48.00	52.00	
	38.71	68.42	
=====			
Total	62	38	100
	62.00	38.00	100.00

STATISTICS FOR TABLE OF GROUP BY ITEM 17

Statistics	DF	Value	Prob

Chi-Square	1	8.319	0.004
Likelihood ratio Chi-Square	1	8.470	0.004
Continuity Adj. Chi-Square	1	7.173	0.007
Mantel-Haenszel Chi-Square	1	8.236	0.004
Fisher's Exact Test (Left)			0.999
(Right)			3.51E-03
(2-Tail)			7.02E-03
Phi Coefficient		0.288	
Contingency Coefficient		0.277	
Cramer's V		0.288	

Sample Size = 100

TABLE OF GROUP BY ITEM 18

Frequency			
Percent			
Row Pct			
Col Pct	1	2	Total
=====			
M	10	17	27
	14.71	25.00	39.71
	37.04	62.96	
	100.00	29.31	
=====			
S	0	41	41
	0.00	60.29	60.29
	0.00	100.00	
	0.00	70.69	
=====			
Total	10	58	68
	14.71	85.29	100.00

Frequency Missing = 32

STATISTICS FOR TABLE OF GROUP BY ITEM 18

Statistics	DF	Value	Prob

Chi-Square	1	17.803	0.000
Likelihood Ratio Chi-Square	1	21.196	0.000
Continuity Adj. Chi-Square	1	14.973	0.000
Mantel-Haenszel Chi-Square	1	17.542	0.000
Fisher's Exact Test (Left)			1.000
(Right)			2.90E-05
(2-Tail)			2.90E-05
Phi Coefficient		0.512	
Contingency Coefficient		0.456	
Cramer's V		0.512	

Effective Sample Size = 68

Frequency Missing = 32

WARNING : 32% of the data are missing.

WARNING : 25% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF GROUP BY ITEM 19

Frequency			
Percent			
Row Pct			
Col Pct	1	2	Total
=====			
M	10	40	50
	10.00	40.00	50.00
	20.00	80.00	
	100.00	44.44	
=====			
S	0	50	50
	0.00	50.00	50.00
	0.00	100.00	
	0.00	55.56	
=====			
Total	10	90	100
	10.00	90.00	100.00

STATISTICS FOR TABLE OF GROUP BY ITEM 19

Statistics	DF	Value	Prob

Chi-Square	1	11.111	0.001
Likelihood Ratio Chi-Square	1	14.976	0.000
Continuity Adj. Chi-Square	1	9.000	0.003
Mantel-Haenszel Chi-Square	1	11.000	0.001
Fisher's Exact Test (Left)			1.000
(Right)			5.93E-04
(2-Tail)			1.19E-03
Phi Coefficient		0.333	
Conntingency Coefficient		0.316	
Cramer's V		0.333	

Sample Size = 100

TABLE OF GROUP BY ITEM 20

Frequency			
Percent			
Row Pct			
Col Pct	1	2	Total
=====			
M	13	36	49
	13.13	36.36	49.49
	26.53	73.47	
	86.67	42.86	
=====			
S	2	48	50
	2.02	48.48	50.51
	4.00	96.00	
	13.33	57.14	
=====			
Total	15	84	99
	15.15	84.85	100.00

Frequency Missing = 100

STATISTICS FOR TABLE OF GROUP BY ITEM 20

Statistics	DF	Value	Prob

Chi-Square	1	9.772	0.002
Likelihood Ratio Chi-Square	1	10.724	0.001
Continuity Adj. Chi-Square	1	8.098	0.004
Mantel-Haenszel Chi-Square	1	9.673	0.002
Fisher's Exact Test (left)			1.000
(Right)			1.66E-03
(2-Tail)			1.88E-03
Phi Coefficient		0.314	
Contingency Coefficient		0.300	
Cramer's V		0.314	

Effective Sample Size = 99

Frequency Missing = 1

APPENDIX C

MALINGERED MENTAL ILLNESS

Forensic psychiatrists have a major role to play in the detection of malingered mental illness, stated Professor Phillip Resnick (1994). Malingering may be defined as the voluntary production, exaggeration, or false creation of symptoms when they do not exist. However, there are clues which enable the clinician to distinguish between genuine mental illness and malingering.

There are five main reasons why a person may feign mental illness. First to avoid punishment following a criminal act. Second, to avoid military service. Third, to obtain financial advantage by obtaining disability grants, for instance. Fourth, to seek to obtain drugs or be transferred to a psychiatric unit, and fifth, in the case of homeless people, to be admitted for shelter, although in the USA, it has been said that it is more difficult to get into a public hospital than into the Harvard Medical School. The clinician needs a high level of scepticism if he or she is to avoid being taken in. As George Santayana observed, 'Scepticism is the chastity of the intellect, and it is shameful to surrender it too soon.'

FACIAL EXPRESSIONS

Facial expressions may be the least reliable guides to ascertaining the truth, although there are a few pointers to the genuine article. A true smile involves the muscles of

the mouth, eyes and face. A smile involving the mouth only should be regarded with suspicion. Simple pleasantness of facial expressions and smiles should be considered together with movements and attitudes of the unwatched limbs and hands. Observers were asked to listen to audiotapes, the court transcript and a videotape to see whether they could tell if a person were lying. Interestingly enough, the video was not a good guide, because facial expressions tended to distract from consideration of what was being said and how it was being expressed.

FACIAL EXPRESSION IS NO GUIDE TO TRUTH-TELLING
--

LYING

When compared with truthful speech, people raise the pitch of their voices when lying, and give more hesitant answers to questions. They also make more grammatical errors and slips of the tongue. They are more prone to make irrelevant, vague statements and self-manipulating gestures. They tend to distance themselves from the questioner, and there is often a discrepancy between their verbal and non-verbal communication. There is often the feeling that the lies have been rehearsed. The pupils of the eyes are more dilated, and liars tend to raise their eyes more often.

Misconceptions about liars are that they have less eye contact, that they have shifty eyes, that they smile less,

that they shift their position more and that they take longer to answer a question. None of these are true.

PATTERNS OF HALLUCINATION

Hallucinations generally follow a particular pattern in genuine mental disease, and if the hallucination being described does not fit these patterns, then malingering should be considered as a possibility. Genuine hallucinations are accompanied by a delusion in 88% of cases and are usually related to some psychic purpose. Schizophrenic hallucinations are intermittent, and visual hallucinations are usually of normal-sized people and are in colour. They also tend to diminish during activity. Olfactory hallucinations are of unpleasant rather than pleasant odours.

People do not like hallucinations, and have generally developed a strategy to reduce them, such as engaging in some specific activity, changing posture, socialising or taking medication.

CLUES TO A MALINGERED PSYCHOSIS

A tendency of malingerers is to overact the part, and overemphasise their symptoms. The true sufferer from a psychosis may be more hesitant to discuss it, whereas a malingerer loses no opportunity to call attention to it. When attempting to describe a schizophrenic hallucination, it is much more difficult to mangle the form rather than the content, and the malingered symptom may fit no known

diagnostic entity. Sudden onsets of delusions are suspicious, as are contradictions in the story, and behaviour may not correlate with the delusions described. Attempts may be made to intimidate and control the clinician, and there may be a tendency to repeat questions. There may be many other clues, but the most important guidelines for the detection of malingering are first, to maintain a high index of suspicion, and second, to be totally familiar with the disease being imitated.

IT IS MORE DIFFICULT TO MALINGER THE FORM THAN THE CONTENT OF A SCHIZOPHRENIC HALLUCINATION
--

THE PSYCHIATRIC PREDICTION OF VIOLENCE

A great deal depends on the extent to which violent behaviour can be predicted in a psychiatric patient, and psychiatrists are often asked to assess whether patients are safe to be released into the community. Although there will always be the unpredicted and unpredictable exceptions, it is possible to make a reasonably accurate assessment, claimed Professor Philip Resnick, Professor of Psychiatry and Director of the Division of Forensic Psychiatry at the Cape Western Reserve University.

First, a look at the pattern of violence in society as a whole, in particular in the United States. Violence peaks in the late teens and early twenties, males are ten times more violent than females, the lower the IQ the greater the likelihood of violence, and the lower the social class, the

greater the street violence. Persons who abuse substances have a much higher incidence of violence. Less education, frequent changes of jobs, and changes of homes - all predispose to violent behaviour. Until 1990 there was a good deal of confusion in the literature about the epidemiological association between violence and mental illness. Much depended on which groups were studied, and it was not until 1990 that a study definitively showed a clear association between mental illness and violence, and this has subsequently been confirmed by two further studies in 1992 and 1993. This was part of a larger study in which a random sample of 10 000 ordinary people were given a questionnaire which contained the question "Did you perform a violent act in the past year?" Two in every hundred who had not been diagnosed as suffering from a mental illness admitted to committing a violent act in the past year. In those suffering from a major mental illness such as schizophrenia or a bipolar disease, there was about a five-fold increase. In alcoholics, it was a twelve-fold increase, and even higher with drug abuse. So there is a clear relationship between mental illness and violence, but alcoholism and drug abuse are even more predictive of violence, and in persons who are schizophrenic and substance abusers at the same time, the rate will be even higher.

ALCOHOL AND DRUGS ARE MAJOR FACTORS IN TRIGGERING VIOLENCE

HOW DANGEROUS?

In assessing dangerousness, there are four main factors to look at. The first is the magnitude of the possible harm. Is a person likely to be slightly hurt or killed? We also need to look at whether we are talking about people or property. We are of course more concerned about people, and we can consider both physical harm and psychological harm. The second issue, likelihood, is where the opportunity for psychiatric prediction is not great, but in reality we combine the magnitude and the likelihood together. For instance, if you hit the person next to you across the face as a result of your mental illness, this would not be a good reason for admission to a psychiatric hospital. However, if there was one chance in a hundred that you were going to kill the person next to you, there would be a major cause for concern. Likelihood and magnitude of the risk therefore need to be considered together, and some statutes in the USA recognise this distinction.

The third issue is imminence. If someone is going to be violent in the next five years, then it would not justify deprivation of liberty to the same extent as it would if violence were likely in the next few hours or the next few days.

The final issue is frequency. Some crimes have a high frequency. For instance, in the USA, the average exhibitionist has 150 showings before his or her first arrest. So this is a high-frequency, low magnitude type of

crime.

PRONENESS TO VIOLENCE BY DIAGNOSIS

The paranoid individual who has a predisposition to violence, whether due to a delusional disorder or schizophrenia, is much more likely to be violent in the community than other diagnostic categories, but less likely to be violent when hospitalised. A paranoid individual in the community has a plan; he is better organised, has access to weapons and access to his target. Once he is admitted to hospital, he has no access to weapons or his target, and shows less assertiveness. Another dangerous phenomenon concerns command hallucinations in which the individual is told to carry out an act or acts by "voices". Two-thirds of schizophrenics have auditory hallucinations, and one-third of these are of the command variety. The difficulty is that when a schizophrenic hears a command hallucination, how likely is he to obey it? There are two statistically significant factors involved here; the first is whether the voice is familiar or unfamiliar. The second factor is that if the command hallucination is associated with a hallucination-related delusion about the potential victim, the command is much more likely to be carried out.

An important factor is who is issuing the command. For instance, if the patient believes the voice he hears is the voice of God, the command is more likely to be carried out.

DEPRESSION AND VIOLENCE

Depression is more likely to be associated with suicide than harm to others. However, murder, and particularly the murder of young children by their mothers, is far from unknown in cases of psychosis and severe depression. One out of 26 cases of homicide in the USA involves the killing of a child by a parent. If a mother becomes psychotic or severely depressed to the extent that she becomes suicidal, she may well decide to take her children with her out of what she has come to regard as a cruel and uncaring world. When assessing suicide risk in a mother, the question should always be asked "What are your plans for the children?"

MANIA

Manic patients have a substantial incidence of causing physical harm to others, but is of a less severe variety than in schizophrenics. There is less killing and severe hurting, and manic patients tend to strike out at others only when limits are being set on them.

PERSONALITY TRAITS

A whole cluster of personality traits can be predictive of violence. For example, impulsivity with an absence of reflective delay; low frustration tolerance; inability to tolerate criticism; repetitive antisocial acts and driving automobiles recklessly. These individuals may be very self-centred with a tendency to superficial relationships and to dehumanise others; they lack introspection and tend to blame other people for their difficulties.

CHILDHOOD ANTECEDENT FACTORS

Adult violence may have its seeds sown in childhood. A major factor is the battered child who has suffered parental brutality, and boys and girls respond differently to this situation. Girls are much more likely to grow up and replicate the victimisation by having a higher incidence of being raped and marrying abusive men. Boys who are abused physically or sexually are more likely to replicate the victimisation on others who are less powerful, such as their own children, or in boarding schools where they are likely to replicate their own experiences on others.

THE SEED OF ADULT VIOLENCE ARE SOWN IN CHILDHOOD

Delinquency as an adolescent is associated with adult violence and tattoos should always be examined as they can be described as bumper stickers of the soul. In the USA, 26% of tattoos say "Mom" or "Mother," which may suggest some passive dependence traits. However, a tattoo which says "Born to Kill" carries quite a different message and one which is worth noting.

TATTOOS ARE BUMPER STICKERS OF THE SOUL

There is a classic childhood triad which may predict adult violence: fire-setting, cruelty to animals and bed-wetting. However the best single predictor of future violence is past

violence, and it pays to examine closely patterns of past violence in terms of the type of violence and what the trigger factors were. A great deal can be learned from the family members, particularly by asking them whether they had cause to be afraid of the person under scrutiny.

THE BEST PREDICTOR OF FUTURE VIOLENCE IS PAST VIOLENCE

OTHER FACTORS

Alcohol is a highly potent factor in violence, and in the USA, 60% of persons arrested for crimes of violence have detectable blood alcohol levels. Drugs are also a major factor, particularly amphetamines and cocaine. They act in two main ways - first by disinhibiting, and secondly by raising levels of paranoia.

The availability of weaponry is a factor in the prediction of violence, and arsenals are invariably ominous, as in the change in the pattern of keeping a weapon. In the USA, one in four households has a firearm, and 42% keep that weapon loaded. If someone who had previously kept the firearm in a closet moves it under the bed, that is a danger sign.

ARSENALS ARE OMINOUS

Fear and anger are both precipitants of violence, as is the feeling of helplessness. If the clinician senses these emotions when carrying out an examination, he or she should

not terminate the interview, but rather try to come to terms with them. Threats should always be taken seriously, whether delivered personally or over the telephone. The offering of food can help to defuse a difficult situation, but adequate scrutiny should also be available when dealing with potentially dangerous patients.

ALL THREATS SHOULD BE TAKEN SERIOUSLY
