CLINICAL CHARACTERISTICS OF SCHIZOPHRENIA

It is a psychotic disorder characterised distorted thinking, poor interpersonal skills, impaired emotional responses and loss of touch with reality.

It’s an episodic illness where periods of psychotic disturbance are interspersed with more normal periods of functioning.

Early signs include withdrawal, mood changes and general apathy.

Generally, peak age of onset in women is 5-10 years later than men. (possibly the protective effect of oestrogen in women could cause this)

Unlike most diagnostic criteria’s, there’s no essential symptom that much be present for it to be diagnosed.

DIAGNOSTIC CRITERIA UNDER DSM-IVR;

At least two positive symptoms for at least one month including;

- DELUSIONS – bizarre beliefs that seem real to the person
- EXPERIENCES OF THOUGHT CONTROL – believe they’re under the control of an alien force
- HALLUCINATIONS – unreal perceptions of environment
- DISORDERED THINKING – feeling thoughts have been inserted/withdrawn from their mind or believing their thoughts are being broadcasted to others.

- AFFECTIVE FLATTENING – reduction in the range and intensity of emotional expression
- ALOGIA – lessening of speech fluency
- AVOLUTION (APATHY) – reduction of goal-directed behaviour or inability to carry out routine activities.
- SOCIAL WITHDRAWL

❖ If delusions are bizarre the diagnosis can be made with just one symptom)

Types of schizophrenia:

DSM-IV-TR distinguishes three types;

1. DISORGANISED – delusions and hallucinations are fragmentary, they tend to ignore personal hygiene, mood is inappropriate and speech incoherent
2. CATAGONIC – sometimes purposeless motor activity, dreamlike state with vivid hallucinations, bizarre postures and doing the opposite of what is asked
3. PARANOID – paranoid delusions, auditory hallucinations, ideas of reference (believing what they hear/see on TV is about them), agitation, no disorganised language and in many respects less disturbed that those with the other types.
(2) **ISSUES WITH CLASSIFICATION AND DIAGNOSIS OF SCHIZOPHRENIA**

**RELIABILITY** *(the consistency of a measuring instrument and the extent to which psychiatrists can agree on the same diagnoses when independently assessing patients)*

- Reliability can be measured in terms of whether 2 independent diagnostic tools give similar scores (inter-rater reliability) or whether tests used to deliver the diagnoses are consistent over time (test-retest).
- In parts of the world the DSM diagnostic tool is used while others may use the ICD, this **cultural differences** pose a threat to validity as diagnosis is not consistent between different parts of the world.
- Issues with reliability might be due to the variation in criteria for diagnosis.
- No physical cause that can be measured so a great deal of emphasis is on the ability to report symptoms (which due to the condition may not be accurate) further affecting reliability and making objective diagnosis difficult.
- Interpretation of symptoms is subjective (down to the person doing the diagnosis) and this may vary between psychiatrists so skills and knowledge affect reliability.

**VALIDITY** *(the extent that the classification system measures what it claims to measure)*

- Validity and reliability are linked because a diagnosis cannot be valid if it is not reliable.
- One aspect is predictive validity – it shows the validity of a diagnosis by demonstrating that it can predict scores on some criterion measure. Having high predictive validity would mean it is clear how the disorder would develop and how people would respond to treatment.
- Issues arise due to **symptom overlap** – people have found that people with dissociative Identity Disorder (DID) have more schizophrenic symptoms that those with it (so sub-types have been developed). It raises issues of comorbidity.
- **Comorbidity** - This is an important issue to the validity as it refers to the extent that 2 or more conditions co-occur. Symptoms may appear to fit with schizophrenia, however they may be due to a combination of other illnesses, making it difficult and unreliable to diagnose and treat. It’s often difficult to define the boundaries between schizophrenia and other disorders. Depression is frequently co-morbid with schizophrenia.

**EVALUATION/AO2:**

- We still don’t fully know what causes the disorder and there are various explanations and so classification, diagnosis and treatment become difficult.
- Using different criteria makes it hard to compare data in studies looking for treatment options as it’s hard to compare if people have been diagnosed using different criteria.
- Ethical issues of labelling the person – lead to them being stigmatised (socially sensitive research) or affecting their life (e.g. their employment). There’s also the issue of a self-fulfilling prophecy.
Research has shown that other factors may be more influential. For example, it may be linked to gender or psychosocial factors like social skills, academic achievement and family tolerance of schizophrenic behaviour.

CULTURAL BIAS
- In America the diagnosis was used more liberally than other countries as they classifications systems used broader definitions.
- Cooper found that during the same period, in the US schizophrenia rose from 20% to 80% yet in the UK they remained at 20%. To help this there was attempts to make the classifications systems more similar.
- Additionally, Fernando found that African-Caribbean people in the UK are more likely to be diagnosed as schizophrenic than white people because, perhaps, psychiatrists may over or under estimate psychological problems in members of other cultures or possibly it may result from cultural differences in language and manerisms.
- Furthermore, psychiatrists who encounter patients claiming to be surrounded by spirits may view this as a sign of schizophrenia, but it Puerto Rican cultures, such a belief is common.
- Copeland gave a description of a patient to US psychiatrists and British Psychiatrists. 69% of those in the US diagnosed schizophrenia but only 2% in the UK – suggests the tools are ethnocentric and so reduces reliability between cultures.

There’s also the issue of gender bias – women are more likely to be classed as mentally ill than men (Winter). This could be because psychiatrists who are predominantly male may be biased against or insufficiently sensitive to female clients.

RELIABILITY
- Whaley found inter-rater reliability between health professionals was as low as 0.11 meaning that, when independently assessing patients, the diagnosis was rarely consistent so the DSM tool is unreliable.
- DSM states only one symptom is required for a diagnosis if delusions are “bizarre”. What constitutes being bizarre is hard to agree on. Mojtabi found when 50 psychiatrists had to differentiate between “bizarre” and “non-bizarre” delusions they produced inter-rater reliability correlations of only 0.40, so even this diagnosis requirement lacks reliability. Thus attempting to use “bizarre” is reductionist and is simply an attempt to over-simplify something we do not fully understand
- Schneider developed the First Rank symptoms that he believed distinguished schizophrenia from other disorders and that the existence of these first rank symptoms would make diagnosis more reliable and thus more valid.
- To help the issues, other diagnostic tools (such as St. Louis Criteria) have been developed specifically for diagnosing schizophrenia. They can help increase reliability as studies have found high reliability levels with the PSE interviewing technique.
- Rosenhans study “being sane in insane places”. It highlights the issue of reliability and validity. Normal people went to psychiatric hospitals in the US claiming to hear voices and they were diagnosed as schizophrenic and admitted to hospital. Throughout their stay no one recognised they were ‘normal’. In a follow up study, Rosenhan phoned hospitals saying he’s be sending psuedopatients and, even though none were actually sent, it resulted in a 21% increase in detection rate – they couldn’t reliably identify the disorder
**VALIDITY**

- Diagnosis has little Predictive validity as studies suggest that 20% of those diagnose recover, 10% significantly improve and 10% improve a little. We cannot fully understand why some recover and some don’t and this highlights how reductionist the tools are. Also, this much variation in the prognosis suggests that the original diagnosis lacked predictive validity and so it was not helpful in dealing with the course of schizophrenia.

- Psychiatrists have tried to address the problem of symptom overlap by proposing mixed disorder categories such as schizo-affective disorder, but the validity of these categories have been questioned.

- If a classification system was valid it should be able to predict outcome and response to treatment, however this has proved difficult.

(3) **BIOLOGICAL EXPLANATIONS OF SCHIZOPHRENIA**

1. **GENETICS (twin and adoption studies)**
   - It seems to run in families as studies have shown the risk for a person developing the disorder is proportional to the amount of genes they share;
     - For MZ twins it is 48%
     - DZ twins with one affected parent = 17%
     - Children of 2 affected parents = 46%
     - Grandchildren = 5%
     - General population = 1%
   - This led Neale to conclude the heritability of schizophrenia at 81%
   - Cardno reported a concordance rate of 26.5% for MZ twins and 0% for DZ twins
   - Concordance rates are not 100%, which shows that other factors must be important

2. **BIOCHEMISTRY (the Dopamine hypothesis)**
   - The hypothesis believes schizophrenia results from an excess of dopamine activity at certain synaptic sites.
   - Messages from neurones that transmit dopamine fire too easily or too often.
   - Schizophrenics have abnormally high levels of D2 receptors on receiving neurons, resulting in more dopamine binding, and this more neurones firing.
   - Dopamine plays a key role in guiding attention, so disturbances in this process may lead to the problems related to attention, perception and thought

3. **NEUROANATOMY**
   - Studies have found that the frontal lobes (which are known to have an important role in higher intellectual functioning and fluent expression) are smaller in people with schizophrenia.
   - PET scans have found reduced cerebral blood flow in these frontal lobes which fits with the symptoms of schizophrenia such as altered posture and abnormal eye movements
   - It’s been found that the asymmetry in normal brains in the prefrontal cortex is not found in people with schizophrenia.
Studies have found that ventricles in the brain tend to be larger in schizophrenics, particularly the ones on the left side. Andreasen found evidence for this in scans, however it was only the case for men not women.

Abnormalities have also been found in the limbic system (which regulates emotions) and research have shown that schizophrenics have a smaller hippocampus.

EVALUATION;

GENETICS

- MZ twins are relatively rare so sample sizes are small
- Twin studies don’t use the same diagnostic criteria so comparisons cannot always be made
- Concordance rates can be calculated in different ways and vary widely depending on the method used
- Concordance rates are related to the scientific rigour of the studies – studies using ‘blind interviewers’ found lower concordance rates than other studies. The better controlled the study, the lower the concordance rate.
- However, all twin studies have found a higher rate among MZ twins than DZ twins, suggesting that research into this area is reliable.
- Kety found high rates of the disorder in people whose biological parents had it by who’d been adopted by ‘normal’ parents
- Tienari – studied 155 adopted children whose biological mothers had schizophrenia and found that 10% of them developed schizophrenia compared to a control group. However the schizophrenic genetics revealed itself only if the adoptive family was psychologically disturbed in some way. So, even vulnerable individuals could be protected from the disorder if their family and rearing were healthy.
- Using family studies makes it hard to disentangle nature from nurture as families often share the same environment, making research into family studies low in validity because it’s not sure what’s being measured.
- 2/3rds of schizophrenics don’t have relatives with the illness
- The fact that schizophrenia appears to run in families may be just due to do with common rearing patterns. For example research on Expressed Emotion (EE) has shown that the negative emotional environment in some families may lead to stress beyond the persons coping mechanisms, thus triggering a schizophrenic episode.

DOPAMINE HYPOTHESIS

- Drugs than lock dopamine alleviate some of the major symptoms of schizophrenia. However, these drugs don’t work for everyone and only tend to alleviate positive symptoms
- A drug that is used to treat Parkinson’s disease works by increasing dopamine levels and this can produce symptoms of schizophrenia
- Post-mortems on people with schizophrenia have shown an increase in dopamine in parts of the brain. The issue with port-mortems is that they are usually carried out on people who have taken drug treatment for years so it’s hard to conclude a cause and effect.
PET scans have led researchers to find a two-fold increase in the density of dopamine receptor sites in schizophrenics who had never been treated with drugs compared to patients who had been treated and a control group.

It may be likely that dopamine is implicated in causing schizophrenia but it is an oversimplified explanation on its own.

It is an incomplete explanation as antipsychotics take several weeks to reduce positive symptoms, even though they begin blocking D2 receptors very quickly suggesting that their helpful effect may be due to the effects this blockade has on other brain areas and neurotransmitter systems. Serotonin neurons regulate dopaminergic neurons so dopamine may just be one piece in a bigger picture.

High levels of dopamine are not found in all schizophrenics.

Drugs such as Clozapine work affectively against schizophrenia yet they have little dopamine blocking activity.

Drugs used to actually reduce dopamine levels can actually increase them as the body tries to compensate for the sudden deficiency.

Davis found that antipsychotics that reduced dopamine levels did actually work as relapse occurred in 55% of those who were taking a placebo but only in 19% of those who remained on the drug.

**NEUROANATOMY**

 Much research is difficult to interpret and there have been contradictory findings.

 It can also be hard to disentangle cause and effect because many of the participants have suffered from the disorder and have taken medication for a long time.

 The abnormalities in the brain are not found in all people with schizophrenia – there must then also be some other factors

 Enlarged ventricles are found in other disorders (such as mania) and they may be more of a vulnerability factor than an immediate cause of the disorder.

- A diathesis-stress model may be more appropriate with a number of genes being involved in a predisposition which then requires environmental factors to trigger the illness.

(4) **PSYCHOLOGICAL EXPLANATIONS OF SCHIZOPHRENIA**

(The mark scheme states that the diathesis stress model cannot gain credit for A01)

- **FAMILY DYNAMICS/COMMUNICATION**

  **Bateson’s double blind theory**

  Explains schizophrenia through the repeated exposure to faulty communication in which the child is put in a “no win” situation.
It describes how children who frequently receive contradictory messages from their parents are more likely to develop schizophrenia as it prevents the development of an internally coherent construction of reality and may manifest itself as schizophrenic symptoms. The child may resort to self-deception and to develop a false concept of reality and an inability to communicate effectively.

**Expressed Emotion (EE)**

- High EE (a negative emotional climate) is a family communication style that involves criticism, hostility and emotional over involvement.
- A pattern of criticism and hostility in relatives of people with schizophrenia is strongly linked to relapse.

**COGNITIVE APPROACHES** *(emphasise impaired thoughts and attention processing)*

- The cognitive approach acknowledges the role of biological factors in causing the initial sensory experiences but it claims that further features appear as the person attempts to understand these first experiences. For example, they may turn to others when they begin hearing voices and, when other people fail to confirm the validity of them, it could lead them to believe that others are hiding the truth and so they begin to reject feedback from those around them and develop delusional beliefs that they are being manipulated by others.

**Frith’s model**

- It occurs due to faulty information processing leading to cognitive overload. The schizophrenic is then unable to distinguish effectively between their thoughts and outside stimuli hence they experience hallucinations and passivity symptoms.

**Bentall’s model**

- It occurs due to deficits and biases in information processing which over emphasise threatening interpretations.

**LIFE EXPERIENCES** *(which focuses on the link between social adversity and schizophrenia)*

- Certain stressors, such as the loss of a close relative, may trigger the disorder because high levels of physiological arousal associated with the neurotransmitter changes are thought to be involved.

**PSYCHODYNAMIC EXPLANATIONS**

“Schizophrenic Mother”
Fromm-Reichmann believed this type of mother is cold and domineering, leading to a lack of trust in offspring.

Freud believed schizophrenia was due to a regression to a pre-ego stage (and before a realistic awareness of the world was realised) before as a defence mechanism against a cold and uncaring parent.

As a result schizophrenia is seen as an infantile stage which is reflected in its symptoms such as delusions of grandeur which reflects this primitive condition and other symptoms such as auditory hallucinations that reflect the person’s attempts to re-establish ego control.

**EVALUATION:**

**FAMILY DYNAMICS**

- The early studies that showed the link between schizophrenia and dysfunctional families were mainly retrospective and made little use of control groups and so there are difficulties drawing cause and effect conclusions.
- A disturbed family communication may be an effect rather than a cause of the illness.
- Studies (e.g. Brown or Tarrier) have shown that higher levels of relapse occurs in families with disturbed communication.
- Vaughn found high levels of EE are more prone to relapse and that the exposure and the amount of time spent in high EE environments are also important.
- EE is linked with other disorders such as depression and ED’s so it isn’t unique to schizophrenia.
- EE is the basis of ‘family intervention’ treatment methods and these have had some success in reducing relapse rates. However it is not known whether the EE family intervention was the key element of the therapy or whether other aspects of family intervention helped.
- There is concerns over the way that EE is measured as assessment only requires one observation so it might not be sufficient to give an accurate picture of family dynamics.
- Linszen found that a patient returning to a family with high EE are 4 times more likely to relapse.
- With the double blind theory, Berger found that schizophrenics reported a higher recall of double-blind statements by their mothers then non-schizophrenics. (Though the study could be unreliable as patients’ recall may be affected by their disorder)

**COGNITIVE**

- Studies have supported Frith’s model by showing changes in the blood flow to certain areas of the brain when schizophrenics perform certain kinds of cognitive tasks.
- To support the idea that schizophrenia is caused by impaired attention mechanisms, it has been found that many people with the disorder perform poorly on various information processing tasks.
- The cognitive model simply describes the symptoms in terms of deficits in cognitive processes but does not explain where these deficits come from so it is not a complete model of the disorder.

**LIFE EXPERIENCES**
Brown found 50% of patients had experienced one major life event in the last 3 weeks prior to their schizophrenic episode yet only 12% experienced one in the 9 weeks prior to the episode, suggesting the life event triggered the episode.

- Methodological issues - findings were based on the patients’ retrospective recall which is never truly objective and is often altered by reconstructed memory or even their schizophrenic episode. The research is thus low in internal validity because it does not measure what it claims to measure.
- It is only correlational as it does not distinguish whether the life events preceded schizophrenia or whether they are a consequence of it, so it’s hard to establish cause and effect.

Hirsch carried out a prospective study, checking the life events experienced in a year and found a 23% risk of patients having a relapse during the 1 year period because of a life event. This risk was 41% for those who had twice the average number of life events. This contradicts Brown’s study as they didn’t find that life events needed to immediately precede an episode, therefore making this whole explanation an incomplete psychological explanation.

- Life events as an explanation is a more holistic account because, when combined with a biological pre-disposition, it may be able to better explain schizophrenia (this suggests a diathesis-stress relationship)
- VanO’s reported no link between life events and the onset of schizophrenia. He found that those patients who had experienced a major life event actually went on to have a lower likelihood of relapse.
- It could be that the beginnings of the disorder were the cause of the major life events

PSYCHODYNAMIC

- It is unfalsifiable so is impossible to tests its credibility. It is not objective and is based on Freud’s subjective opinions so lacks the principle features of science.
- It has some face validity in assuming that the person with schizophrenia experiences inner turmoil, however this might not actually be due to the harsh parenting but rather by other things such as biology
- Real-life applications – it has led to psychodynamic therapies which helps bring the subconscious conflicts to the conscious to establish control over the ego and then ultimately recover from schizophrenia
- Parents of a schizophrenic child may behave differently but it could just a cause of having to deal with the disorder.
- Gottdiener carried out a meta-analysis to find that 66% of patients receiving psychotherapy improved after treatment, suggesting it can help treat the illness.

Psychological explanations can be used to develop effective treatments

- There are ethical issues in attributing blame to families
- There is lots of evidence demonstrating the role of biological factors

(5) BIOLOGICAL TREATMENT OF SCHIZOPHRENIA

ANTIPSYCHOTIC DRUGS
They block dopamine receptors.

Types:

1. **TYPICAL ANTIPSYCHOTICS** - block D2 receptors in several brain areas. They reduce the effects of dopamine and so reduce the symptoms. They are dopamine antagonists as they bind to dopamine receptors but do not stimulate them and so block their action.

2. **LESS TYPICAL ANTIPSYCHOTICS** – used as a last resort when other drugs have failed.

3. **ATYPICAL ANTIPSYCHOTICS** – they also block serotonin receptors as well as dopamine. They temporarily occupy the D2 receptors and then rapidly dissociate to allow normal dopamine transmission.

**ECT**

- It is not a mainstream therapy.
- It was abandoned as a treatment after the discovery of the drugs, but has recently been introduced in the USA.
- In the UK it is not recommended by NICE except in very particular cases.
- The idea behind it was that schizophrenia was rare in people with severe epilepsy so they thought seizures somehow reduce symptoms.

**EVALUATION;**

**DRUGS**

- Relatively cheap, effective, rapidly reduce symptoms and enable many people to live normal lives.
- Atypical type seem more effective as they target a broader range of symptoms and have the fewest side effects.
- Typical antipsychotics seem to have the most side effects. It can lead to uncontrollable movements (tardive dyskinesia) and occurs in around 30% of patients and is irreversible in 75% of cases.
- These adverse effects can cause patients to stop taking their medications.
- Being on medication reinforces the view that there is ‘something wrong with you’ which prevents the individual from thinking about possible stressors that might be a trigger for their condition and this reduces their motivation to look for possible solutions.
- About 30% of patients appear to be drug resistant.
- Drugs are generally more effective on positive than negative symptoms.
- Relapse is likely when they are discontinued.
- They only treat the symptoms not the cause.
- Deniker discovered that the typical antipsychotics had a therapeutic effect and alleviated the psychotic symptoms of hallucinations and delusions.
- There are ethical issues with informed consent and the dehumanising effects of some treatments.
- There is the problem of the patient not taking the medication. Due to the nature of the disorder they may feel paranoid and experience thought control where they believe others are forcing them to take medication to ‘drug them up’ so that they can take over their brain.
- Davis carried out a Meta review and found that relapse occurred in 55% of patients in the placebo drugs group and it only occurred in 19% of those on the real drugs. However there is...
problems of using placebos as it is not a fair comparison; those taking the placebo are actually in a state of drug withdrawal and so the previously blocked dopamine system becomes flooded with dopamine, totally overwhelming the dopamine system, explaining the relapses in the placebo condition.

Vaughn found that antipsychotic drugs did make a significant difference, but only for those living with hostility and criticism but for those in a more supportive home, no significant difference between those on medication or a placebo was found.

Roth stated that for 35% of schizophrenic patients “drugs made little or no lasting effect”

Reductionist (as ignores individual differences)

ECT

✓ Adams compared ECT with a placebo and found that more people improved in the real ECT condition (however, there was no indication that this advantage was maintained)

✗ When ECT was compared to drugs, results favoured the drugs.

(6) **PSYCHOLOGICAL TREATMENT OF SCHIZOPHRENIA**

(Mark scheme says you can reference older ones such as psychodynamic therapies but you need to make it clear that they are no longer considered suitable for most people, perhaps because it is hard to develop an appropriate therapeutic relationship with psychotic patients)

**CBT**

**Coping Strategy enhancement (Tarrier)**

❖ The aim is to teach individuals to develop and apply effective coping strategies which will reduce the frequency, intensity and duration of symptoms and alleviate the distress.
❖ It uses distraction, concentrating on specific tasks and positive self-talk combined with initiation of social contact or withdrawal from social contact.
❖ Other techniques involve relaxation and breathing exercises or ways of drowning out the hallucinatory voices by shouting or turning up the TV volume.
❖ The aim is to ensure they have at least 2 appropriate strategies per distressing symptom

**Beck and Ellis’s form of cognitive therapy**

❖ According to this approach, irrational beliefs about the self and the significance of events are responsible for causing distress or other negative emotions
❖ This therapy tries to challenge these negative beliefs and put them into a reality test by asking for the evidence behind them

**FAMILY BASED INTERVENTIONS**

❖ Sessions aim to help EE and try to develop a cooperative and trusting relationship for the family group where all the family members have equal opinion rights.
The family are provided with practical coping skills that enable them to manage the everyday difficulties and they learn constructive ways of communication that focus on any good things rather than any bad things.

**SOCIAL SKILLS TRAINING**

- It does not target symptoms but rather just manages the disorder
- It makes use of behavioural techniques (such as modelling, reinforcement, role-playing and practice in real life settings) and attempts to modify or improve social behaviour
- One type of social skills training is “Milieu therapy” which aims to include patients in hospital in decision making and in managing wards with the focus on improving self-care routines, conversational skills and job-role skills.
- Milieu therapy can include token economy (patients earn privileges by conforming to expected norms)

**EVALUATION:**

**CBT**

- It has found to be effective especially with drug-resistant patients.
- Drury found faster improvements for patients receiving CBT than those on a social program. He also found a reduction of positive symptoms and a 25-50% reduction in recovery time for those given a combination of medicine and CBT.
- Garety found significant improvements in 60 drug-resistant patients when CBT was combined with standard care.
- At least 73% of Tarrier’s sample reported that his strategies were successful in managing their symptoms. He also found an alleviation of positive symptoms in a coping strategy enhancement group as opposed to a non-treatment group.
- Zimmerman found that CBT was effective at treating positive symptoms.
- Research into Beck and Ellis’s CBT have found that it can reduce the severity of delusional symptoms.
- Gould found in all seven studies in his meta-analysis that there was a significant decrease in the positive symptoms after CBT.
- Most studies into the effectiveness of CBT have been conducted on patients that, at the same time, were also being treated with medication so it is hard to see which actually was providing the therapeutic effect.
- One study found that many patients were not deemed suitable for CBT because psychiatrists believed they would not fully engage with the therapy.

**FAMILY INTERVENTION**

- When based around reducing EE, it has proved effective in reducing the relapse rates and helped improve compliance with medication.
- Some have argued then that family intervention has not provided the therapeutic effect of helping symptoms but rather the face it increased medicine compliance, it may well be the medicine that has seemed to help them.
Pharoah reviewed 53 studies which compared family intervention care to standard care and found that some studies reported an improvement in the overall mental state with family intervention yet other studies did not find this.

A meta-analysis found that, when comparing family intervention to standard care, there was a reduction in hospital admissions during treatment and the severity of the symptoms were also reduced.

**SOCIAL SKILLS TRAINING**

Wing compared female inpatients on a range of positive and negative symptoms and behavioural ratings and found differences in negative symptoms between those women from wards which were stimulating and those which were not but once social changes were introduced to the less-stimulating hospitals, improvements were noticed in a third of patients.

Practical real life application – the need for social changes has led to many hospitals providing environment that promote self-esteem and personal control.

Birchwood reviewed research and found that SST generally are beneficial in increasing the individual’s competence and assertiveness in social situations.

It appears that some kind of active intervention needs to be maintained otherwise social skills will begin to deteriorate again.

There is a wide range of symptoms so treatments might be effective for some but not others.

There are factors affecting the choice of treatment such as financial constraints including the time taken, the availability of appropriate therapists and the accuracy of the original diagnosis.

There are ethical issues such as that of informed consent.