

## **ELECTIVE (SSC5C) REPORT (1200 words)**

A report that addresses the above four objectives should be written below. Your Elective supervisor will assess this.

**Describe the pattern of disease/illness of interest in the population with which you will be working and discuss this in the context of global health: What is the epidemiology of schizophrenia in Singapore, and how does this differ from that in the UK?**

Schizophrenia is a common mental disorder that affects approximately 1% of the global population.<sup>1</sup> Currently, exact figures regarding the prevalence of schizophrenia in the UK and in Singapore are limited; however it is estimated that around 220, 000 people in the UK are affected.<sup>2</sup> In Singapore, a total of 23 200 people are estimated to be affected by schizophrenia. This translates to an average of 580 per 100 000 people in Singapore.<sup>3</sup> However, reports state that rates of schizophrenia are greater in higher latitudes as compared to lower ones.<sup>4</sup> Thus, the prevalence of schizophrenia in Singapore would be expected to be lower as compared to that in the UK.

In general, schizophrenia is more common in males than females.<sup>4</sup> It has a later onset in females than in males; with most females affected between the years of 25-35, as compared to 15-25 in males. However, the peak incidence of the disorder is often cited at around 21 years old for both sexes.<sup>5</sup>

Schizophrenia has also been associated with urbanisation, developed nations and migrant populations. However, more research is required to clearly establish the links between them.<sup>4</sup>

**Describe the pattern of health provision in relation to the country which you will be working and contrast this with other countries, or with the UK: How is psychiatric treatment organised in Singapore? How does this compare to that in the UK?**

Psychiatric treatment in Singapore is organized in a similar system to that of the UK. Patients can be seen by General Practitioners in clinics or polyclinics, before referral for specialist treatment. However, patients who are floridly psychotic and possess risks to themselves or others can be detained under the Mental Health (Care and Treatment) Bill in Singapore. This is similar to the Mental Health Act that is present in the UK, however, it consists of 6 forms instead of various sections.<sup>6</sup> One difference between the Mental Health Act in the UK and the equivalent in Singapore is the presence of Section 17a in the UK, which states that patients must receive Supervised Community Treatment should they fulfill the necessary criteria.<sup>7</sup> Another difference is in Form 6, which in Singapore allows for the transfer of patients between mental health institutions. There is no such equivalent in the UK. However, the remaining forms in the Mental Health (Care and Treatment) Bill in Singapore have rough equivalents in the Mental Health Act in the UK.

In addition, follow up and outpatient care is similar in both countries. Both healthcare systems employ a multi-disciplinary approach; with the involvement of occupational therapists, social workers, physiotherapists and such.

**Health related objective: Describe the pathophysiology, treatment and management of schizophrenia in Singapore.**

Schizophrenia is a complex mental disorder consisting of positive, negative, cognitive and disorganised symptoms. Positive symptoms reflect mental features that are not normally present in individuals. These consist of hallucinations and delusions. Conversely, negative symptoms reflect diminished normal psychological and emotional function. These may manifest as flattened affect, anhedonia, apathy and social withdrawal. Cognitive symptoms comprise a reduction in ability to judge, process and understand information. There may also be a shortened attention span. Finally, symptoms of disorganisation include an incongruous affect, as well as disordered speech, thinking and behaviour.<sup>5</sup>

According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V), at least 2 of the following symptoms must be present for diagnosis. These symptoms include: hallucinations, delusions, disorganised behaviour, speech and negative symptoms. Also, at least 1 of the symptoms must be hallucinations, delusions or disorganised speech.<sup>8</sup>

The pathophysiology regarding schizophrenia is currently unclear. Many theories exist, however the dopamine hypothesis is widely accepted as being significant. There have been multiple variations to this hypothesis. Version II of the hypothesis was coined in 1991; it proposed that schizophrenia was due to a combination of frontal hypodopaminergia and striatal hyperdopaminergia. This version has been the guiding framework for current thinking. Other neurotransmitters such as GABA have also been thought to lead to the development of schizophrenia, but their exact role is unknown.<sup>9</sup>

Schizophrenia is also genetically linked; individuals with an affected first degree relative have a 10% risk of developing the illness.<sup>8</sup> Over 100 different loci have been associated with the disease; however, the exact genetic aetiology is currently unknown.<sup>10</sup>

Treatment of schizophrenia involves the use of antipsychotics. For individuals with a confirmed diagnosis, two trials of antipsychotics would be carried out. One of the antipsychotics must be an atypical antipsychotic; examples include Risperidone, Olanzapine and Quetiapine to name a few. Examples of typical antipsychotics include Chlorpromazine, Haloperidol and Flupentixol amongst others. If there is inadequate or no response, clozapine, an atypical antipsychotic, would be

commenced. If response is still inadequate, combination therapy involving clozapine and another antipsychotic would be continued. At this stage, electroconvulsive therapy may also be considered.<sup>5</sup>

Antipsychotic medication also requires monitoring for extrapyramidal side effects, hyperprolactinemia and metabolic syndrome. Therefore, routine monitoring of lipid profile, weight and HbA1c should also be undertaken. Other side effects include anti-adrenergic and anti-cholinergic side effects. Rare reactions include neuroleptic malignant syndrome, which is characterized by pyrexia and muscle rigidity; and is severely life-threatening.<sup>5</sup>

As mentioned above, long term management of schizophrenia involves a multidisciplinary team approach. Schizophrenia is a complicated illness, and patients would benefit from a holistic approach to the mental disorder.

**Personal/professional development goals.:** To develop my communication and history-taking skills, especially in Mandarin. To brush up on my ability to perform a mental state examination.

In general, I am more at ease taking histories and conversing with patients in English. However, this placement challenged me to go out of my comfort zone; forcing me to exercise my command of Mandarin as well. I felt that this was a good learning experience, as I had to think of the right words in order to elicit a history in Mandarin. Also, I found that I learnt many key phrases by listening to other clinicians speak to patients in Mandarin, thus learning how to screen for auditory hallucinations and mood symptoms in the language. However, I feel that I can still improve in terms of listening to the patient, as there were times when I found myself unable to comprehend the patient's answers. Therefore, it would be good for me to gain more practice. Also, I think that it would be useful for me to learn Hokkien and other dialects, as a sizeable number of Singaporeans converse only in Mandarin dialects. This would definitely be beneficial when working in Singapore in the future.

Next, I feel that this placement provided many good opportunities for me to assess a patient's mental state. I felt that it was a good reminder of the components that comprise the mental state examination and was helpful to watch clinicians document their assessment of a patient's mental state. This helped me to familiarize myself with the terms used to describe various aspects of the mental state.

In conclusion, I feel that this placement has allowed me good practice in both communication and history taking skills, as well as my ability to assess a patient's mental state. However, there is always room for improvement and I must continue to practice, especially in Mandarin and in various dialects.

References:

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