Serious mental illness and physical health problems:
A discussion paper

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Abstract

People with serious mental illness have higher morbidity and mortality rates of chronic diseases than the general population. This discussion paper explores the complex reasons for these disparities in health, such as limitations of health services, the effects of having a serious mental illness, health behaviours and the effects of psychotropic medication. Physical health can be enhanced by improved monitoring and lifestyle interventions initiated at the start of treatment. There are opportunities for mental health nurses to play a significant role in improving both the physical and mental health of people with serious mental illness.

Keywords: Serious mental illness; Physical health; Health behaviours; Lifestyle; Antipsychotic medication

What is already known about the topic?

- People with serious mental illness have increased rates of physical illness compared with the general population and have a reduced life expectancy. Reasons for increased morbidity and mortality include factors relating to having a mental illness, the fragmentation of health care, health behaviours such as smoking and physical inactivity and the effects of psychotropic medication.

What this paper adds

- This paper summarises and synthesises the current literature on the physical health of people with serious mental illness and adds to the debate about the role of the mental health nurse in monitoring physical health and promoting healthy lifestyles.

1. Introduction

People with serious mental illness (SMI) have higher morbidity and mortality rates of cardiovascular disease than the general population, they also have higher than expected rates of infectious diseases, non-insulin-dependent diabetes, respiratory diseases, some forms of cancers (Dixon et al., 1999) and HIV infection (Cournos et al., 2005). It has been estimated that the life expectancy of people with schizophrenia is reduced by 10 years (Newman and Bland, 1991). These high rates of morbidity and mortality need to be considered within the context of a global increase in the rates of chronic diseases in high, middle and low-income countries. Although the demands on the mental health nurses role...
are great, the size of the mental health-nursing work-
force in relation to other disciplines means we are in a
strategic position to have a positive impact on both the
mental and physical well being of people with SMI.

This paper discusses the epidemiology of the morbidity
and mortality of physical health problems that
impact on people with SMI, the possible reasons for
poor physical health in people with SMI and the
potential role of the mental health nurse in improving
the physical health of people with SMI. The databases
MEDLINE, CINAHL, PsychINFO were searched from
1980–2006 using the terms schizophrenia and/or psy-
chosis and combined with physical and/or diabetes,
obesity, smoking*, diet, exercise, HIV, cancer, antipsy-
chotics*. Papers by key authors in the field of physical
health and schizophrenia were also searched as well as
Department of Health websites in the UK, USA and
Australia for policy recommendations.

2. Epidemiology

2.1. Cardiovascular disease

Cardiovascular disease (CVD) currently causes
16.7 million, or 29.2% of all deaths globally. By 2010,
CVD will be the leading cause of death in developed
countries (WHO, 2003) and is rapidly becoming the
leading cause of death in the developing world (WHO,
2005). In addition to risk factors such as age, gender and
family history that can not be modified, CVD is also
associated a number of other risk factors including:
obesity, hypertension, smoking, diabetes, hyperlipede-
mia, lack of exercise and poor diet. These are all
conditions and health behaviours common in people
with SMI and can all be prevented or minimised (Harris
with SMI have rates of CVD 2–3 times higher than the
general population (Brown et al., 2000, Osby et al.,
2000) and a recent study suggested that women with
SMI have a higher risk of developing coronary heart
disease than men (Goff et al., 2005).

2.2. Respiratory disease

Up until 50 years ago respiratory diseases such as
pneumonia and tuberculosis accounted for the majority
of deaths amongst people with SMI who lived in
institutions (Brown, 1997). Respiratory diseases are still
more prevalent in people with SMI, which are thought
to be as a result of the high rates of smoking or passive
smoking. In a study of 200 out patients with schizo-
phrenia or bi-polar disorder in America, 15% of those
with schizophrenia and 25% with bi-polar disorder had
chronic bronchitis and 16% of people with schizophre-
nia and 19% of people with bi-polar disorder had
asthma (Sokal et al., 2004). These rates were all
significantly higher than those of the matched controls
from the general population. They also found that even
when smoking was controlled for as a confounder, both
people with schizophrenia and bi-polar disorder were
more likely to suffer from emphysema.

2.3. Cancers

Cancer accounts for 7.1 million or 12.6% of global
deaths annually, with the number of new cases annually
estimated to rise from 10 to 20 million by 2020 (WHO,
2003). Tobacco use is the single-largest causative factor,
followed by poor diet and physical inactivity. Both
increased and decreased prevalence rates of different
types of cancer in people with schizophrenia have been
reported in the literature.

Researchers have consistently reported higher rates of
digestive and breast cancers in people with schizophrenia
(Schoos and Cohen, 2003) but the research on lung
cancer in people with schizophrenia is contradictory.
Brown et al. (2000) and Lichtermann et al. (2001) both
found mortality rates for lung cancer twice as high in
people with schizophrenia than in the general popula-
tion. However, in two extensive cohort studies by
Mortenson (1989, 1994), rates of lung cancer were found
to be similar or lower than those seen in the general
population. Tentative hypotheses about the possible
reasons for the reduced rates of lung cancer and other
cancers in people with schizophrenia have been posited.
These include: death from other causes (such as CVD)
before reaching the expected age of death from lung
cancer (Casey and Hanson, 2003); an under diagnosis of
malignancies in this population and the theory that
antipsychotic medication has anti-tumour properties
(Cohen et al., 2002). The increased rates breast cancers
are thought to be associated with high levels of prolactin
caused by some antipsychotic medicines and inadequate
breast care (for example failure to undertake regular self
examination). Digestive cancers have been associated
with poor diet and high levels of alcohol consumption
(Casey and Hanson, 2003).

2.4. Diabetes

Worldwide, at least 177 million people (2.8% of the
population) have diabetes. This number is expected to
rise to 370 million (4.4% of the population) by 2020
(WHO, 2003). The relationship between diabetes and
schizophrenia has been discussed and investigated more
than any other co-occurring mental and physical health
problem. Controversy exists about the prevalence and
etiology of diabetes in people with SMI (Holt and
Peveler, 2005).

The association between schizophrenia and diabetes
was first observed in the 1800s by the famous British
Sexually transmitted diseases and HIV are transmitted. Reasons for this include lack of knowledge about how condom and injecting drug use (sexually active are more likely to engage in high risk compared to the general population, those that are proportion of people with SMI are sexually active. Although a smaller were 3.8 times more likely to have a diagnosis of HIV and patients with a mood disorder compared with the general population.

AIDS/WHO, 2005). The majority of prevalence studies that have examined rates of HIV in people with SMI were conducted in the USA and report prevalence rates of between 3% and 7% (Sewell, 1996, Rosenberg et al., 2001). Blank et al. (2002) observed that people with schizophrenia were 1.8 times more likely to have a diagnosis of HIV and patients with a mood disorder were 3.8 times more likely to have a diagnosis of HIV compared with the general population.

Contrary to prevailing clinical stereotypes, people with SMI are sexually active. Although a smaller proportion of people with SMI are sexually active compared to the general population, those that are sexually active are more likely to engage in high risk behaviours that may lead to HIV, such as sex without a condom and injecting drug use (Cournos et al., 2005). Reasons for this include lack of knowledge about how sexually transmitted diseases and HIV are transmitted and prevented (Arrufo et al., 1990; Kalichman et al., 1994), a susceptibility to coercion into unwanted sexual activity, difficulties in establishing stable social and sexual relationships, and comorbid alcohol and substance use (Coverdale and Turbott, 2000).

3.1. Service-related factors

The physical health care needs of this population have long been overlooked by workers in both primary and secondary care (Gournay, 1996; Phelan et al., 2001). For example, Brugha et al. (1989) found that in 145 people with SMI at a psychiatric day care facility, 41% had medical problems requiring care and 44% had unmet needs. There are many reports in the literature about the lack of assessment, monitoring and recording of the physical health status of people with SMI. In a UK study of physical health care monitoring in a primary care setting, Burns and Cohen (1998) demonstrated that, although the annual general practice consultation rate was significantly higher than normal for people with SMI the amount of data recorded was poor: 27% had weight; 38% blood pressure and 2% had their cholesterol levels recorded. Monitoring of physical health is no better in secondary mental health services. In a UK study, Paton et al. (2004) reviewed the case notes of 606 inpatients with SMI to determine if weight, cholesterol and triglycerides had been measured at any point in their care. Only 18% (113) of the patients had their weight recorded and 3.5% (21) had their lipids monitored during their admission. In a study by Greening (2005) of 63 patients in a rehabilitation and recovery service, 16% had their weight recorded, 16% had their smoking status recorded and 24% had their blood pressure taken.

A lack of clarity about whose role it is to provide health promotion, detect and manage physical problems in people with SMI add to the service-related barriers to promoting health. In the UK, guidelines published by the National Institute for Clinical Excellence (NICE) for the treatment of schizophrenia in secondary and primary care (NICE, 2002) recommend that primary care practitioners should provide routine physical checks for people with schizophrenia, unless the person does not want contact with or has no general practitioner (GP), in which case secondary mental health services should provide these routine physical health checks. The guidelines also state that people admitted to psychiatric wards should have their physical health routinely checked. In the USA, an expert panel have published consensus recommendations for the monitoring of the physical health of patients with SMI (Marder et al., 2004). They recommend that mental health care providers carry out the necessary monitoring of physical health as they believe that in addition to the physical health checks carried out in primary care settings, additional monitoring by mental health practitioners will result in earlier detection of serious conditions. Government policies in parts of Australia acknowledge that the physical health of people with SMI should be incorporated into case management (Victorian Mental Health Services, 1995). Although clarification of roles and responsibilities is welcome it is important to
highlight that the physical health care of people with SMI is the responsibility of primary and secondary care practitioners as well as service users and their carers. The most important thing is that each of these parties knows who is responsible for doing what, when, where, that this information is written down and all relevant parties have a copy of the plan.

3.2. Illness-related factors

SMI may impact on people’s help-seeking behavior. For example, it has been suggested that people with schizophrenia are less likely to spontaneously report physical symptoms (Jeste et al., 1996). They may also be unaware of physical problems because of the cognitive deficits associated with the schizophrenia (Phelan et al., 2001), because of a high pain tolerance (Dworkin, 1994) or due to a reduced pain sensitivity associated with antipsychotic medication (Jeste et al., 1996). There are also socio-economic consequences of suffering from a mental health disorder, such as poverty, poor housing, reduced social networks, lack of employment and meaningful occupation opportunities, and social stigma, all of which impact on the physical health and the physical health behaviours of people with SMI.

3.3. Health behaviours of people with SMI

Commonly cited reasons for the increased morbidity and mortality rates in people with SMI are their high rates of smoking, poor diet, lack of exercise, co-morbid substance use and unsafe sexual practices (Brown et al., 1999, Lambert et al., 2003). These behaviours are often referred in the literature as “lifestyle choices”. Services users may argue that these are not choices at all, but the physical, psychological, social and environmental consequences of having a severe mental illness and the treatments prescribed for them.

3.3.1. Smoking

Epidemiological studies that have established international prevalence rates of smoking in people with schizophrenia and bi-polar disorder range from 58% to 88%, up to three times higher than the general population (Hughes et al., 1986; de Leon et al., 2002). People with SMI tend to be heavier smokers, smoking more than 25 cigarettes a day (Kelly and McCreadie, 2000). The reasons why people with SMI may have such high rates of smoking are well researched and include neurobiological, psychological, behavioural and social factors making it extremely difficult to alter smoking behaviour in this population.

An increase in dopamine through inhaling nicotine has been shown to alleviate certain psychiatric symptoms (for example, negative symptoms, cognitive deficits and antipsychotic side effects) and, therefore, smoking can be seen as a means of self medication (Goff et al., 1992; Dalek et al., 1998). Smoking may also improve the attention and selective processing of information that is normally impaired in people with schizophrenia (Alder et al., 1998). Qualitative studies by Lawn et al. (2002) and Luckstead et al. (2000) found that people with schizophrenia smoke out of habit and routine, for relaxation purposes, as a way of making social contact, for pleasure and as a way of gaining control in their lives. Smoking is ingrained in the culture of psychiatry. Health professionals often doubt this client group’s motivation to stop smoking and promote smoking by using cigarettes to manage service users’ behaviour (McNeill, 2001).

3.3.2. Physical activity

The World Health Organization (WHO) identifies physical inactivity as one of the leading causes of death in developed countries (WHO, 2003). People with SMI have been shown to be less physically active than the general population (Brown et al., 1999; McCreadie, 2003). Encouraging people to follow national recommended guidelines to improve their physical health through activity is a major public health challenge. People with SMI face additional challenges to lead a more active lifestyle. The sedating effects of some medications make it more difficult to be active. Depression or the negative symptoms of schizophrenia may make it difficult to get motivated. The financial cost of joining a gym may be off-putting or the lack of confidence to do so may also influence a person’s decision to participate in exercise. However, the benefits of exercise are well documented and can prevent, delay the onset or help with the management of a number of physical and mental health problems (DH, 2004).

3.3.3. Diet

In a survey of the dietary habits of 102 people with SMI by McCreadie (2003) the average fruit and vegetable intake for these people was 16 portions a week, compared with recommended intake of 35 per week (DH, 2004). The physical health consequences of a poor diet include CVD, diabetes, obesity and some cancers. Studies of people with SMI repeatedly show that saturated fats from dietary intake of meat and dairy products are associated with worse outcomes in schizophrenia (Peet, 2004). There is a particularly strong association between sugar consumption and poorer outcome in schizophrenia whereas consumption of fish and sea food, particularly omega 3 fatty acids, has been associated with better outcomes (Peet, 2004).

3.4. Treatment-related factors

Since the introduction of psychotropic medication many people have been enabled to live productive lives
in their own communities rather than spending long periods of time in hospital. The beneficial effects of atypical compared to typical antipsychotic medication has led clinicians to prescribe these medications for other disorders such as bi-polar and dementia (Jin et al., 2004). However, we have known for many years that antipsychotic medication has a deleterious impact on physical health. For example, in the late 1950s, within a year of its introduction, there were reports in the literature that chlorpromazine was linked to hyperglycaemia, glycosuria and weight gain (Koran, 2004). With the introduction of atypical antipsychotics in the early 1990s there has been heightened interest in the relationship between antipsychotic drugs and increased rates of obesity, type 2 diabetes, CVD, hyperprolactinaemia and metabolic syndrome in people with SMI. Although the observed increase in some of these disorders may be due to the fact that there is much better medical surveillance with these medicines.

3.4.1. Weight gain

Obesity is a global epidemic and related to an increase of consumption of energy dense foods, nutrient poor foods (i.e. high levels of sugar and saturated fats) combined with reduced physical activity (WHO, 2003). The impact of obesity on health can lead to a number of disabling conditions such as increased blood pressure, insulin resistance, respiratory difficulties, an increased risk of diabetes, and an increased risk of heart disease (WHO, 2003). There is contradictory evidence that people with SMI have higher rates of obesity than the general population (Wirshing and Meyer, 2003). The literature seems to suggest that women with SMI are more obese than men (Allison et al., 1999, McCreadie et al., 2003). There is also evidence that people with SMI have higher rates of upper body obesity (visceral fat), which is more of a risk factor for developing CVD and diabetes than overall body fat (Ryan and Thakore, 2001).

Both typical and atypical antipsychotic drugs have an effect on dopaminergic, serotonergic, histaminergic, cholinergic and adrenergic neurotransmitters, all of which are associated with the aetiology of weight gain. Clozapine and olanzapine are commonly associated with weight gain compared with other antipsychotics and may initially cause insulin sensitivity leading to hyperglycaemia and food cravings (Werneke et al., 2003). The noticeable difference in body composition (a higher waist to hip ratio and more visceral fat) between service users with SMI and healthy controls has also been found in people with schizophrenia who have never taken antipsychotics (Thakore et al., 2002). Antipsychotics, some mood stabalisers and antidepressants increase appetite and make people thirsty. Fast food and carbonated drinks that are high in saturated fats and sugar are quick way of relieving these problems and an affordable and easy option for people on a low income. Weight gain added to schizophrenia or bi-polar disorder increases the social stigma people have to endure and increases the risk of people stopping their medication.

3.4.2. Diabetes and glucose intolerance

Typical antipsychotics, in particular the low potency ones such as chlorpromazine may induce or make existing diabetes worse (Newcomer et al., 2002). The atypical antipsychotics clozapine and olanzapine are associated with new onset or exacerbating type 2 diabetes, not just through their propensity to cause greater weight gain than other newer agents but because of their effects on glucose regulation (Newcomer et al., 2002). There are also case reports linking respiridone and quetiapine to impaired glucose intolerance, diabetes and ketoacidosis (Taylor et al., 2005). Although the research on the use of antipsychotics and its association with diabetes is copious, some argue that the quality of the research is methodologically weak and at this point in time more controlled prospective studies are needed before a definite causal link between antipsychotics and diabetes is confirmed (Taylor et al., 2005, Holt and Peveler, 2005).

Diabetic Ketoacidosis (DK), a potentially fatal condition, may be the first obvious symptoms of type 2 diabetes. It is related to metabolic stress such as an infection, trauma, myocardial infarction or stroke (Jin et al., 2004). Mental health nurses need to be aware that DK has a rapid onset (often <24 h) and symptoms include polyuria, polydipsia, polyphagia, vomiting, abdominal pain, dehydration, potentially leading to coma and death (Expert Panel, 2004). Emergency treatment includes rehydration, insulin therapy, electrolyte correction and treatment of the underlying condition.

3.4.3. Cardiovascular effects

Although the overall risk is very low, most drugs used to treat mental illness are associated with ventricular arrhythmia, ECG changes and even sudden cardiac death (Taylor et al., 2005). In recent years there have been concerns about the impact antipsychotic mediation has on the corrected QT (QTc) interval prolongation and sudden death, despite the fact that a whole range of medicines including antibiotics can cause QTc prolongation (Taylor et al., 2005). The medicines that have been associated with QTc prolongation are thioridazine and sertindole, although it is important for mental health nurses to be aware that any antipsychotic that is given intravenously and in combination with other antipsychotics at high doses may cause these cardiac changes (Taylor et al., 2005). Hypotension is a common side effect of both typical and atypical antipsychotics and tricylic antidepressants because of their blockade of α1 adrenergic receptors. It most frequently occurs with the
use of low-potency drugs such as chlorpromazine and clozapine, though does occur with other antipsychotics in high doses (Taylor et al., 2005). Clozapine use has also been linked to myocarditis (inflammation of the heart muscle). This usually occurs within the first two months of initiating treatment and symptoms including tachycardia, fever, flu-like symptoms, fatigue and chest pain (Killion et al., 1999).

Other conditions also need to be taken into account when considering potential causes of sudden death in people with SMI, such as co-morbidity of substance abuse, acute exhaustive mania, where there is continuous manic psychomotor excitement, dehydration and electrolyte imbalance (Gray, 2001).

Hyperlipidaemia (too much cholesterol and triglycerides in the blood) is one of the many risk factors for CVD and influenced by health behaviours such as diet and smoking. The higher the total cholesterol and low-density lipoprotein (LDL) cholesterol, the higher the morbidity and the higher the level of high-density lipoprotein (HDL) the lower the risk of heart attacks. Both typical and atypical antipsychotics have been shown to have an effect on triglyceride and cholesterol levels with olanzapine and clozapine appearing to have the most impact (Casey, 2004).

3.4.4. Metabolic syndrome

Abdominal obesity, hypertension, dyslipidemia, insulin resistance and glucose intolerance cluster together to form the metabolic syndrome, also known as Syndrome X and a diagnosis is made when 3 or more of these conditions are present (Ryan and Thakore, 2001). There is evidence that the metabolic syndrome is increased in people with schizophrenia and may provide an explanation for the increased prevalence of diabetes and CVD (Holt et al., 2004).

3.4.5. Eye health

Antipsychotic medication has been associated with lens and corneal changes since the mid 1950s (Shahzad et al., 2002). Isaac et al. (1991) reported that patients receiving phenothiazines were four times more likely to develop cataracts. A large cohort and nested case control study by Ruigomez et al. (2000) using the United Kingdom General Practice Database, found no evidence of an overall increased risk of cataracts in people-prescribed antipsychotics, though patients-prescribed chlorpromazine and prochlorperazine did have a significantly higher risk. There have been case reports that quetiapine may cause cataracts, although a causal link has not been demonstrated as these patients also had co-occurring conditions such as diabetes and hypertension and eye trauma (Marder et al., 2004). Despite there not being a proven link, the company that manufacture quetiapine recommend (in America) eye examinations after initiation of treatment and at 6-month intervals (Astra Zeneca, 2005).

3.4.6. Dental health

Antipsychotics, antidepressants and mood stabilizers all cause xerostomia (a reduction in salivary flow). Low-potency antipsychotics such as chlorpromazine cause hyposalivation, as does the co-administration of anticholinergic medication. A reduction in salivary flow changes the oral environment and leads to caries, gingivitis and periodontal disease (Friedlander and Marder 2002). In addition to the effects of medication, poor dental health may also be related to poor diet, smoking and poor oral hygiene (McCreadie et al., 2004).

3.4.7. Sexual effects

All antidepressants (especially the SSRIs), mood stabilisers (particularly lithium and carbamazepine), typical and atypical antipsychotics are known to cause sexual problems. The adrenergic and anticholinergic effects of antipsychotic medication affect sexual functioning and the blockade of dopamine receptors in the tuberinfundibular pathway in the brain may result in hyperprolactinaemia (raised levels of the hormone prolactin).

Raised prolactin levels can cause a decrease in testosterone in men and a decrease in oestrogen in women, leading to sexual dysfunction. Most studies have shown that the older antipsychotics are associated with up to a 10-fold increase in prolactin levels, which usually occurs in the first week of treatment and will remain high as long as the patient continues to take medication. If treatment is stopped prolactin levels return to normal within 2–3 weeks (Hummer and Huber, 2004). The atypicals antipsychotics amisulpride and risperidone have also been associated with increased prolactin levels (Halbreich and Kahn, 2003). The prevalence of hyperprolactinemia in females taking risperidone may be as high as 88% compared with 47% in people taking typicals (Kinon et al., 2003). In adolescents treated for childhood-onset schizophrenia 6 weeks of olanzapine treatment raised prolactin levels beyond the upper limit of the normal range in 70% of patients (Wudarsky et al., 1999).

There are numerous clinical effects of hyperprolactinemia seen in people with SMI who are taking antipsychotic medication. Women experience amenorrhea, disturbed menstrual cycle and anovulation. Both men and women experience galactorrea (leaking milk from the breasts), gynecomastia (painful and swollen breasts) and sexual dysfunction (Dickson and Glazer, 1999, Halbreich and Kahn, 2003). There is contradictory evidence that the reduction in oestrogen caused by raised prolactin levels are associated with increased rates of breast cancer (Halbreich et al., 1996) and osteoporosis (Halbreich and Palter 1996).
3.4.8. Neuroleptic malignant syndrome

Neuroleptic malignant syndrome (NMS) is a rare though potentially fatal consequence of all antipsychotic drugs or any drugs that block dopamine D_2 receptors in the brain. Reported incidence and mortality rates with the use of typical drugs are 0.2–1% (Doran, 2003; Taylor et al., 2005). There are case reports of NMS occurring with the use of atypicals but this is less common than with the older drugs. NMS usually occurs when people are taking drugs within the therapeutic range, though studies suggest that people are more likely to experience it if they take high doses or the drugs are rapidly titrated (Taylor et al., 2005). Some studies suggest that greater risk is posed if the patient is catatonic, is exhausted and dehydrated or has a previous history of NMS (Taylor et al., 2005). Signs include hyperthermia and profuse sweating, fluctuating blood pressure and tachycardia, muscle rigidity, coarse tremor, confusion, mutism and stupor leading to coma and death if not treated. Blood tests reveal elevated creatine kinase, leucocytosis and altered liver function (Taylor et al., 2005). If NMS is suspected liaison with medical colleagues is essential and antipsychotics must be withdrawn and vital signs closely monitored until a diagnosis can be confirmed. Moderate to severe cases will need to be referred to an emergency unit where dopamine agonists and muscle relaxants may be prescribed. Patients usually recover in one to two weeks and antipsychotic medication can be restarted with very close monitoring of physical and biochemical parameters (Taylor et al., 2005).

4. The monitoring of the physical health of people with SMI

There is no consensus about the type and frequency of physical health assessment and monitoring in people with SMI, although a number of guidelines exist that may inform practice (Marder et al., 2004; NICE, 2002). Generally poor levels of knowledge and skills about physical health monitoring in the workforce may contribute to the poor physical health of people with SMI. For example, in a survey of 640 practice nurses in the UK (Gray et al., 1999), 61% were involved in delivering mental health care in primary care settings and 70% reported that they had received no formal mental health training. Conversely, in a training needs analysis of 168 qualified mental health nurses 45% had no formal training in physical health care, although 96% said they would be willing to attend physical health training Nash (2005).

Based on our review of the literature essential routine monitoring should include weight, body mass index (BMI) and waist circumference, blood pressure, lipid profiles, screening for insulin resistance and diabetes, dental checks and eye health checks. It is not necessarily the mental health nurses role to carry out these checks, and local protocols should be in place to guide the practitioner. However, the mental health nurse has a role of ensuring these are carried out at the onset of treatment and regularly throughout treatment. It is also important that the service user and their families/carers understand why these checks are being done and the significance and meaning of any results. Nurses can also systematically and proactively enquire about the quality of people’s dietary intake, level of physical activity, smoking behaviour and sexual health.

4.1. Lifestyle advice and interventions for improving the health behaviours of people with SMI

Education on the management of weight through healthy eating and exercise and how to minimise the use of substances such as tobacco should be integrated into routine care and should begin when the service user first comes into contact with mental health services. Most mental health services have access to dieticians, physiotherapists and smoking cessation specialists. Mental health nurses could actively collaborate with these professionals to design specialist health promotion programmes for people with SMI. There tends to be pessimism about changing health behaviours such as stopping smoking or weight management in people with SMI. There is emerging evidence that people with SMI can stop smoking, loose weight and be more physically active if interventions and lifestyle programmes are tailored to overcome the neurological, cognitive, behavioural and social deficits associated with SMI. Smoking cessation programmes specifically designed for people with schizophrenia that include nicotine replacement therapy (NRT) or bupropion, cognitive behavioural and motivational interviewing produce quit rates of 12–18% after 6 months (Addington et al., 1998; George et al., 2000, Weiner et al., 2001; George et al., 2002), similar to quit rates in the general population who receive intensive behavioural support and NRT (West et al., 2000). Weight management programmes have been shown to help patients lose weight. In a nurse-led study by Veerland et al. (2003) a 12-week programme that incorporated nutritional education, exercise, motivational counselling, cognitive and behavioural interventions, clients lost 2.7 kg in weight compared to a matched control group who put on weight. However, interventions do not have to be lengthy and complex. A study by Wirshing et al. (2006) demonstrated knowledge about nutrition and healthy lifestyles was significantly improved following a single 30 min education programme for in patients with schizophrenia.
5. Conclusion

The causes of poor physical health in people with a severe mental illness are complex and interactive. Whilst adverse effects of medication have a significant impact, health behaviours of people with SMI and the lack of training health professionals receive have a part to play. Mental health nurses have an opportunity to improve the physical and mental health of people with SMI through systematic monitoring and collaborative health promotion interventions initiated at the onset of people’s illness. Poor physical health in people with SMI does not have to be inevitable.

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