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Title The physical health of individuals with serious mental illness: A thematic and narrative synthesis. Journal: Primary Care

Abstract

Individuals with severe mental illness (SMI) die on average 20 years younger than the general population. The aim of the review described in this article was to examine relevant literature on the physical health of those with SMI and identify examples of physical health tools that have been evaluated. Four electronic databases were searched and areas identified included side effects of psychotropic medications, obesity, cardiovascular diseases and diabetes, risky sexual behaviour, poor dietary intake and physical inactivity. The authors conclude that physical care of people with SMI can work well when physical and mental health care providers work in unison to facilitate an integrated care pathway. Additional training is required for mental health nurses in physical health care.

Keywords

mental health nurses, physical health, psychotropic medications, serious mental illness

The physical health of people with severe mental illness (SMI) is a global public health concern (Maj 2009). The term ‘serious mental illness’ refers to individuals with specific mental health conditions such as schizophrenia, schizoaffective disorder and bipolar disorder who have received care from primary and secondary mental health services within three years [Q WITHIN THE LAST THREE YEARS?] (National Institute for Health and Care Excellence (NICE) 2006 Q MISSING REFERENCE), Department of Health 2011).

Those with SMI die an average of 20 years younger than the general population (World Health Organization (WHO) 2012) due to lifestyle choices such as poorer dietary intake, low physical activity (McCreadie et al 2005), smoking (Robson and Haddad 2012*),* unsafe sex practices (Ratcliffe et al2011), side effects of psychotropic medication (Healy 2008) including obesity, cardiovascular diseases and diabetes, poor integrated care pathways between primary and secondary health care services (Blythe and White 2012), and lack of physical health knowledge among registered mental health nurses (Nash 2010).

People with SMI, particularly those with schizophrenia, schizoaffective disorder and bipolar disorder, are vulnerable to poorer physical health, which results in higher rates of mortality and morbidity when compared to the general population (De Hert et al2011). Norman and Ryrie (2009) in their study reported that approximately 40% of deaths in individuals with SMI are from suicide and accidents, while 60% are due to inequality in access to physical healthcare for conditions that include cardiovascular diseases (CVD), some forms of cancer, diabetes, chronic lung diseases such as tuberculosis, respiratory problems including asthma, coronary heart musculoskeletal disorders, chronic obstructive pulmonary diseases, gastrointestinal problems, poor dietary intake, poor dental health Poor dental health is a result of the poor diet and GIT problems], nutritional and vitamin deficiency blood-borne diseases such as HIV/AIDS and hepatitis B and C, sexually transmitted diseases, and alcohol and substance misuse.

A thematic and narrative review was undertaken of published work on the physical health of individuals with SMI. The review aimed to:

* Identify and examine relevant literature on the physical health of individuals with SMI.
* Identify examples of physical health tools that have been evaluated.

Methodology

*Literature search*

We searched four electronic databases, CINAHL, MEDLINE, PsycINFO and NHS Evidence, from 2005 to 2013. An additional search was carried out for grey literature and references were hand-searched.

*Search strategy*

Limiters and the Boolean operators AND and OR were used to combine, exclude, include and narrow the search, with variation of key words including: serious mental illness AND physical health care; mental health nurses AND physical health provision; psychotropic medications AND serious mental illness; physical health monitoring AND interventions; physical health assessment tools; physical health assessment OR physical health monitoring.

*Inclusion criteria*

Studies were selected if they were directly or indirectly relevant to the research topic: the physical health of individuals with SMI

*Search outcome*

The search yielded 124 studies from 2005 to 2013 that were related to the subject matter. Of those, 17 were selected of which ten were then excluded – five were reviews and five were qualitative studies. Seven units of analysis were used for the review and can be seen in Table 1

Table 1 Flow chart of search results

|  |
| --- |
| Total records identified124IdentificationTotal record of abstracts and titles screened for eligibility124ScreeningFull-text articles excluded107Total number of full-text articles screened124EligibilityFull-text articles assessed for eligibility17Full-text articles excluded for minimal information on the topic10IncludedArticles included7 |

Units of analysis

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Author and year | Purpose | Type of study |  | Data collection | Key findings |
| Happell et al 2011 | A role for mental health nursing in the physical healthcare of consumers with severe mental illness | Qualitative |  | Semi-structured interviewsFocus group discussions | Mental health nurses were ambivalent about their role in providing physical healthcare |
| Howard and Gamble 2011 | To investigate mental health nurses’ views and practice of physical health assessment and care management for adults with SMI | Qualitative |  | Semi-structured interviewsQuestionnaires | Mental health nurses are willing to take responsibilities for physical care roles, therefore physical skills appraisal, training and supervision should be provided for them |
| Schuel et al 2009 | To determine whether the SMI Health Improvement Profile (HIP), facilitated by mental health nurses, has the clinical potential to identify physical morbidity and inform future evidence-based care | Qualitative |  | Semi-structured interviews | HIP intervention impacts positively on the physical health of individuals with SMIMental health nurses require additional training to improve their use of the HIP and how to ask sensitive questions about sensitive subjects |
| Olsen et al 2005 | To assess the levels of physical health in an SMI population, and to identify any physical health problems in individuals in this group | Qualitative |  | Case notes entered into a computerised database | Nurse-led wellbeing support programme should be incorporated into clinical practice as it improves the physical health of people with SMI |
| White et al 2009 [Q SEE NOTE IN REFERENCE LIST] | To provide trainees with in-depth knowledge of physical health in SMI | Qualitative |  | Keynote presentations | If mental health nurses complete a HIP during assessment, individuals diagnosed with SMIcould have their physical health needs assessed and treated within a year |
| Nash 2010 | Examining the knowledge of mental health nurses in relation to basic facets of physical need for clients with SMI | Qualitative |  | Observational and quiz-based assessment | Most mental health nurses need additional training to meet the emerging physical health agenda for clients with SMI |
| Smith et al 2007 | A service evaluation of a programme designed to improve overall wellbeing in patients with SMI | Quantitative |  | Physical health screening tool | Physical health problems are common in individuals with SMI |

*Quality appraisal*

Two reviewers independently assessed the articles using a predesigned checklist specifically developed for the review.

*Data abstraction*

A predesigned sheet was developed to extract the relevant data. Two reviewers independently extracted data, which was then cross-checked and any conflicting views were settled by the reviewers.

*Synthesis*

A narrative synthesis of the result was undertaken, which provided the themes in the Results section.

Results

Four areas of physical health were identified from the papers reviewed: side effects of psychotropic medications; obesity, CVD and diabetes; risky sexual behaviour; poor dietary intake and physical inactivity.

*Side effects of psychotropic medications*

People with SMI suffer from metabolic issues including weight gain, diabetes and CVD due to the side effects of long-term use of psychotropic medications (Ohlsen et al2005, Smith et al2007). The Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) (Lieberman et al2005) revealed that antipsychotic medications help to improve the quality of life for individuals with SMI (McEvoy et al2006, Meltzer et al2010). Some studies showed adverse effects of antipsychotic medication (Citrome and Yeomans2005, Healy 2008, Nash 2010, Howard and Gamble 2011), with over-sedation and extrapyramidal reactions (Gray et al2009, Meltzer et al2010) the key factors in these metabolic issues, which result in non-concordance.

Additionally, antipsychotic medication can cause reduction in saliva, leading to gingivitis and dental problems (Gray et al2009). Antipsychotic medications and mood stabilisers such as lithium and carbamazepine can cause gastrointestinal problems, a need for frequent use of the toilet, excessive thirst (Newell and Gournay 2009, sexual dysfunction as a result of raised prolactin levels in men and increased oestrogen and anovulation in women, renal failure and decreased psychomotor speed (Happell et al2011). Drugs prescribed for bipolar disorder, including carbamazepine, valproate, topiramate, lamotrigine and zonisamide, are associated with weight gain, insulin-resistant diabetes, dyslipidemia, and reproductive and metabolic in women (Kenna et al2009).

Tailoring medication regimens to individuals facilitates concordance (Gray et al 2010), and the National Institute of Mental Health (2005) noted that alternative medication routes such as weekly or monthly depot injections can improve concordance.

The lack of patient insight is the strongest influence on non-concordance, which can cause rebound psychosis – a sudden return of the symptoms of the original illness, leading to re-admission. A population-based cohort study by Happell et al (2011) found a reduction in relapse when individuals with SMI were given adequate information about medication and were involved in the decision-making regarding their preferred treatment plan.

Individuals can put on 5-6kg within two months of starting antipsychotic medications (Foley and Moorley 2012). Howard and Gamble (2011) suggests that these side effects can be monitored with anticholinergic medication and the Liverpool University Neuroleptic Side Effects Rating Scale, but Rethink (2011) argues that although anticholinergic medicines like procyclidine, orphenadrine and trihexyphenidyl alleviate side effects of psychotropic medications (Central and North West London 2012, they have their own side effects including constipation, dry mouth, blurred vision and difficulty in passing urine (Rethink 2011). Without antipsychotic medication, individuals with SMI might suffer serious and disabling symptoms (Meltzer et al2010) such as hallucinations, delusions, and impaired cognitive and social functioning (Newell and Gournay 2009).

*Obesity, CVD and diabetes*

A body mass index (BMI) ≥ 25 is considered obese (NICE 2006). Individuals with SMI are predisposed to being overweight due to the adverse effects of psychotropic medications and having a higher percentage of body fat, which leads to obesity caused by lack of physical activity (Smith et al2007). Life-threatening diseases can occur as a result, including type 2 diabetes (Diabetes 2012, CVD and hypertension, breast and colon cancer, and stroke (Smith et al2007).

Screening for diabetes rarely occurs in people with SMI (Newcomer and Hennekens 2007) even though mortality outcomes are three times higher in this population (Ohlsen et al2005, Smith et al2007) and diabetes remains undiagnosed, unreported and untreated (Holt 2005). Roberts and Bailey (2011) advocate the use of metformin and statins to improve weight loss in those with SMI.

*Risky sexual behaviour*

Compared to those without SMI, people with SMI have disproportionately higher rates of sexually transmitted infections and diseases such as chlamydia, syphilis, genital herpes, genital warts, trichomoniasis, pubic lice, scabies and HIV (Hughes and Gray 2009). Reasons for this include multiple partners, unprotected sex and trade sex (Meade and Sikkema 2005). Individuals with SMI are unable to communicate effectively about safer sex with their partners, and have poor interpersonal and assertiveness skills often attributed to limited social interaction (Senn and Carey 2008)

*Poor dietary intake and physical inactivity*

People with SMI are prescribed central nervous system medications such olanzapine and clozapine (Bishara and Taylor 2008), which are linked to food craving, binge eating, weight gain and hypertriglyceridemia (McEvoy et al2006, Meltzer et al2010).

Physical activity is internationally recognised as a vital illness-prevention and health-management strategy (WHO 2007) that improves self-esteem, decreases the risk of long-term physical illnesses (Scott and Happell 2011), stimulates the release of acetylcholine, which calms individuals (Callaghan 2004) and increases cerebral blood flow, muscle relaxation and body temperature. But people with SMI are less likely to participate in physical activities (McCreadie et al 2005, Park et al 2011) and this contributes to poorer physical health outcomes, partly due to self-neglect and poor integrated care pathways between mental health nurses and other health providers (Happell et al2011). Mental health nurses rarely discuss these areas during assessments with individuals who have SMI due to their lack of understanding, limited knowledge, low confidence and role ambivalence (Hayland et al2003 Tosh et al 2011).

Discussion

Mental health nurses are reported to lack the skills to effectively monitor the physical health of individuals with SMI after receiving education in the basics of anatomy and physiology. A possible reason for this is the difference in the training curriculum between mental health and other branches of nursing. In adult nursing, for example, greater emphasis is placed on physical health.

 Neglecting this aspect of care impacts on people with SMI who have a mortality rate of 4,008 deaths per 100,000 compared to 1,122 deaths per 100,000 in the general population – 3.6 times higher (Health and Social Care Information Centre, 2011). It is paramount that mental health nurses conduct holistic and comprehensive assessments in collaboration with individuals with SMI so that health needs can be identified, goals set and interventions implemented (Happell et al2011, Robson and Haddad 2012).

Several studies (Gray et al2009, White et al 2009, Nash 2010) found irregularities in the competencies of mental health nurses in the assessment and recording of physical health data, which results in poorer physical health outcomes for people with SMI even when they are able to access physical healthcare.

Aspects of physical health that mental health nurses monitor in individuals with SMI include blood pressure, BMI, and blood sugar, prolactin and lipid levels. They also arrange dental and optical checks (Robson and Gray 2006), and monitor thyroid function, lipid profile, weight and height (NICE 2006). They arrange blood tests and urinalysis, and assess tobacco and alcohol use (Ratcliffe et al2011), and the side effects of psychotropic medications (Howard and Gamble 2011).

It is imperative that holistic and comprehensive assessment is carried out in collaboration with the individual with SMI so that needs are identified, goals set and interventions implemented. Care needs to be planned, documented (Nursing and Midwifery Council 2008 and communicated between primary and secondary mental health services (Shuel et al2010).

The use of assessment tools is well documented in evidence-based literature as the basis for measuring the level, frequency and duration of risk (Fortinash and Worret 2007). Two monitoring tools used by mental health nurses to identify physical health needs are the Wellness Support Programme (WSP) (Ohlsen et al2005) and the HIP (White et al2009). Although both provide strong evidence in support of an integrated care pathway, the HIP is favoured by most mental health nurses (Gray et al 2009, Shuel et al2010, Howard and Gamble 2011) as it enables them to carry out 28 physical health risk assessments in collaboration with the person with SMI to plan care based on the level of risks identified. The WSP is mostly used to screen for CVD risk factors and the impact of antipsychotic medications as a contributor to CVD (Smith et al2007).

Assessment tools are one step in supporting individuals with SMI but it is vital that mental health nurses develop the skills to recognise and differentiate between mental and physical health symptoms so that appropriate physical health care interventions are implemented (Gray et al2009).

Mental health nurses are in a position to support people with SMI to participate in physical activities to reduce cardiovascular mortality (Happell et al2011). Individuals can be encouraged to participate in positive lifestyle activities such as smoking cessation, nutrition counselling, weight management and supervised exercise programmes*.* Mental health nurses should apply health promotional activities around CVD, where a potential for change in modifiable risk factors, such as physical activity, smoking and diet, has been shown (Robson and Haddad 2012).

The studies we reviewed showed that mental health nurses lacked the skills and knowledge for meeting the physical health needs of individuals with SMI. They were all in favour of additional physical healthcare training so that interventions are targeted towards advice on healthy lifestyle choices.

Conclusion

Appropriate and effective physical care of people with SMI can work well when physical and mental health care providers and primary and secondary mental health services work in unison to facilitate an integrated care pathway and reduce inequality in care. Improved access to physical care can be facilitated through additional physical health training for mental health nurses, implementation of the HIP, monitoring of the adverse effects of psychotropic medications, screening for physical illnesses and health promotion advice on lifestyle choices.

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