Mental Health and Physical Activity 7 (2014) 198–204

Contents lists available at ScienceDirect

Mental Health and Physical Activity

journal homepage: www.elsevier.com/locate/menpa

Knowing is not doing: The relationship between health behaviour knowledge and actual health behaviours in people with serious mental illness

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ARTICLE INFO

Article history:
Received 22 October 2013
Received in revised form
4 March 2014
Accepted 4 March 2014
Available online 16 March 2014

Keywords:
Knowledge level
Mental health
Physical activity
Diet
Community mental health care

ABSTRACT

Objectives: Low levels of physical activity and poor dietary habits are common in people with serious mental illness and contribute to the poorer overall health and early mortality observed in this population. This paper examines the relationships between health behaviour knowledge and self-reported health behaviours in people with serious mental illness.
Methods: We examined the health behaviour knowledge, level of physical activity, consumption of fruits and vegetables and attitudes towards saturated fat intake in 21 community-based mental health consumers in a regional city in Queensland, Australia. Relationships between dichotomous variables of health behaviour knowledge, physical activity levels, daily fruit and vegetable intake, and attitude towards saturated fat intake were examined using Phi coefficients and point biserial relationships respectively.
Results: The mean score for health behaviour knowledge was 10.2 out of a possible maximum score of 14 points. No statistically significant relationships were observed between the dichotomous variables of health behaviour knowledge and level of physical activity, consumption of fruits and vegetables or attitudes towards saturated fat intake. A weak statistically significant relationship was observed between raw health knowledge score and the number of daily serves of vegetable.
Conclusions: The lack of significant relationships between health behaviour knowledge and self-reported health behaviours is supported by health behaviour theory which proposes that knowledge alone is insufficient to elicit behaviour. In this regard, people with serious mental illness may not be dissimilar to the general population.

1. Introduction

People with serious mental illnesses (SMI) such as schizophrenia or bipolar disorder may experience significant functional impairment and are known to be less physically active and have poorer dietary intakes compared to the general population (Dakwar et al., 2012; Kilbourne et al., 2007; Simonelli-Muñoz et al., 2012). These behaviours contribute to the overall poorer physical health and early mortality of people with SMI (Druss, Zhao, Von Esenwein, Morrato, & Marcus, 2011; Hoang, Goldacre, & Stewart, 2013; Lawrence, Kisely, & Pais, 2010).

A numbers of factors are proposed to contribute to the poor physical health behaviours of people with SMI including low motivation, false health beliefs and lack of knowledge regarding health behaviours (Campion, Francis, & Preston, 2005; Osborn, Nazareth, & King, 2007; Roberts & Bailey, 2010). However, studies reporting the health knowledge of people with SMI are equivocal. Brunero and Lamont (2010) reported in a cross-sectional analysis of mental health consumers' beliefs towards physical health, that while most consumers possessed positive beliefs, physical health outcomes remained poor, suggesting the multifactorial nature of the belief–behaviour relationship. More recently, Hardy, Deane, and Gray (2013) reported that all

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http://dx.doi.org/10.1016/j.mhpa.2014.03.001
1755-2966/

participants who underwent guided interviews had a good understanding of the importance of a healthy diet and regular physical activity, although not all were actively engaged in healthy dietary or physical activity behaviours. Similarly, Glover, Ferron, and Whitley (2013) reported that people with SMI are well aware of the importance of physical activity for health and cited medication side effects, dealing with the symptoms of the illness and physical comorbidities as significant barriers to exercise. This capacity to access, understand and use health information to make decisions is referred to as health literacy (U.S. Department of Health and Human Services, 2000) and low levels of health literacy are often associated with poor health outcomes (Berkman, Sheridan, Donahue, Halpern, & Crotty, 2011) and poor medication adherence (Walker, Pepa, & Gerard, 2010). While these traits may be evident in some mental health consumers, one recent study reported that people with SMI have a level of health literacy which is not substantially different to that of the general population (Galletly, Neaves, Burton, Liu, & Denson, 2012).

Theoretical models are proposed to explain health behaviours including the health belief model (Rodenstock, 1974) and Theory of Reasoned Action (Ajzen, 2002), however these models both argue that health behaviour is linked directly to one's beliefs. The *Integrated Theory of Health Behavior Change (ITHBC)* (Ryan, 2009) purports that health behaviour can be enhanced by improving both knowledge *and* beliefs, increasing self-regulation skills and enhancing social facilitation (Ryan, 2009). On this basis, people are more likely to engage in recommended health behaviours when they have knowledge and beliefs which support that behaviour. Consistent with Bandura's Social Cognitive Theory (Bandura, 2004), ITHBC argues that knowledge and beliefs impact upon self-efficacy and outcome expectancy and that increased knowledge may lead to increased self-efficacy. While ITHBC proposes that knowledge alone is insufficient to lead to behaviour change, knowledge and beliefs are linked to self-regulation skills and abilities. In concert with social facilitation, this may result in enhanced engagement in self management behaviours and resultant improvement in health status (Ryan, 2009).

Based on the ITHBC, it would appear that in isolation, good levels of health knowledge or positive beliefs regarding health are not sufficient to contribute to health related behaviours. This may help explain why people with SMI, who possess health literacy skills similar to that of the general population and a high level of understanding and positive beliefs regarding the importance of health behaviours, do not participate in physical activity or consume healthy diets. However, as suggested by Dickerson et al. (2005), people with SMI may simply prioritise physical health differently compared to the general population and this may impact on the uptake of health producing behaviours such as participation in regular physical activity and maintaining a healthy diet.

While studies have reported both the physical activity and dietary habits of people with SMI, and the health literacy, health knowledge and understanding in people with SMI, to date, no study has investigated the relationship between health knowledge and health behaviours in people with SMI. The significance of this relationship is vital in our understanding of the physical health of people with SMI and the development of successful interventions to enhance the physical health in this vulnerable population. Therefore, the purpose of this paper is to report the relationship between knowledge of health behaviours, and physical activity participation and healthy eating behaviours in a sample of community based mental health consumers located in a regional city in Queensland, Australia.

2. Methods

2.1. Participants

The protocol for this randomised controlled trial has previous been published (Happell, Stanton, Hoey, & Scott, 2013). All adult community based mental health consumers attending a regional hospital community mental health service in Queensland, Australia, with English as their first language and identified by their consultant, mental health nurse or case manager as being able to provide informed consent, were invited to the study. Consumers were invited to participate during face-to-face conversations with their case manager or mental health nurse. The service had more than 400 consumers receiving community based mental health services at the time of the study. The Director of Nursing at the service was actively involved in encouraging staff to recruit participants and follow recruitment protocols. One hundred and fifteen participants provided informed consent during the eight week recruitment period and 59 were subsequently randomised to the CHN group. On commencement of the intervention, 38 people withdrew consent, refused participation or were unable to be contacted, leaving 21 participants in the CHN group.

A cardiometabolic health nurse (CHN) was employed by the mental health service for the purpose of coordinating the physical health care of community based mental health consumers attending the service. Our CHN had more than 10 years experience as a registered nurse working in community and in-patient mental health settings. Individual appointments were arranged for baseline data collection with comprised a range of questionnaires on physical health knowledge and behaviours and standardised cardiometabolic health assessments including waist circumference and body mass index (BMI). The primary purpose of this assessment was to identify 'at-risk' indicators of cardiometabolic health. Where deemed necessary, the CHN provided linkages to General Practitioners, allied health professions or community agencies appropriate for the physical health care of the consumer. The CHN also assisted the consumer with recommendations regarding self-management of health behaviours such as physical activity and diet. To ensure data were collected in a consistent and comprehensive manner, we provided additional training to familiarise the CHN with the administration of the questionnaires as necessary. The present paper describes relevant outcomes from this assessment related to knowledge of health behaviours and health behaviours.

2.2. Knowledge of health behaviours

To assess the knowledge of health behaviours we have developed the Australian Health Behaviour Knowledge and Attitudes Questionnaire (AHBKAQ) for the purposes of this study. The AHBKAQ is based on the somewhat outdated European Health and Behaviour Survey (Wardle & Steptoe, 1991) and consists of 22 items assessing knowledge and attitudes of health behaviours. The first 14 questions are based on current Australian health guidelines and assess health behaviour knowledge using a true or false response system. Items for this questionnaire were sourced from the Department of Health education and prevention website (Department of Health, 2013) and reflect a range of public health guidelines including those about overweight, physical activity, diet, smoking, safe sex and alcohol and illicit drug. For example, we provided the statement: *Australian dietary guidelines recommend you should eat at least five serves of vegetables per day*; to which the participant provides a true or false response. This instrument was analysed for readability and found to have a Flesch-Kincaid Grade Level of 10.5. This result indicates the content of the instrument can