

The Healthy Lifestyles Project: Pilot data in women with psychosis

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INTRODUCTION

People who experience serious mental illness (SMI), such as psychosis, have a shortened lifespan compared to the general population. In fact, it has been reported that people with SMI lose 25-30 years of normal lifespan compared to the general population (1, 2). Most of the excess mortality (>60%) among people with SMI is due to deaths related to comorbid medical conditions (3,4). About 50-75% of people with schizophrenia develop coronary heart disease (CHD) (5). This is because this group of people have greater risk factors for CHD, including increased rates of smoking, obesity, diabetes, cholesterol problems, poor diet and inactivity. The rates of death from CHD in people with schizophrenia are about twice that seen in the general population (4).

Women experiencing SMI have specific additional risk factors, further increasing their risk of CHD. They tend to have higher rates of obesity, with increased body mass indices (BMI) and waist circumferences (6,7). Healthy premenopausal women are largely protected from CHD, due to the presence of estrogen (8). Low estrogen levels in women with schizophrenia have been described in several studies, independent of the hormonal disturbances caused by some medications (9,10). Consequently, women with SMI may no longer be protected from the onset of CHD before menopause.

Unfortunately, the physical health of women with SMI is often overlooked, both clinically, and in the research world. This is despite the growing awareness of the substantial impact the typical lifestyle of people with SMI can have on morbidity, mortality, treatment non-compliance, and quality of life. Recently though, a few research studies have demonstrated that psychological treatment focussed on the risk factors for CHD is feasible and effective for people with SMI (e.g. 11). This includes the present study, which is the first to our knowledge to specifically focus on women with psychosis.

AIMS

To test the feasibility and effectiveness of a multi-component risk factor intervention for (1) the reduction of CHD risk and (2) smoking cessation among female smokers with psychosis.

To examine gender differences in lifestyle and intervention outcomes.

METHOD

This project was funded by the Commonwealth Department of Health and Ageing, and was conducted at 4 sites across Australia.

People experiencing psychosis, who smoked and had a body mass index (BMI) > 30 participated in this study. Participants completed an initial assessment, followed by 9 individual therapy sessions over 13 weeks, and a final assessment at 15 weeks by an independent rater. The assessments are detailed in Table 1 below. The manual guided, multi-component CHD risk factor intervention included motivational interviewing (MI), cognitive behavioural therapy (CBT) and provision of education and resources. Nicotine Replacement Therapy (NRT) was also offered to participants.

Table 1: Study Assessments

Variable	Assessment Instrument
Diagnosis/clinical variables	Diagnostic Interview for Psychosis (DIP) ¹²
Symptom measures	
Psychopathology	Brief Psychiatric Rating Scale (BPRS) ¹³
Depression	Beck Depression Inventory II (BDI-II) ¹⁴
Smoking Behaviour	Reasons for smoking/quitting, past quit attempts
No. cigarettes per day	Opiate Treatment Index (OTI) ¹⁵
Nicotine dependence	Fagerstrom Test for Nicotine Dependence (FTND) ¹⁶
Diet/Weight	Weight (kg) Body Mass Index (BMI) = weight(kg)/height ² (m ²)
Physical Activity	Number of times person engaged in physical activity
CHD risk score	Based on the Framingham equation ¹⁷

RESULTS

SAMPLE

A total of 43 participants were recruited across the 4 sites. Of these, 18 (42%) were female. Results focus on the physical health and lifestyle of female participants in this project, and their outcomes after receiving the intervention. Gender differences in these variables are also investigated.

The mean age of female participants was 37.9 years (SD=9.3). The majority were Australian born (89%), single (67%), and did not have any children (67%). Seventy-three percent were unemployed and 94% received the Disability Support Pension (DSP). The most common diagnoses were schizophrenia (39%) and schizoaffective disorder (39%). Eighty-three percent of female participants were taking antipsychotic medication.

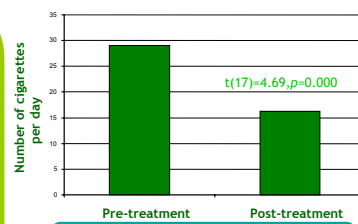


Figure 1. No. cigarettes smoked per day

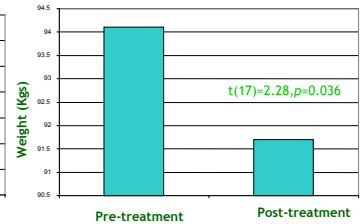


Figure 2. Weight change

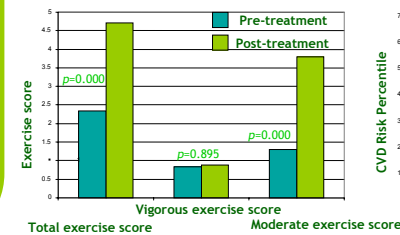


Figure 3. Physical activity levels

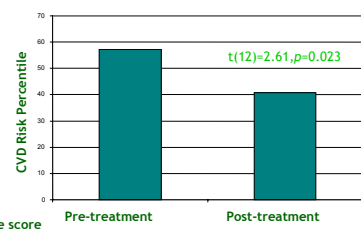


Figure 4. Overall CHD Risk

RESULTS

GENDER DIFFERENCES AT PRE-TREATMENT

Independent-samples t-tests examined gender differences at pre-treatment. There were no significant differences between male and female participants on the majority of key variables. However, whilst females weighed significantly less than males, $t(41)=-2.26, p=0.03$, they were significantly more likely to say that their weight affected aspects of their life such as physical function, self-esteem, level of public distress, intimate relationships and work/daily activities, $t(39)=-2.28, p=0.03$. Females had a significantly lower CHD risk score than males, $t(36)=-3.95, p=0.000$.

PRE- AND POST-TREATMENT OUTCOMES FOR FEMALE PARTICIPANTS

Repeated-measures t-tests examined the difference from pre- to post-treatment for female participants. After participating in this multi-component intervention, female participants significantly reduced the number of cigarettes they smoked per day (Fig.1), and their level of nicotine dependence, $t(17)=-4.77, p=0.000$. Both their weight (Fig.2) and BMI significantly decreased after the intervention, $t(17)=-3.68, p=0.002$, and their quality of life related to weight significantly improved, $t(14)=3.0, p=0.01$. Female participants significantly increased their level of physical activity, in particular the amount of moderate exercise (Fig. 3). There was a significant reduction in overall CHD risk score for female participants (Fig.4).

GENDER DIFFERENCES FROM PRE- TO POST-TREATMENT

Two-way repeated-measures ANOVAs investigated gender differences from pre- to post-treatment. There were very few significant differences on key variables across time as a result of gender. Female participants significantly increased their level of moderate exercise more than the male participants ($p=0.006$). The effect of gender on change in BMI from pre- to post-treatment was approaching significance, ($p=0.65$). Significantly more males completed treatment in this project than females ($p=0.009$).

DISCUSSION AND CONCLUSIONS

Women with SMI do have significant risk factors for CHD.

This study demonstrated that a multi-component CHD risk factor intervention for women with SMI who smoke, was associated with significant and positive lifestyle changes, in terms of a reduction in smoking and weight, an increase in physical activity and an improvement in quality of life relating to weight.

Women with SMI are interested in their physical health, and are both willing, and able to make positive lifestyle changes.

Therefore, this multi-component intervention was both feasible and effective for this group of people, and gives this very important health issue the attention it deserves.

An interesting finding was that despite weighing significantly less than males, female participants were significantly more likely to say that their weight affected their self-esteem and social/daily life. This may be a particular point of focus for psychological therapy with women with SMI.

Another interesting gender difference was that significantly more males completed treatment in this project than females. This point must be taken into consideration, and techniques to enhance the enthusiasm of female participants to attend, need to be applied.

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