New Moves: Targeting physical and mental well-being in people with mental illness

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The New Moves program, developed by The Schizophrenia Fellowship of NSW, specifically targets the physical health and recovery needs of people with a mental illness. New Moves engages participants in exercise activities that target cardiovascular fitness and strength training. Activities are performed in a group environment with peer support, which encourages social interaction and interpersonal skill development. By participating in the preparation of healthy meals and a variety of educational discussion topics, participants learn skills to manage their physical health and long term recovery better. Program evaluation has found significant benefits to physical health, social well-being and quality of life.

Why physical health interventions are needed for people with mental illness?

Mental health and physical health are inextricably linked. People with severe mental illness (SMI), such as schizophrenia and mood disorders, have higher rates of physical illness than the general population (Lambert, Velakoulis, & Pantelis, 2003; O’Sullivan, Gilbert, & Ward, 2006). They also have physical health problems that remain undetected or untreated (WFMH, 2010). Up to 50% of people with serious mental illness have recognisable medical disorders and about 20% have medical problems that may explain or exacerbate their psychiatric condition (Lawrence, Holman, & Jablensky, 2000; Wonca, 2008). The additive effects of co-occurring physical illness and mental health problems often produce worse overall health outcomes (WFMH, 2010).

People with SMI have been found to receive insufficient medical assessment and treatment (Muir-Cochrane, 2006), and to be less likely to receive preventative medical care and screening (Druss, Rosenheck, Desai, & Perlin, 2002), despite being at high risk of co-morbid medical illnesses and early death.

People with mental illness report that healthcare professionals dismiss or ignore physical health complaints. Evidence of this was noted in the report Equal Treatment – Closing the Gap (DRC, 2006) where it was found that, when people with mental health problems reported physical ill health, it was viewed as part of the mental health problem and so not investigated or treated. Consequently, the physical health problems of those with mental illness are often undetected, overlooked and/or untreated.

Poor access to medical care contributes to the high rate of mortality seen in those with SMI. The life expectancy of people experiencing SMI is reported to be 10–20 years less than that of the general population (Allebeck, 1989; Brown, Inskip, & Barraclough, 2000; Muir-Cochrane, 2006; Smith, 2008).

Common co-morbid physical illnesses experienced by people with SMI include cardiovascular disorders, diabetes, metabolic
syndrome, hypertension, respiratory illness and obesity-related diseases (O’Sullivan, et al., 2006).

Metabolic syndrome is a combination of medical symptoms and problems such as increased blood pressure, elevated insulin levels, abnormal or high cholesterol and excess body fat around the waist area. Metabolic syndrome increases the risk for cardiovascular disease and diabetes, and is common in people with schizophrenia (Heiskanen, Niskanen, Lyytikaninen, Saarinen, & Hintikka, 2003). It has been found that 52% of people on high potency antipsychotics had metabolic syndrome (Suvisaari, 2008).

Linde-Feucht (2007) identified that a person’s behaviour contributes to 40% of the premature death problem in people with a mental illness, and that small changes in behaviour can significantly increase a person’s longevity (Linde-Feucht, 2007).

The negative affect associated with mental illness may impact on one’s motivation to exercise and eat healthily. In addition, side effects of anti-psychotic and anti-depressant medication include sedation and increased appetite, both of which encourage weight gain. Other problems impacting on the poor physical health of those with mental illness include smoking, alcohol and drug use, as well as poor diet and a sedentary lifestyle. These behaviours represent modifiable risk factors that contribute to the increased morbidity and mortality associated with severe mental illness.

Background and history of New Moves

The New Moves program is the product of the evaluation and refinement of the Eat Well, Move Well, Stay Well (EMS) Program delivered by the Schizophrenia Fellowship of NSW between 2009 and 2010. The original program was funded by the Department of Health and Aging (DoHA), Healthy Active Australia Grant 2008. Data presented in this paper is from the evaluation of the EMS program in 2010. The New Moves program is currently partially funded by the NSW Department of Sports and Recreation, and supported by the Schizophrenia Fellowship of NSW.

Theoretical framework of New Moves

New Moves is a health promotion, healthy lifestyle program specifically targeting the needs of people with serious mental illness.

The design and implementation of the New Moves program is built on a solid foundation of evidence-based models of behaviour change theories and Occupational Therapy. This theoretical framework creates a strong versatile program that maximises participant outcomes.

Two models of behaviour change, the Health Belief Model (Becker, 1974; Rosenstock, 1974) and the Stages of Change Model (DiClemente & Prochaska, 1982; Prochaska & DiClemente, 1983, 1984), are synthesised with the framework provided by The Model of Human Occupation (Kielhofner, 2008). This theoretical framework allows one to gather a comprehensive understanding of the situation to be addressed, the needs and motivation of the target population, and the environmental context in which the behaviour occurs. The theory helps to guide practice, providing intervention strategies that facilitate behaviour change and enhance behaviour skills, maintain active engagement of participants, and help them maintain positive behaviour changes, so that they become part of everyday life.

Target population

The New Moves program has been designed to meet the physical health, social and recovery needs of people (aged 18–65 years) with serious mental illness, and who have problems with healthy lifestyle behaviour and choices. It is particularly designed for the individual who, due to problems associated

Table 1: New Moves weekly discussion topics

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Subject</th>
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<tbody>
<tr>
<td>1</td>
<td>Activate</td>
<td>Orientation</td>
</tr>
<tr>
<td>2</td>
<td>Measure Up</td>
<td>Fitness Assessment</td>
</tr>
<tr>
<td>3</td>
<td>Health</td>
<td>Co-morbidities associated with mental illness</td>
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<tr>
<td>4</td>
<td>Food</td>
<td>Healthy Eating and Fluid Intake</td>
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<tr>
<td>5</td>
<td>Hard Stuff</td>
<td>Drinking (alcohol, caffeine &amp; soft drinks)</td>
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<tr>
<td>6</td>
<td>Shake It</td>
<td>Exercise</td>
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<tr>
<td>7</td>
<td>Feel Good</td>
<td>Self-esteem and Body Image</td>
</tr>
<tr>
<td>8</td>
<td>Half Way</td>
<td>Fitness Assessment</td>
</tr>
<tr>
<td>9</td>
<td>Motivate</td>
<td>Motivation</td>
</tr>
<tr>
<td>10</td>
<td>Recover</td>
<td>Recovery &amp; Resilience (smoking, drugs, grief &amp; loss)</td>
</tr>
<tr>
<td>11</td>
<td>Shop</td>
<td>Shopping and Meal Planning</td>
</tr>
<tr>
<td>12</td>
<td>Connect</td>
<td>Maintenance (Social life &amp; connectedness to the community)</td>
</tr>
<tr>
<td>13</td>
<td>Out and About</td>
<td>Generalisation (Community cafe &amp; shopping centre)</td>
</tr>
<tr>
<td>14</td>
<td>Join In</td>
<td>Generalisation (Community gym)</td>
</tr>
<tr>
<td>15</td>
<td>New Life</td>
<td>Fitness Assessment</td>
</tr>
<tr>
<td>16</td>
<td>Graduate</td>
<td>Lifestyle Intervention</td>
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with his/her mental illness and/or side effects of the medications used to treat the mental illness, has not been exercising and/or making healthy food choices. Participants of the New Moves programs are generally in the obese range; many have non-insulin-dependent Diabetes Mellitus (NIDDM) or are at risk of metabolic syndrome. Most of the participants are not engaged in any exercise routine at the start of the program, but may have exercised in the past.

Key program outline

The New Moves program is run in a weekly two-hour session over a period of 16 weeks. Each two-hour session includes:

- A discussion/information topic (see table 1)
- Cardiovascular exercise, designed to be fun and socially interactive
- Strength training exercise
- A healthy meal/snack, including preparation of the meal.

New Moves is practical as well as educational. The participant engages in exercise activities for both strength training and cardiovascular fitness. A variety of fun activities are used to maintain motivation. Exercises and activities are described and modelled by the facilitator; the participant performs the activity under the guidance of the facilitator, and the facilitator provides immediate feedback and positive reinforcement designed to encourage mastery, performance capacity, skill and confidence. Participants are also involved in the preparation of simple healthy meals, which facilitates generalisation and transfer of skills to the home environment.

Discussion topics (itemised in Table 1) are designed to be informative and to promote discussion and self-reflection.

The program is run in a group setting that facilitates social networking and development of interpersonal skills, and helps to reduce the isolation felt by many people with a mental illness.

Through the provision of support and education, participants learn to make healthy lifestyle choices to manage their health, fitness and weight better. Expected outcomes of the program include improved fitness, physical health and mental well-being with a consequent reduction in the reliance and use of health care systems.

Peer educators

Participants who have completed the New Moves program are offered the opportunity for training to become peer educators and to co-facilitate future programs. Individuals who complete the training and work as peer educators learn additional skills such as communication and presentation. The work helps to build their confidence and self-worth, aiding to their personal recovery journey.

New Moves physical health assessments

In order to participate in the New Moves program, participants are required to see their GP to obtain medical clearance. Baseline medical assessments are performed to assess risk factors for disease. Risk factors that are assessed at baseline include:

- Blood pressure
- LDL cholesterol ("bad" cholesterol)
- HDL cholesterol ("good" cholesterol)
- Triglycerides (fat found in the blood)
- Blood glucose (sugar)
- Family history of premature heart disease
- Physical inactivity
- Cigarette smoking.

The requirement for participants to see their GP for medical clearance and medical assessment is important not only for risk assessment but also to enable early detection and treatment of disease if present and/or initiation of preventative measures. Some participants were found not to have had regular medical assessments by their GP prior to undertaking the program.

A Physical Activity Readiness Questionnaire (PAR-Q) and Health Screen Questionnaire is completed at baseline. Written evaluations completed by participants include a Quality of Life (QOL) Questionnaire and Personal Wellness Wheel (PWW). A Fitness Assessment is undertaken at baseline.

The fitness test includes:

1. Flexibility: Sit and reach test.
3. Cardiovascular Fitness: Six-minute time trial.
4. Body Composition: Height, weight and waist girth measurement.
5. Cardiovascular Health: Blood pressure and heart rate.

Each participant’s weight is monitored and recorded weekly. At week 8 (half-way) and week 15 (program completion) the fitness assessment is repeated. At program completion the QOL questionnaire and PWW are documented again. The baseline and program completion data are then compared.

Participants are required to give their consent for the data collected to be used for research and evaluation purposes of the New Moves program.

Goal setting

Goal setting is an important part of the New Moves program. Participants are encouraged to set SMART (Specific, Measureable, Achievable, Realistic and Time-defined) goals that are personally relevant to them and important to their physical health and overall well-being. The collaborative recovery model (CRM) is used to assist participants to develop a plan to achieve the goals that they have set, to identify the barriers that might impact on achievement.
of their goals, and to find ways to overcome these barriers. The New Moves facilitator regularly reviews participants’ progress in their particular goals and continues to motivate them to achieve their desired outcome or behaviour. The New Moves facilitator aims to empower participants’ autonomy and ability to make healthy lifestyle choices that will continue beyond their involvement in the program.

Evaluation outcomes and key findings

New Moves has been evaluated using both quantitative outcome measures and qualitative measures, based on participant feedback and case note reports. Fifty-five participants have completed the New Moves Program since 2009. Thirty-eight participants are currently enrolled in the program. The data analysis presented in this paper is based on those who have completed the program.

The majority of participants began the New Moves program with a Body Mass Index (BMI, defined as weight in kg divided by height in metres squared) in the obese range. A normal BMI is in the range of 20–25. A person classified as obese has a BMI over 30. Participants in the New Moves program had BMIs of up to 56. Participants also had waist circumferences in the unhealthy range. Generally a waist circumference greater than 94cm for men and 80cm for women puts the person at risk of developing chronic diseases. The majority of New Moves participants had a waist circumference greater than 100cm. Many participants also had co-morbid physical illness such as NIDDM, metabolic syndrome and respiratory illnesses associated with cigarette smoking.

The key outcome objectives assessed in evaluation studies are:

1. Cardiovascular Fitness.
2. BMI.
4. Mental and Physical Well-being

Statistical analysis found significant improvements in cardiovascular fitness, waist girth measurement and Quality of Life. Many participants lost weight on the program, reducing their individual BMI into the healthy range or overweight range from the obese range. Overall there was not a statistically significant change in weight.

Qualitative analysis

Following completion of the program, participants were interviewed and asked to provide feedback regarding the program. Qualitative analysis of the feedback looked at the impact the New Moves program has had on the lives and well-being of participants in terms of meeting specific needs, providing support and education to bring about desired behaviour changes and empowering participants to take control of their health.

Participant feedback was reported in the following areas:

2. Improved choices in healthy eating.
3. Reduction in consumption of drugs, alcohol and/or cigarettes.
4. Improved mood, motivation and/or confidence.
5. Development of social network.

Overall there were noted improvements in exercise behaviour and healthy eating. Participants reported they were incorporating exercise into their daily routines and increasing incidental exercise.

Some participants reported that the New Moves program helped them to exercise independently in local gyms and/or attend aquatic centres. Other participants reported that they enjoy and need the motivation of the supported group environment in order to exercise.

Participants reported feeling better about themselves; there were noted improvements in mood, self-esteem and confidence. Some participants noted improvements in body image and stated this was important for them to feel comfortable exercising in community gyms.

Participants enjoyed the meal preparation and healthy eating component of the program. They reported that they are now eating a more balanced diet, incorporating more fruit and vegetables in their diet and consuming less sugar, salt and caffeine. Some people have reported a reduction in the number of cigarettes smoked.

Case notes reported a participant stating: “I’m happier now”. This participant was reported to be “excited and motivated to be part of the group”, to show “increases in confidence when interacting with other group members since starting the program”; and to “be enjoying the exercises and social aspects of the group”.

All participants reported a sense of belonging and connectedness to the program. They enjoyed the social aspect of attending the program and interacting with other participants. For some participants, living alone and being socially isolated, the New Moves group was the only social interaction they had. The social and peer support was found to be important to maintain the motivation for exercise. One participant stated that “working together as a group maintains commitment and helps to build self-esteem and confidence”. Attending the program and doing additional exercise during the week helped to provide the participants with more structure to their day. Participants reported a sense of great satisfaction and achievement in completing the program and making personal gains. The graduation ceremony provided them with feelings of achievement and accomplishment. Case notes report participants feeling proud of themselves when receiving a certificate of participation at the graduation ceremony.
Peer educator feedback

Peer educators were interviewed and found to have noted improvements in their confidence and self-esteem through participating in and co-facilitating the program. They reported leading healthier lifestyles, incorporating exercise and healthy eating into their daily routines. Their role as peer educators gave them improved feelings of self-worth, feeling valued and leading more meaningful and productive lives. One peer educator stated: “I’ve never held a paying job before so it’s rewarding getting paid for what I enjoy to do”.

Implications for consumers

As highlighted in the introduction, people with SMI tend to smoke more, exercise less and eat a poorer diet than the general population (Wand & Murray, 2008). In addition, weight gain is a common side effect of anti-psychotic, antidepressant and other mood stabilising medication (Zhao, 2008). Consequently, those with SMI have higher rates of co-morbidities such as obesity, diabetes, high cholesterol and hypertension; and thus have a vastly increased risk of developing metabolic syndrome and cardiovascular disease (Smith, 2008; Suvisaari, Saarni, & Perala, 2007). With the recognition of this link between physical health problems and mental health disorders, there is an urgent need for health promotion interventions such as the New Moves healthy lifestyle program.

By attending the New Moves program, participants made significant improvements in their physical health and mental well-being. This is highlighted in the statistically significant improvements in waist girth measurements and cardiovascular fitness. Waist girth measurement is a risk indicator for metabolic and cardiovascular health. Increased waist girth measurements increases the risk of developing heart disease, diabetes, high blood pressure, stroke, sleep apnoea, various forms of cancer and other degenerative diseases. The significant reduction in waist measurement observed amongst the participants means they have reduced the risk of developing co-morbid diseases and, in the long term are likely to have reduced the burden on the health care system.

Improvements in QOL, confidence, self-esteem, mood and overall well-being have also been noted. These improvements enhance the overall health of the individual, having a synergistic effect on all dimensions of health and general well-being (physical, mental, spiritual, emotional and social). A visual representation (Personal Wellness Wheels [PWW], typical example, diagram 1 and 2 below) highlights the impact the program has had on enhancing overall well-being.

The Personal Wellness Wheel provides a graphical representation of a participant’s self-reported overall wellness. The spokes represent dimensions of wellness in the areas of emotional, physical, social, vocational, environmental, psychological, spiritual and intellectual well-being. Since overall wellness is multidimensional, the goal is to create a balance between the dimensions as well as a high level of wellness in each dimension. This tool can be used to evaluate health and identify opportunities for personal growth.

The above example shows the participant’s reported personal growth in the areas of intellectual, emotional, physical, social, vocational, psychological and spiritual well-being from baseline to program completion.

The improvement in participants’ sense of health, well-being, self-esteem, body image and mood is in line with previous studies which found that physical activity improves mood and reduces the symptoms of psychosis, anxiety and depression (Beebee et al., 2005; Callaghan, 2004).

Challenges to program implementation

Participants in the New Moves program have demonstrated a good rate of program completion. Initial barriers to engaging participants in the program are related to accessibility of transport. The drop-out rate is higher in the first two weeks, but...
once the routine is started participants are motivated to continue to attend the program. Challenges to attendance are related to conflicting times with medical appointments and participants gaining work. These challenges are minimised when the program is run on a weekend. Participants seemed to prefer the weekend program as it gives structure to the weekend, when other activities are limited. The main reason for people not attending is generally due to weather conditions, such as “too hot to exercise” or “too wet to leave the house”.

Recommendations for best practice

Healthy lifestyle interventions need to begin as early as possible in the treatment process. Ideally, healthy lifestyle and health intervention groups should be implemented in both the hospital and community setting. Commencing a healthy lifestyle program whilst in hospital will minimise the impact of medication side effects for consumers. If consumers are also referred to and participate in a community-based healthy lifestyle group, it is likely they will maintain improved health behaviours, adapting them to their community and home situation. This approach will improve consumers’ physical and mental health and maximise their recovery, and reduce the cost and burden on the Australian health care system in the long term.

It is essential that participants are followed up in the future, to determine whether program attendance has resulted in long-term health behaviour changes and if it has made long-term improvements to physical health, mental health and quality of life.

Conclusion

The benefits of health promotion interventions such as New Moves are multidimensional and synergistic. There are benefits to the individual in terms of QOL, general well-being and physical and mental health, and additional cost benefits in terms of reducing the burden on the health care system. The Schizophrenia Fellowship of NSW continues to provide ongoing commitment to New Moves based on the positive outcomes from evaluation and the significant benefits identified to the participants’ physical, social and mental well-being.

About the author

Katherine Gill is the program co-ordinator for the New Moves Program and the Mental Health Sports Network at the Schizophrenia Fellowship of NSW. She has a background in Occupational Therapy, and Medical and Mental Health research.

References


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