



RESEARCH TO  
PRACTICE 2018

27-29 MARCH 2018  
BRISBANE, QUEENSLAND

## MENTAL HEALTH ORAL FREE PAPERS

**Thursday, 29 March 2018**

**9:00am – 10:30am**

**Presentations:**

**144**

Exercise Physiology services improve symptoms of PTSD in people attending a university teaching clinic  
*Robert Mullins*

**171**

The effects of a Physical Activity Intervention Implemented within a Residential Mental Health Rehabilitation Unit  
*Karen Kendall*

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Evaluating an exercise program for youth within the Western Australia Drug and Alcohol Youth Service  
*Bonnie Furzer*

**291**

The feasibility and efficacy of exercise as an adjunctive treatment to reduce craving levels in alcohol use disorder  
*Kirrily Gould*

**321**

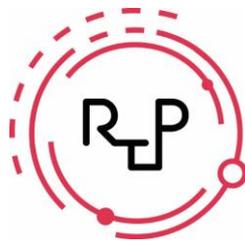
A Healthy Lifestyle and Behaviour Change Program in a Community Mental Health Setting  
*Georgia Frydman*

**343**

Assessing physical activity in people with mental illness: 23-country reliability and validity of the Simple Physical Activity Questionnaire (SIMPAQ)  
*Simon Rosenbaum*

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### Exercise Physiology services improve symptoms of PTSD in people attending a university teaching clinic

**Robert Mullins**<sup>1</sup>, Jane Shakespeare-Finch<sup>1</sup>, Andrew McWilliam<sup>1</sup>, Fiona Naumann<sup>1</sup>, Fiona Caristo<sup>1</sup>, Ross Young<sup>1</sup>, Adam Scott<sup>2</sup>

<sup>1</sup>Queensland University of Technology, Brisbane, QLD, Australia; <sup>2</sup>White Cloud Foundation, Brisbane, QLD, Australia

**Aim:** To evaluate the impact of exercise physiology (EP) care on current or former Defence and First Responder participants with self-reported post-traumatic stress disorder (PTSD) attending the Queensland University of Technology (QUT) teaching clinic.

**Methods:** An experimental single group intervention, examining a real-world model of EP care in participants with self-reported PTSD. Participants attended 10 sessions of one hour individualised exercise supervised by an accredited EP with involvement of 4<sup>th</sup> year bachelor of clinical EP students from QUT completing a work integrated learning module. Quantitative pre-post evaluations of clinical outcomes included the six-minute walk and grip strength tests; the international physical activity questionnaire; satisfaction with health care; Impact of Events Scale - Revised (IES-R) and Kessler psychological distress scale (K10). Participants were also interviewed about their experiences.

**Results:** Participants had a mean age of 44.8 years (SD = 12.0). The majority (78.4%) were male. Symptoms of distress and PTSD significantly reduced post-intervention. K10 mean difference = -8.00, 95% CI -10.82 to -5.18,  $p < 0.001$ ,  $n = 17$  and IES-R mean difference = -14.49, 95% CI -21.12 to -8.71,  $p < 0.001$ ,  $n = 16$ . There were no significant changes for physical activity levels, walking ability or grip strength. Qualitative results ( $n = 21$ ) revealed four domains relevant to participant experience. The domains included an environment of safety; a person-centered approach; positive psychosocial health changes and positive physical health changes.

**Conclusion:** This study provided evidence that an exercise physiology service can reduce symptoms of PTSD and levels of distress in people attending a university teaching clinic. An environment of safety was demonstrated that led to positive self-reported physical and psychosocial health benefits. No detrimental effects of participating in the program were identified.





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### The effects of a Physical Activity Intervention Implemented within a Residential Mental Health Rehabilitation Unit

**Karen D Kendall**<sup>1</sup>, Nicole Korman<sup>2,3</sup>, Dan Siskind<sup>2,3</sup>, Shelukumar Shah<sup>2</sup>, Shuichi Suetani<sup>2,3</sup>, Frances Dark<sup>2,3</sup>, Stephen Parker<sup>2,3</sup>, Ketevan Nadareishvili<sup>2</sup>

<sup>1</sup>School of Exercise & Nutrition Sciences, Queensland University of Technology, Brisbane, Queensland, Australia;

<sup>2</sup>Addiction and Mental Health Services, Metro South Health Services, Brisbane, Queensland, Australia; <sup>3</sup>School of Medicine, The University of Queensland, Brisbane, Queensland, Australia

**Introduction** People with severe mental illness (SMI) are sedentary, have high cardiometabolic risks and reduced life expectancy compared to the general population. Physical activity (PA) programs have demonstrated positive effects on physical and mental well being in people with SMI. Despite growing evidence of the benefit of PA, its implementation into routine mental health care settings remains a challenge.

**Aim** To evaluate the acceptability and feasibility of a novel collaboration between a mental health service and exercise physiology (EP) students in delivering a 10-week group PA intervention.

**Methods** A single-arm prospective cohort pilot study for patients with SMI living at a residential rehabilitation continuing care unit. Ten participants engaged in three 45-minute circuit based group exercise sessions per week supervised by fourth year EP students. The group circuit included aerobic and resistance based exercise that was progressed over the 10-week period. Functional exercise capacity (6-minute walk test), habitual PA (Simple Physical Activity Questionnaire), psychotic symptoms (Brief Psychiatric Rating Scale), negative symptoms (Scale for the Assessment of Negative Symptoms), and metabolic parameters were measured at baseline and following the intervention.

**Results** Of 16 eligible residents, 13 consented to participate and completed baseline measures. Ten participants (77%) completed the study with an 78% exercise session completion rate. 6-minute walk test distance increased significantly (76.8m: 95%CI 54-99). Psychotic and negative symptoms scores were significantly reduced (3.4: 95%CI 0.024-6.7 and 14.5: 95%CI 9.6-6.8) respectively. There was no significant change in sedentary behaviour or metabolic parameters following the intervention.

**Conclusion** PA programs delivered by EP students using a novel, naturalistic real-world design are of benefit to and appear acceptable and feasible for patients with SMI in a residential rehabilitation setting.





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### Evaluating an exercise program for youth within the Western Australia Drug and Alcohol Youth Service

**Bonnie Furzer**<sup>1</sup>, Alissa More<sup>1</sup>, Ben Jackson<sup>1</sup>, James Dimmock<sup>1</sup>, Ashleigh Thornton<sup>1</sup>, Allan Colthart<sup>2</sup>, Kemi Wright<sup>1</sup>, Dylan Warner<sup>1</sup>

<sup>1</sup>School of Human Sciences (Exercise & Sport Science), The University of Western Australia, Perth, WA, Australia; <sup>2</sup>Next Step Drug and Alcohol Service, Mental Health Commission, Perth, WA, Australia

**Introduction:** Substance use disorders (SUD) are one of the most common mental health challenges faced by young people, with 12.7% of Australian youth aged 16 to 24 years estimated to have a SUD. Despite a range of treatment methods available, relapse is common, and young people may come to drug and alcohol treatment with variety of goals. Evidence for exercise as adjunct therapy in youth SUD treatment is scarce, despite support for the efficacy of this approach among adult populations.

**Methods:** Youth undergoing residential treatment for SUD were provided with twice-weekly tailored exercise sessions, with the aim of examining their perceptions about the outcomes associated with regular exercise participation during their recovery. Qualitative (i.e., focus group) methods and content analytic procedures were employed to explore the experiences of youth and staff members.

**Results/Conclusion:** Over a six-month period, 50 eligible participants commenced the exercise program with a mean age of substance initiation of  $14 \pm 1.96$ yr (11-19yrs; Male=66.7%; Female=33.3%). Over 50% were diagnosed with a co-occurring mental health disorder, and 60% had previously been admitted to the rehabilitation program. Fifty-four percent were poly drug users, with the primary substance as cannabis (55%), methamphetamines (40%) or alcohol (3.7%). Focus group participants (n=27 young people; n=10 staff) described themes relating to *exercise perceptions, recovery-specific outcomes, and other health outcomes*. Specifically, cited benefits included *establishment of healthy routine, improved overall sleep, improved appearance, positive recovery (i.e., interpersonal) relationships, cathartic effects, and a sense of accomplishment*. Youth with SUDs are prone to co-occurring physical and mental health comorbidities, and the results of this study indicate that exercise may assist in remedying these issues.





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### The feasibility and efficacy of exercise as an adjunctive treatment to reduce craving levels in alcohol use disorder

**Kirrilly Gould**<sup>1,2</sup>, Philip B Ward<sup>1,3</sup>, Simon Rosenbaum<sup>1,4</sup>, Rebecca McKetin<sup>5</sup>, Angela Douglas<sup>6</sup>, Zachary Steel<sup>1,2</sup>

<sup>1</sup>University of New South Wales, Sydney, NSW, Australia; <sup>2</sup>St John of God Health Care North Richmond Hospital, North Richmond, NSW, Australia; <sup>3</sup>Schizophrenia Research Unit, Ingham Institute of Applied Medical Research, Liverpool, NSW, Australia; <sup>4</sup>Black Dog Institute, Prince of Wales Hospital, Sydney, NSW, Australia; <sup>5</sup>National Drug Research Institute, Curtin University, Perth, WA, Australia; <sup>6</sup>University of Wollongong, Wollongong, NSW, Australia

**Background:** Alcohol use disorders affect nearly twenty per cent of Australians. Alcohol dependency is associated with a range of comorbidities and chronic diseases leading to premature mortality. Although limited, previous research shows that structured physical activity may decrease levels of substance use and increase abstinence duration. A lack of research investigating the effect of exercise on alcohol urges leads to this study, which aims to assess the feasibility and efficacy of an exercise intervention to reduce alcohol craving levels among inpatients with alcohol dependency.

**Methods:** A 14-day intervention study was conducted among 40 participants with a DSM-5 diagnosis of alcohol dependency and receiving treatment at St John of God Hospital Richmond, aged between 18 and 65 years and medically cleared to participate. Outcomes were assessed at multiple time-points (baseline, pre- and post-exercise sessions, and discharge), including questionnaires; DASS, PANAS, AUQ, IPAQ, PSQI. An individualised program was delivered by an accredited exercise physiologist.

**Results:** Statistically significant reductions in post exercise alcohol cravings ( $p < 0.001$ ), depression ( $p < 0.001$ ) and negative affect ( $p < 0.01$ ) were found. Significant increases were also found in positive affect post-exercise ( $p < 0.001$ ) and sleep quality ( $p < 0.001$ ). Significant improvements were observed in cardiorespiratory fitness, muscular strength and self-reported physical activity ( $p < 0.001$ ).

**Conclusion:** A significant immediate effect for reducing alcohol urges and improving mood was found when combining usual care with exercise. Data suggest that exercise may be a promising adjunctive treatment for inpatients with alcohol dependence.





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### A Healthy Lifestyle and Behaviour Change Program in a Community Mental Health Setting

Georgia Frydman<sup>1</sup>, Erikka Hennessy<sup>2</sup>

<sup>1</sup>*Collaborative Centre for Health in Psychosis (Concord Hospital), Sydney, NSW, Australia;* <sup>2</sup>*Community Mental Health, Sydney Local Health District - NSWHealth, Sydney, NSW, Australia*

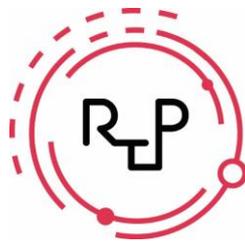
The poor physical health outcomes experienced by those living with severe mental illness leads to a life expectancy gap of up to 30 years. This is due to an increased prevalence of cardio-metabolic risk factors such as obesity, dyslipidemia and type 2 diabetes. Addressing the contributing lifestyle factors of physical activity and diet are the cornerstone of interventions that reduce cardio-metabolic disease. A healthy lifestyle program was used in order to redress the absence of readily available services to meet the demand of poorer nutrition and low physical activity engagement in this population. The primary aim was to assess the feasibility and acceptability of this model of physical health intervention for the mental health consumer cohort.

ccChiP and SLHD community mental health collaborated to design and deliver a lifestyle behavior change program. The program was focused on improving the knowledge, skills and self-efficacy of participants and intended to elicit positive lifestyle behaviour changes. A novel design feature of the program was a shorter delivery time of 1 hour per week rather than the traditional 2hrs; 30 minutes for practical skills-based health education and 30 minutes of low-moderate intensity group exercise. The program was facilitated by a Mental Health Dietitian and EP with support from Peer Support Workers. 8 12-week groups have been delivered.

Data relating to demographics, anthropometry, fitness and attendance were collected pre- and post-program. 100 participants attended at least one session. The average rate of attendance was 58% with 31% (n=31) of participants graduating (i.e. ≥80% attendance). From the consumer perspective, experiences were positive.

Short-form education groups are feasible and acceptable to Mental Health Consumers. We are currently continuing investigations that focus on content, knowledge and behaviour change in relation to physiological outcomes. Early stage results will be available at time of presentation.





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### Assessing physical activity in people with mental illness: 23-country reliability and validity of the Simple Physical Activity Questionnaire (SIMPAQ)

**Simon Rosenbaum**<sup>1,2</sup>, Rachel Morell<sup>1</sup>, Philip B Ward<sup>1,3</sup>

<sup>1</sup>University of New South Wales, Sydney, NSW, Australia; <sup>2</sup>Black Dog Institute, Prince of Wales Hospital, Sydney, NSW, Australia; <sup>3</sup>Schizophrenia Research Unit, Ingham Institute of Applied Medical Research, Liverpool, NSW, Australia

**Introduction:** Physical inactivity is a key contributor to the global burden of disease. Insufficient physical activity disproportionately affects vulnerable populations such as those experiencing mental illness. Physical activity is associated with improvements in symptoms of mental illness in addition to a reduction of cardiometabolic risk. Ensuring valid and reliable clinical tools are available to assess physical activity within clinical mental health settings is of clear significance.

**Methods:** Between 2014 and 2016 the International Working developed the five-item SIMPAQ as an instrument to assess physical activity and sedentary behaviour among populations at risk of engaging in high levels of sedentary behaviour. During 2016/2017, 40 centres from 23-countries collected reliability and validity data on the SIMPAQ from patients with mental illness. Test-retest repeatability was assessed one-week apart. Criterion SIMPAQ validity was assessed against the Actigraph Gt3x accelerometer. Spearman's correlation coefficients will be reported.

**Results:** Data collection was completed in July 2017. N=1,068 participants were recruited from 40 centres across 23-countries including lower-middle (India, Nigeria, Pakistan), upper-middle (Brazil n=30; Iran n=29) and high-income countries (Australia n=142; Belgium n=35; Canada n=28; Czech Republic n=9; Denmark n=23; Germany n=57; Hong Kong n=8; Ireland n=7; Italy n=114; Japan n=19; Netherlands n=22; Norway n=20; Portugal n=9; Spain n=37, Switzerland n=155; Taiwan n=37; USA n=13).

**Conclusion:** The validity and reliability of the SIMPAQ as a clinical measure to assess physical activity and sedentary behaviour among a diverse sample of people with mental illness will be reported.

