

## EXERCISE FOR MENTAL HEALTH

# CASE STUDY



**Accredited Exercise Physiologist:** Dr. Rob Stanton

**Client Name:** William\*

**Age:** 27



### REFERRAL AND HISTORY

William is a 27-year-old patient with schizophrenia, who lives with his sister and was referred by his GP for weight loss. During his initial exercise physiology consultation, William related his rapid 35kg weight gain to the commencement of a new antipsychotic medication regime (prescribed by his psychiatrist). His weight gain resulted in symptom exacerbation, and a cycle of poor medication adherence, repeated inpatient admissions, and poor physical health. His referral documentation showed the typical cardiometabolic profile of dyslipidaemia, impaired glucose tolerance, central obesity, and poor liver function.



### INITIAL ASSESSMENT:

William was reluctant to participate in an initial assessment. The exercise physiologist utilised motivational interviewing techniques to identify William's fears and concerns around exercise. Using a motivational<sup>(1, 2)</sup> interviewing approach, he confided that he found it very difficult to get pants to fit, which further exacerbated his symptoms. This was evident when William refused to be weighed or have his waist circumference measured. Subsequently, initial outcome measurement tools were focused on functional tasks and behavioural related questionnaires (table 1).



### EXERCISE INTERVENTION

Using a Health Coaching Australia (HCA)<sup>(7)</sup> approach that utilises patient-centred communication and behaviour change principles identifying barriers and concerns, William identified behaviours that were personally important, that he was ready to change, and confident that, with support, could be changed.

For William this was to:

- Go for short walks each day with his sister, who was his carer, and who was also looking to exercise more.
- Use a pedometer to monitor his steps, but with no specific goal to achieve, other than to walk.
- Record his activity in a diary, along with medication use, and mood.

A follow up was scheduled after only a brief period to assess the feasibility and acceptability of the intervention, and to examine the presence of adverse events.



## OUTCOME MEASUREMENT DATA AT BASELINE, 10 DAYS, AND 24 DAYS

INITIAL TESTING	BASELINE	FOLLOW UP 1 (10 DAYS)	FOLLOW UP 2 (24 DAYS)
Positive and Negative Affect Schedule <sup>(3)</sup>	Positive Affect = 20/50 Negative Affect = 39/50	Positive Affect = 20/50 Negative Affect = 31/50	Positive Affect = 25/50 Negative Affect = 26/50
Behavioural Regulation in Exercise Questionnaire (BREQ-2) <sup>(4)*</sup>	Amotivation: 4.0 External regulation: 1.5 Introjected regulation: 0.3 Identified regulation: 0.5 Intrinsic regulation: 0.0	No change	Amotivation: 4.0 External regulation: 1.0 Introjected regulation: 1.7 Identified regulation: 0.5 Intrinsic regulation: 1.0
Patient Specific Functional Scale (PSFS) <sup>(5)</sup>	1. Climbing the front stairs at home: 3/10 2. Bending over to put on shoes: 2/10 3. Entering and exiting his car: 5/10 4. Hanging out the washing: 4/10	No change	1. Climbing the front stairs at home: 3/10 2. Bending over to put on shoes: 4/10 3. Entering and exiting his car: 5/10 4. Hanging out the washing: 4/10
Self-reported physical activity (IPAQ-SF) <sup>(6)</sup>	Category 1 (Inactive)	No change	Category 2 (Minimally active)
6 min walk test (6MWT)	435m	Not assessed	635m
Daily walking	0	5/10 days 15 min per day	-
Steps per day	Not recording	~5250 per day	-

\*Based on multidimensional scoring



## OUTCOMES

### FOLLOW UP 1 (10 DAYS) OBSERVATIONS AND RECOMMENDATIONS:

William was more talkative during the follow up consultation, but still troubled by changes in mood and was not fully compliant with his medication.

William was encouraged to continue his current plan, but to walk for longer, or more often, if he felt able. To improve his positive affect, he was advised to exercise at between 1-3 ('Fairly good' to 'Good'), using the Hardy and Rejeski Feeling Scale<sup>(8)</sup>, and that if his rating fell below zero, he should slow down.

### FOLLOW UP 2 (24 DAYS) OBSERVATIONS AND RECOMMENDATIONS:

A further two weeks later, William's positive affect had improved from 20 to 25, and negative affect fell by an additional 5 points. His BREQ-2 scores showed progress toward introjected regulation; that is away from external regulation, but continued actions because of his anxieties about weight gain and poor

health, and fear of letting his sister down. Two of the four identified items on the PSFS had improved; climbing his front stairs at home, and bending over to put shoes on, but there was no change in the final two items. Review of his diary showed self-reported medication compliance was 100% over the previous 10 days. Both self-reported physical activity, and 6MWT data had improved.

William reported he 'felt a bit better about things' [*sic*] and was positive about his upcoming appointment with his psychiatrist. Although body measurements had not been taken, and there was no self-reported change in waist circumference, he noted it bothered him less because he was making improvements elsewhere.

These objective and subjective data, along with a review of his confidence and importance scale of behaviour change, were used to support William's continued exercise participation. It was suggested he continue to monitor his activity using the pedometer, and to use the diary as a tool for self-accountability and motivation.

### COMMENTS/CONSIDERATIONS:

Accredited Exercise Physiologists (AEPs) play a vital role in the multidisciplinary treatment of people with mental illness. This brief case study shows the importance of a person-centred approach, using established behaviour change strategies, and social support, when attempting to increase physical activity in an individual with mental illness. The use of valid outcome measures can be successfully used to reinforce positive behaviour, or to evaluate the relative success of an intervention.

### REFERENCES:

- O'Halloran PD, Blackstock F, Shields N, et al. Motivational interviewing to increase physical activity in people with chronic health conditions: A systematic review and meta-analysis. *Clinical Rehabilitation* 2014;28(12):1159-1171.
- National Heart Foundation Motivation Interviewing retrieved from <https://www.youtube.com/watch?v=lufIDG1ckM>
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of personality and social psychology*, 54(6), 1063.
- Exercise Motivation Measurement retrieved from [http://pages.bangor.ac.uk/~pes004/exercise\\_motivation/breq/breq.htm](http://pages.bangor.ac.uk/~pes004/exercise_motivation/breq/breq.htm)
- Stratford, P., Gill, C., Westaway, M., & Binkley, J. (1995). Assessing disability and change on individual patients: a report of a patient specific measure. *Physiotherapy Canada*, 47(4), 258-263.
- Hagströmer, M., Oja, P., & Sjörström, M. (2006). The International Physical Activity Questionnaire (IPAQ): a study of concurrent and construct validity. *Public health nutrition*, 9(6), 755-762.
- Health Change Australia retrieved from <http://www.healthchange.com/>
- Hardy CJ, Rejeski WJ. Not what, but how one feels: The measurement of affect during exercise. *J Sport Exerc Psychol* 1989;11(3):304-317.

Case Study supplied by Dr Robert Stanton, AEP \*All names have been changed.

For more resources go to ESSA's members lounge [Best Practice Hub](#).

14.09.17