

This is a repository copy of *Promising evidence for nutrition interventions in people with serious mental illness*.

White Rose Research Online URL for this paper:

<https://eprints.whiterose.ac.uk/id/eprint/115071/>

Version: Accepted Version

Article:

Meader, Nicholas orcid.org/0000-0001-9332-6605 (2017) Promising evidence for nutrition interventions in people with serious mental illness. *The British journal of psychiatry : the journal of mental science*. pp. 94-95. ISSN: 1472-1465

<https://doi.org/10.1192/bjp.bp.116.193318>

Reuse

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.

Promising evidence for nutrition interventions in people with serious mental illness

Nick Meader

University of York

Word count: 977

Number of references: 8

Keywords: serious mental illness, nutrition, health risk behaviour

Conflict of interest statement: I have no conflicts of interest in this area

Abstract

People with serious mental illness (SMI) are more likely to engage in health risk behaviours such as unhealthy eating, physical inactivity and smoking. The review by Teasdale *et al* in this issue shows the potential for nutrition interventions to help people with SMI to lose weight.

Background

Health risk behaviours (such as unhealthy diet, physical inactivity, smoking) are common and there is good evidence that they tend to cluster and co-occur.¹⁻² For example, 68% of adults in England and 52% in the USA were found to engage in two or more health risk behaviours.

Unhealthy diet is particularly common. For example, in the UK a national survey found that 79% of men and 73% of women ate less than 5 portions of fruit or vegetables per day.³ Unhealthy behaviour accounts for 28% of all health burden (measured in Disability Adjusted Life Years) and unhealthy diet was the largest contributor of all behaviour risks to health burden.⁴

People with severe mental illness (SMI) are more likely than the general population to engage in health risk behaviours.⁵ In addition, antipsychotic medication is associated with increased hunger and unhealthy eating.⁶ Given the high prevalence and health burden of risk behaviours in the general population improving diet in people with SMI is an important priority.

Meta-analyses of interventions to reduce health risk behaviours in people with SMI

Health risk behaviour interventions in people with SMI are still in a relatively early stage of development. For example, a recent meta-analysis on the effectiveness of physical activity interventions found limited data and the need for further research.⁷ Teasdale *et al*'s systematic review in this issue shows a promising literature on the effectiveness of nutrition interventions in people with SMI. Weight-loss (2.7Kg compared with controls) following nutrition intervention in people with SMI compares well with weight loss interventions in other populations. For example, a recent meta-analysis in obese adults found a weight loss of 1.56Kg compared with controls.⁸ Teasdale *et al* also found statistically significant reductions in BMI, waist circumference, and blood glucose levels in intervention participants compared with controls. In addition, they found that dietician-led interventions and those delivered at antipsychotic initiation were associated with more improved outcomes.

Future research

Replication in larger trials and the need for further exploration of intervention content

Most trials included in the meta-analysis by Teasdale et al were relatively small and there remain uncertainties regarding risk of bias with almost half not reporting allocation concealment and more than a third not reporting blinding of outcome assessors. There was also potential for publication bias identified in the meta-analysis. Therefore, it is unclear yet whether these promising findings will be replicated in large well-conducted RCTs.

A further limitation is the lack of data on diet outcomes. To evaluate the benefits of nutrition interventions there is a need to be able to show the extent to which they improve nutrition which is unclear based on current data. Future trials should report diet outcomes more transparently and consistently across trials.

In addition, there is great variability in content used by nutrition interventions and therefore there is a need to identify if particular types of Behaviour Change Techniques are associated with improved outcomes using validated taxonomies.

Multiple risk behaviour interventions

A further area of investigation that has received less attention is interventions for multiple risk behaviours in people with SMI. As noted above, people with unhealthy diets are more likely to also be physically inactive or to smoke. So change in one risk behaviour (such as diet) has potential to impact on other risk behaviours (such as physical activity or smoking). Further investigation should also examine whether there are additional gains in targeting diet and physical activity together in order to reduce weight loss or if making sequential changes in behaviours is a more effective long term strategy.

Conclusions

In summary, there are promising data on the potential effectiveness of nutrition interventions for improving weight loss in people with SMI. Current evidence suggests such interventions appear as effective in people with SMI, if not more effective, than in other populations such as people with obesity. Therefore, nutrition interventions have great potential to improve the lives of people with SMI and may reduce their risk of chronic disease.

Future research should seek to replicate these findings in larger well conducted RCTs. There are also a number of further questions to explore including whether particular intervention content and other components of intervention delivery are associated with improved outcomes. In addition if interventions for unhealthy diet should be considered in isolation or within the context of other health risk behaviours.

References

1. Meader N, King K, Moe-Byrne T, Wright K, Graham H, Petticrew M, *et al.* A systematic review on the clustering and co-occurrence of multiple risk behaviours. *BMC Public Health* 2016; **16**:657
2. Noble N, Paul C, Turon H, Oldmeadow C. Which modifiable health risk behaviours are related? A systematic review of the clustering of smoking, nutrition, alcohol and physical activity ('SNAP') health risk factors. *Prev Med.* 2015; **81**:16-41.
3. Poortinga W. The prevalence and clustering of four major lifestyle risk factors in an English adult population. *Prev Med.* 2007;**44**:124–8.
4. Newton JN, Briggs ADM, Murray CJL, Dicker D, Foreman KJ, Wang H *et al.* Changes in health in England, with analysis by English regions and areas of deprivation, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet* 2015; **386**:2257-2274.
5. Dipasquale S, Pariente CM, Dazzan P, Aguglia E, McGuire P, Mondelli V. The dietary pattern of patients with schizophrenia: a systematic review. *J Psychiatr Res* 2013; **47**: 197-207.
6. Treuer T, Hoffmann VP, Chen AK, Irimia V, Ocampo M, Wang G, *et al.* Factors associated with weight gain during olanzapine treatment in patients with schizophrenia or bipolar disorder: results from a six-month prospective, multinational, observational study. *World J Biol Psychiatry* 2009; **10**: 729-40.
7. Pearsall R, Smith DJ, Pelosi A, Geddes J. Exercise therapy in adults with serious mental illness: a systematic review and meta-analysis. *BMC Psychiatry* 2014; **14**:117.
8. Dombrowski SU, Knittle K, Avenell A, Araujo-Soares V, Sneihotta FF. Long term maintenance of weight loss with non-surgical interventions in obese adults: systematic review and meta-analyses of randomised controlled trials. *BMJ* 2014; **348**:g2646.