Physical Activity and Mental Health and Well-Being

Active Oxfordshire Leadership Forum

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The case for physical activity is clear and robust

“Lack of activity destroys the good condition of every human being, while movement and methodical physical exercise save it and preserve it.”
- Plato (~400bc)
And a lot is already happening
Why does tackling inactivity matter

"If sport and physical activity was a drug, it would be regarded as a miracle"
Professor Sally Davies, Chief Medical Officer – Department of Health

1 in 6 deaths in the UK are caused by inactivity

Inactivity costs the UK economy: £7.4 billion

50% of adults meet the guidelines of 150 minutes a week of moderate intensity physical activity. For over 5/7 of them sport is part of the activity mix.

Area of highest impact

Health benefits

Weekly physical activity (min)

Oxfordshire Mind
for better mental health
'Physical inactivity is the fourth leading cause of death worldwide.'

THE LANCET
Physical Activity and Incident Depression: 
A Meta-Analysis of Prospective Cohort Studies

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Objective: The authors examined the prospective relationship between physical activity and incident depression and explored potential moderators.

Method: Prospective cohort studies evaluating incident depression were searched from database inception through Oct. 18, 2017, on PubMed, PsycINFO, Embase, and SPORTDiscus. Demographic and clinical data, data on physical activity and depression assessments, and odds ratios, relative risks, and hazard ratios with 95% confidence intervals were extracted. Random-effects meta-analyses were conducted, and the potential sources of heterogeneity were explored. Methodological quality was assessed using the Newcastle-Ottawa Scale.

Results: A total of 49 unique prospective studies (N=266,939; median proportion of males across studies, 47%) were followed up for 1,837,794 person-years. Compared with people with low levels of physical activity, those with high levels had lower odds of developing depression (adjusted odds ratio = 0.83, 95% CI = 0.79, 0.88; I² = 0.00). Furthermore, physical activity had a protective effect against the emergence of depression in youths (adjusted odds ratio = 0.90, 95% CI = 0.83, 0.98), in adults (adjusted odds ratio = 0.78, 95% CI = 0.70, 0.87), and in elderly persons (adjusted odds ratio = 0.79, 95% CI = 0.72, 0.86). Protective effects against depression were found across geographical regions, with adjusted odds ratios ranging from 0.65 to 0.84 in Asia, Europe, North America, and Oceania, and against increased incidence of positive screen for depressive symptoms (adjusted odds ratio = 0.84, 95% CI = 0.79, 0.89) or major depression diagnosis (adjusted odds ratio = 0.86, 95% CI = 0.75, 0.98). No moderators were identified. Results were consistent for unadjusted odds ratios and for adjusted and unadjusted relative risks/hazard ratios. Overall study quality was moderate to high (Newcastle-Ottawa Scale score, 6.3). Although significant publication bias was found, adjusting for this did not change the magnitude of the association.

Conclusions: Available evidence supports the notion that physical activity can confer protection against the emergence of depression regardless of age and geographical region.

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Fiterix
(aka going for a walk)

Triple Strength
Activity
Friendship
Nature
Scandal of premature mortality

Fig. 2. Average age of death by year for the schizophrenia and general population over three decades with intentional self-harm excluded as cause of death.
Sedentary behavior and physical activity levels in people with schizophrenia, bipolar disorder and major depressive disorder: a global systematic review and meta-analysis

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People with severe mental illness (schizophrenia, bipolar disorder or major depressive disorder) die up to 15 years prematurely due to chronic somatic comorbidities. Sedentary behavior and low physical activity are independent yet modifiable risk factors for cardiovascular disease and premature mortality in these people. A comprehensive meta-analysis exploring these risk factors is lacking in this vulnerable population. We conducted a meta-analysis investigating sedentary behavior and physical activity levels and their correlates in people with severe mental illness. Major electronic databases were searched from inception to April 2017 for articles measuring sedentary behavior and/or physical activity with a self-report questionnaire or an objective measure (e.g., accelerometer). Random-effects meta-analyses and meta-regression analyses were conducted. Sixty-nine studies were included (N = 35,682; 39.5% male; mean age 43.0 years). People with severe mental illness spent on average 476.0 min per day (95% CI: 407.3-545.4) being sedentary during waking hours, and were significantly more sedentary than age- and gender-matched healthy controls (p = 0.003). Their mean amount of moderate or vigorous physical activity was 38.4 min per day (95% CI: 32.0-44.8), being significantly lower than that of healthy controls (p = 0.002 for moderate activity, p = 0.001 for vigorous activity). People with severe mental illness were significantly less likely than matched healthy controls to meet physical activity guidelines (odds ratio = 1.5; 95% CI: 1.1-2.0, p = 0.001, P = 95.0). Lower physical activity levels and non-compliance with physical activity guidelines were associated with older age, being single, unemployment, fewer years of education, higher body mass index, longer illness duration, antidepressant and antipsychotic use. People with bipolar disorder were less physically active, yet spent most time being sedentary. Geographical differences were detected, and patients were more active than patients and those living in the community. Given the established health benefits of physical activity and its low levels in people with severe mental illness, future interventions specifically targeting the prevention of physical inactivity and sedentary behavior are warranted in this population.

People with SMI engage in

- Less moderate-vigorous PA
- More sedentary behaviour
- 50% less likely meet international recommendations of weekly PA
Reasons to be cheerful!

https://www.youtube.com/watch?v=AyirydKJ-Ms
Summary

• Physical activity, especially outdoors and in nature, improves everyone’s Mental Health and Wellbeing

• People with SMI often have low levels of activity and poor physical health

• Physical interventions WORK – depression, schizophrenia, bipolar and more – and are as close to Polypills as we have

• Prevention and early intervention is key
Exercise

• Call to action
• Where else can Oxfordshire lead the way?
• 5-10 year horizon
• Two groups:
  • General population
  • SMI