

What (*I think!?*) psychologists need to know about health economics

Prof. Frank Doyle

fdoyle4@rcsi.ie

EFPA Subgroup on Economics
SC Psychology in Health



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I am not an economist!

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Question?

- A relative of yours has just had a heart attack and is displaying symptoms of depression.
 - What is the best depression treatment for your relative?
 - What is the best treatment for similar people?
 - Says who?



Outline

- Using a population approach for mental health
- Basics of economics
- Evidence of cost-effectiveness of psychological approaches
 1. Prevention/Promotion for Mental Health
 2. Digital Mental Health Interventions
 3. Physical Activity/Exercise for Mental Health
 4. Psychotherapies for Mental Health
- Future considerations – cost-effective in comparison to....?
- Conclusions



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Background & population approach

Background

- WHO 2024 Resolution: Economics of Health for All
- Key Focus Areas: equality, sustainability, health, and well-being as indicators of country's success
 - Not solely GDP
- Importance of Mental Health: Significant social and economic burden, often overlooked in health policies
- Health spending as an **investment**



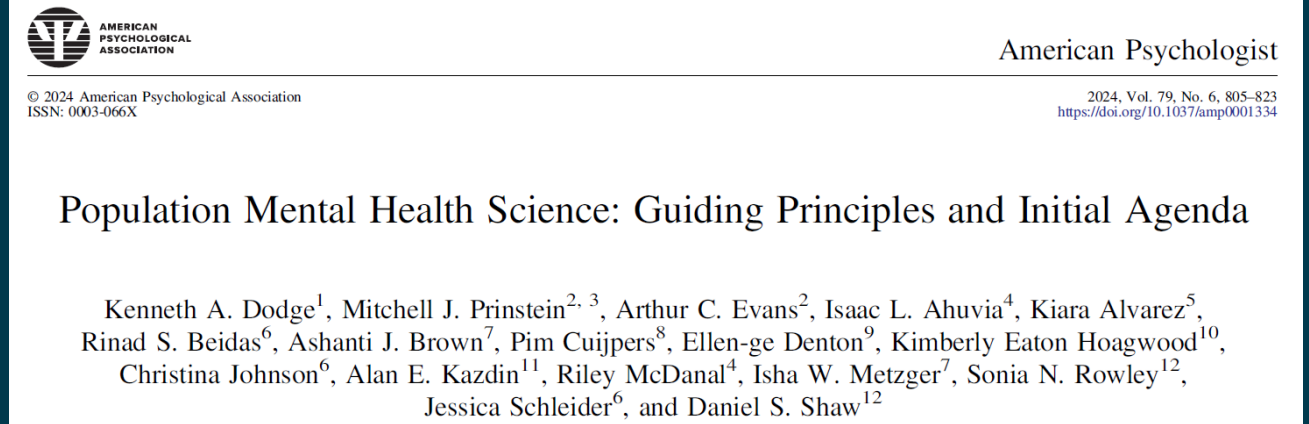
Some statistics...

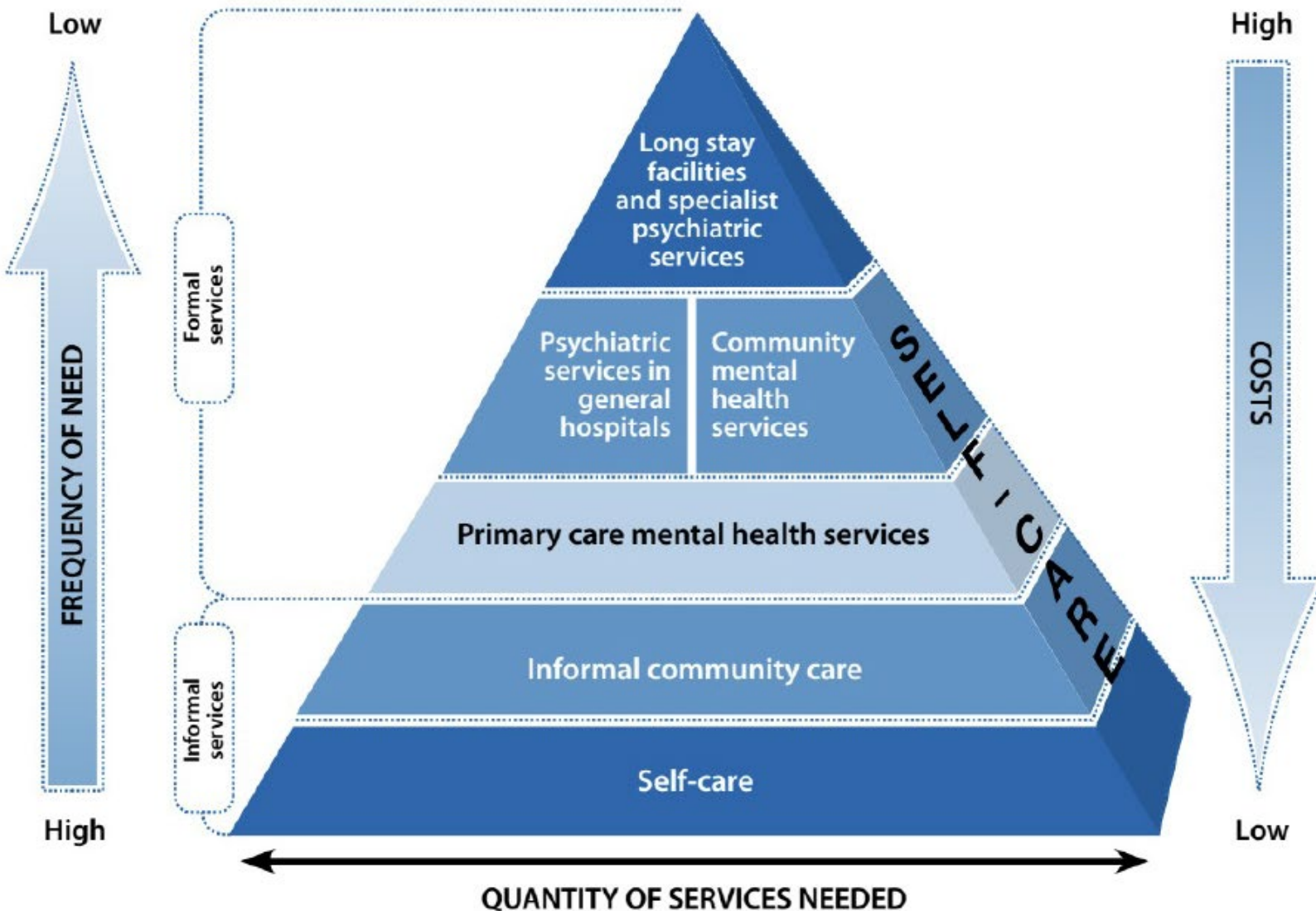
- 13.9% of world's population experienced mental disorders in 2021
 - 17.2% of total years lived with disability (DALYs) due to mental disorders.
- Since 1990, mental disorders have gone from 9th to 6th place in terms of impact on health loss.
- Growing disparities
 - Immigration, climate change, pandemic etc.
- >>> Simply too many for current services

APA Summit

- Need to expand our methods
 - Scale and implementation
 - Policy
 - Primary care for mental health

“...the goal and metric of accountability for psychological scientists and practitioners must change from improvement for individuals who are treated to improvement for the entire population.”





Pyramid approach

- WHO 2009

Population Mental Health Approach

- Policy Shift: From effectiveness to cost-effectiveness
- Reach of Interventions: Small effects with broad reach are more impactful
- Fidelity of interventions when used on a big scale (e-interventions)
- Evaluation Framework where efficacy is just one measure
- Interventions may be cost-effective, but start-up costs prohibitive

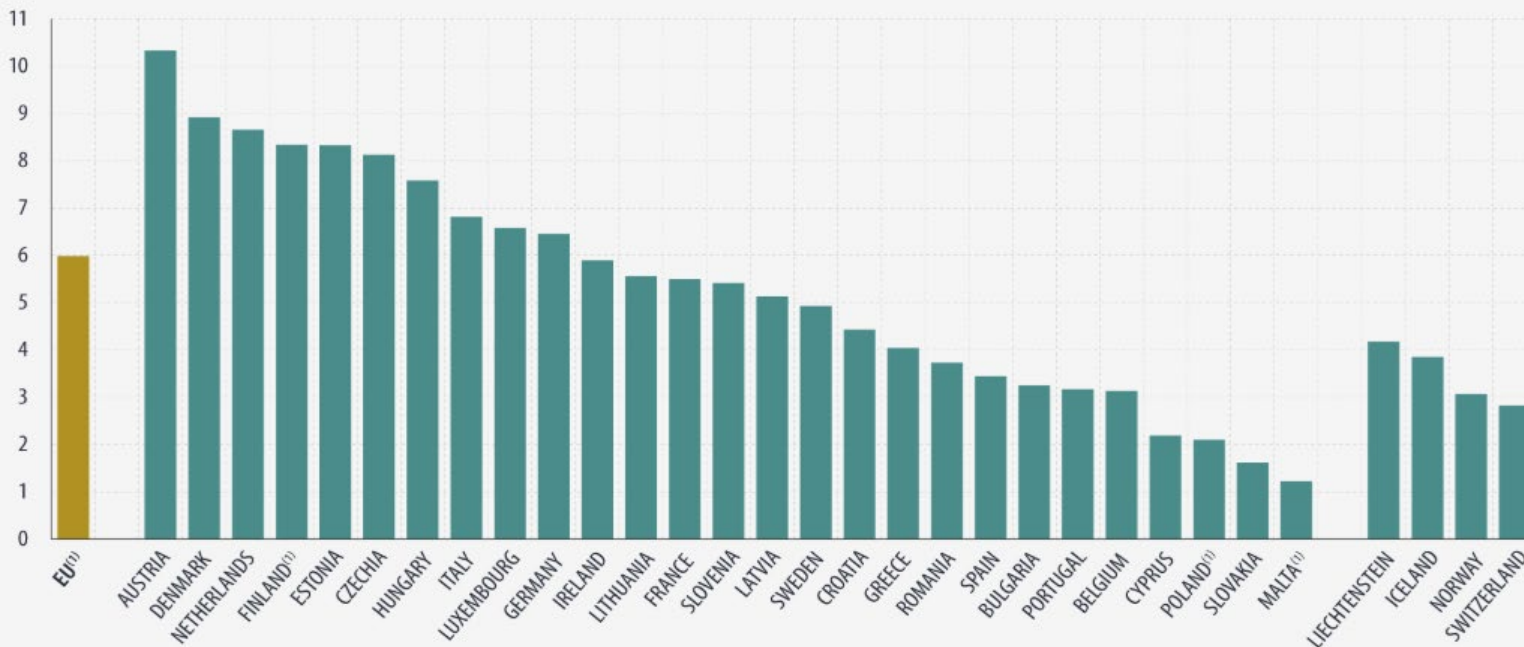
Example: Population Intervention Evaluation Framework

- RE-AIM
 - Reach – % who receive
 - Efficacy – effectiveness
 - Adoption – % of settings adopting, also representativeness
 - Implementation – fidelity ('voltage')
 - Maintenance – >2 years

Preventive care: challenge?

- Average 6% of EU healthcare expenditure is on prevention!

Preventive healthcare expenditure as a share of current expenditure on healthcare, 2021
(%)



⁽¹⁾Provisional.

eurostat 

Health Economics: Core Principles & Methods

- Scarcity
- Opportunity Cost
- Efficiency
- Equity
- **Cost-Effectiveness Analysis (CEA)**
- Cost-Benefit Analysis (CBA)
- Cost-Utility Analysis (CUA)
- **Budget Impact Analysis**

<https://www.healthknowledge.org.uk/public-health-textbook/medical-sociology-policy-economics/4d-health-economics/principles-he>



Economic impact of mental health issues

- UK:
 - Autism estimated to cost £42.7–£44.2 billion
 - Estimated costs of not treating ADHD £17 billion
- US:
 - Costs for adults with MDD increased by 37.9% from \$US236.6 billion to 326.2 billion (2010–2018)
- International:
 - Self-harm (2019) costs: 34 million DALYs lost, US\$639 billion
 - Poor mental health drives economic costs of up to 4% of GDP in OECD countries
 - Mental health cost higher than somatic disease costs

<https://www.autistica.org.uk/our-research/your-research-priorities>

EMBO reports 2016(17):9; PharmacoEconomics (2021) 39:653–665; Lancet 2024; 404: 1445–92; OECD 2025



Mental Health Economics: Special Considerations

- High direct costs: health care for affected individuals and health care for families, caregivers who endure substantial stress
- High indirect costs: lost productivity, caregiver burden, early retirement, death, social services costs
- Intangible costs: pain, stigma, etc.
- Potential for long-term benefits to be underestimated?



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Cost-effectiveness of mental health interventions

Key Areas for Policy Consideration

- 1. Prevention/Promotion for Mental Health
- 2. Digital Mental Health Interventions
- 3. Physical Activity/Exercise for Mental Health
- 4. Psychotherapies for Mental Health

1. Cost-Effectiveness of Prevention/Promotion

- Prevention and promotion improve mental health outcomes
- Challenges: Lack of evidence, awareness, and sustainable implementation; but improvement through the last decade
- Most prevalent studies on:
 - prevention of depression and/or anxiety,
 - promotion of mental health and well-being
- Most studies consistently report that mental health prevention and promotion activities are cost-effective or cost-saving

Examples: Cost-Effectiveness of Prevention/Promotion

- Le (2021) – systematic review of mental health prevention and promotion
 - 65 studies from 2008-2020
 - Children & Adolescents:
 - Screening plus psychological interventions (e.g. CBT) at school
 - Parenting interventions for mental health promotion
 - Older adults: inconclusive
 - Targeted prevention likely to be cost-effective vs. universal prevention
 - However, variable study quality...

2. Digital Mental Health Interventions

- Umbrella term for approaches using technology
 - Apps, wearables, telehealth, online programs
- Advantages: accessibility, fidelity, cost-efficiency, especially in underserved areas
- Anxiety and depression: technology usage is a cost-effective way to enhance the efficiency of CBT treatment
- Challenges: Long-term engagement and integration into healthcare systems

Example: Cost-effectiveness of Digital Mental Health Interventions

- Mitchell et al (2021) systematic review of internet-based anxiety/depression interventions
 - 13 anxiety, 20 depression studies
 - Generally high-quality studies
 - 11/11 studies with cost-effectiveness analysis concluded that intervention was cost-effective
- However:
 - heterogenous cost calculations
 - development costs largely omitted
 - Studies were all from high-income countries

3. Physical Activity (PA) Interventions

- Benefits: Improved physical and mental health, but research limited
- No cost-effectiveness reviews of PA for mental health specifically
- Generally, most cost-effective approaches for PA:
 - school-based interventions for children and adolescents
 - pedometers for adults
 - fall prevention programs for older people
 - mass media campaigns – inconclusive
 - environmental restructuring for the general population
- Successful Models: Exercise referral schemes, community-based programs

Example: Physical Activity Interventions

- Murphy et al (2012) – Wales National Exercise Referral Scheme
 - 2160 inactive participants with elevated CHD risk factors and psychological distress
 - Randomised to usual care or NERS
 - 16-week tailored programme of exercise supervised by a qualified exercise professional
 - Significantly lower anxiety and depression
 - Incremental cost-effectiveness ratio was £12 111 per QALY
 - UK threshold of £20,000
- However, conflicting results also found (UK studies)

4. Psychotherapies

- Established Cost-Effectiveness: **Strong evidence** for both short-term and long-term therapies
 - Short-term therefore more cost-effective
 - But not suitable for all/complex cases
- Group therapies are particularly cost-effective
- Digital therapy reduces costs and improves reach
- Behavioural risk factors can also be addressed in chronic disease management programmes
 - Addressing downstream costs

Example: Psychotherapies

- Thase et al. (2020) – standard CBT versus computer assisted CBT
 - 144 patients with MDD
 - 16 weeks of standard CBT (up to 20 sessions)
 - Good Days Ahead program (including up to 5.5 hrs of therapist contact)
 - Non-inferiority demonstrated
 - HAM-D scores of 9.2 v 8.9 at 16 weeks
 - Remission 41.6% v 42.9%
 - Computer-assisted CBT US\$945 cheaper per patient
- Can more than double access to treatment



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Future considerations: Some (Irish) food for thought

Costs of new drugs?

- Policymakers under pressure to fund more drugs as populations age
- Estimating new drug development costs is controversial, but estimated \$1 billion to \$2.8 billion
 - 80% funded by taxpayers
 - (2019 prices; e.g., Light & Lexchin, 2012; Simoens & Huys, 2021).
- Estimated that 50-90% of drugs have equal/lower efficacy than existing compounds
 - (e.g., Barnes et al., 2015; Kim & Prasad, 2015; Light & Lexchin, 2012; Morres et al., 2019; Naci et al., 2015; Schnog et al., 2021; Wieseler et al., 2019).
- Scarcity & Budget Impact: Compares favourably to psychological approaches?

Example: depression

- Antidepressants have similar efficacy to psychotherapies (e.g. Cuijpers et al., 2020; Heissel et al., 2023)
 - Efficacy of antidepressants can vary (Cipriani et al, 2018) as can their physiological and cardiometabolic effects (Pillinger et al, 2025)
 - Antidepressant de-prescribing seen as an urgent international issue (Brisnik et al, 2024)
- Exercise also a proven depression treatment (e.g. Heissel et al., 2023)
- In Ireland, treatment provision relies largely on antidepressants:
 - 2023: 2 antidepressants 18th and 19th most commonly prescribed medicines
 - Excessive waiting lists for any psychological assessment/intervention – 59.9% seen within 12 months (HSE 2023)

"The left hand doesn't know what the right hand is doing"? Ireland

- National Centre for Pharmacoeconomics
 - HTAs for pharmaceuticals
 - (Cost-)Effectiveness
- Legal: *Health (Pricing and Supply of Medical Goods) Act 2013*
- Threshold: €45,000 per QALY
- Health Information and Quality Authority
 - HTAs for medical devices, non-pharmacological interventions
 - (Cost-)Effectiveness
- Legal: *Health Act (2007)*
- Threshold: €45,000 per QALY

Food for thought.....

- For what we see now as largely one condition....we have:
 - Different technologies
 - Different professions
 - Different settings
 - Different costs
 - Ongoing, Start-up, Other
 - Different legislation
 - Different budgets and policymakers

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Applying Irish costs to international data suggests....

SYSTEMATIC REVIEW/META-ANALYSIS

Hybrid Systematic Review and Network Meta-Analysis of Randomized Controlled Trials of Interventions for Depressive Symptoms in Patients With Coronary Artery Disease

Frank Doyle, PhD, Kenneth E. Freedland, PhD, Robert M. Carney, PhD, Peter de Jonge, PhD, Chris Dickens, PhD, Susanne S. Pedersen, PhD, Jan Sorensen, PhD, and Martin Dempster, PhD

ABSTRACT

Objective: Depression is common in patients with coronary artery disease (CAD) and is associated with poor outcomes. Although different treatments are available, it is unclear which are best or most acceptable to patients, so we conducted a network meta-analysis of evidence from randomized controlled trials (RCTs) of different depression treatments to ascertain relative efficacy.

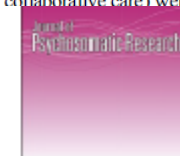
Methods: We searched for systematic reviews of RCTs of depression treatments in CAD and updated these with a comprehensive search for recent individual RCTs. RCTs comparing depression treatments (pharmacological, psychotherapeutic, combined pharmacological/psychotherapeutic, exercise, collaborative care) were included. Primary outcomes were acceptability (dropout rate) and change in depres-



Contents lists available at ScienceDirect

Journal of Psychosomatic Research

journal homepage: www.elsevier.com/locate/jpsychores



Depression interventions for individuals with coronary artery disease – Cost-effectiveness calculations from an Irish perspective

Samira Barbara Jabakhanji ^{a,*}, Jan Sorensen ^b, Robert M. Carney ^c, Chris Dickens ^d, Martin Dempster ^e, Jonathan Gallagher ^f, Isabela Caramlau ^g, Frank Doyle ^h



Incremental Cost per Remission (ICER)

Intervention	NNT	Intervention cost 8 weeks treatment €	Incremental cost per remission (8 weeks) €	ICER (Low/high cost scenario; 8 weeks) €
Pharmacotherapy	3.5	215.66	750.50	695.80
Psychotherapy	7.0	448.43	3116.58	519.43**
Collaborative care	9.9	501.43	4964.21	4964.21
Exercise*	2.6	201.65	526.30	2446.57***

*Exercise: 5 per group

** assumes group psychotherapy (6 per group)

***assumes individual exercise sessions instead of group



We tried to do
this for
depression in
people with
cancer
also....however

- 70 RCTs
- 6831 participants
- NMA not possible due to risk of bias (1/70 low RoB) and integrity concerns (10/70 no concerns)

Practical Implications for Psychologists

- Collaborate with health economists
- Include cost-effectiveness in research proposals
- Conduct higher quality research!
- Advocate for efficient interventions – but the **policy context** is vital
 - Costs may not be generalisable across countries/regions
- Psychological interventions for mental health are generally cost-effective, but start-up costs may be (perceived as) prohibitive

Conclusion

1. Prevention/Promotion for Mental Health
2. Digital Mental Health Interventions
3. Physical Activity/Exercise for Mental Health
4. Psychotherapies for Mental Health

- Mental Health Investments: Cost-effective at population level, particularly for targeted prevention and digital interventions
- Recommendations:
 - Expand digital psychotherapies, short-term psychotherapies and group formats
 - Add psychotherapies to chronic disease management programmes
 - Increase access to targeted prevention and promotion programs
- Future Research: Continue evaluating physical activity interventions, optimize digital delivery

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Thank you for listening

fdoyle4@rcsi.ie

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