

Prevention

Searching through the hype for the evidence

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agenda

- Prevention is seen to be desirable
- Prevention has a troubled history in terms of showing it can deliver results
- Does prevention deliver results?
- Where to from here?



Prevention is seen to be desirable



Apparently they're better than The Cure

“Prevention is better than cure”

Epictetus
55 AD - 135 AD

Prevention has a troubled history in terms of showing it can deliver results



"The overall landscape of public health approaches to prevention consists of a vast amount of time, energy, and in some case money, being spent on programs that either have no demonstrated efficacy, or in the worst instances, have actually been shown not to work."

Black Becker, Plasencia, Kilpela, Briggs, & Stewart, 2014

Drug Abuse Resistance Education

- widely disseminated in USA from early 1980s with no prior testing associated with \$1 billion of costs
- in 1998 evidence emerged to show the program was ineffective

Rosenbaum & Hanson, 1998

Media Smart UK body image lesson

- Launched in 2011 to align with UK government Body Confidence Campaign
- Been downloaded 1500 times
- No benefit over the wait list control condition for all body image variables
- the control group outperformed the lesson in weight esteem for boys.

Diedrich et al, 2013

The desire to do something positive and a positive outcome should not be conflated

Dove self-esteem project/ Body Think: No evidence for effectiveness

*Richardson, et al., 2009**

* Dove is now adopting an evidence based approach, examining Free Being Me, targeting 7-14 year old girls (1- and 5-session program)

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All this talk about fashion models and extreme dieting. How did our idea of beauty become so distorted?

evolution

Can we change your look completely?

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"but they really liked it"

Atkinson & Wade, in press, IJED

But it was the mindfulness group that was significantly more effective across 5 outcome variables at 6-month follow-up relative to controls

Students receiving dissonance were only significantly lower than controls on one variable

Outcome Variable	Mindfulness	Dissonance
enjoyment	~2.5	~2.5
attention paid	~3.0	~3.5
understanding	~3.5	~4.5*
effectiveness	~2.5	~2.5
likely to use	~2.0	~2.5*

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Successful dissemination is an issue

Stice et al, in press, BRAT

The gold standard prevention program for young, body-dissatisfied women is Body Project

Only 1/8 (13%) universities who received training and supervision and were part of a research trial maintained the program at 2-year follow-up

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Successful dissemination is an issue

Ringwalt, Hanley, Vincus, Ennett, Rohrbach et al, 2008, J Primary Prevention

Of 6 curricula rated as effective for prevention of substance use by the Substance Abuse and Mental Health Services Administration

Only 10.3% of 1392 schools reported using any of them

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Outcome depends on the type of prevention

Universal
targeted to the general public or a whole population group that has not been identified on the basis of individual risk. The intervention is desirable for everyone in that group.

Selective
targeted to individuals or to a subgroup of the population whose risk of developing mental, emotional, or behavioural disorders is significantly higher than average e.g., girls.

Indicated
targeted to high-risk individuals who are identified as having minimal but detectable signs or symptoms that foreshadow mental, emotional, or behavioural disorder e.g., girls with body image problems

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impact

Indicated and selective approaches produce stronger effects than universally implemented programs

Even small effects in universal programs can have a substantive effect if they operate on a population level

Cuijpers, 2003, Am J Psychiatry

to show that a prevention program has reduced the incidence of new cases of a mental disorder by 30%

Universal

- Over 10,000 subjects needed in each condition

Selective

- 671 subjects needed in each condition

Does prevention deliver results?



Depression

Cuijpers et al., 2008, Am J Psychiatry

Reduction of the incidence of depressive disorders by 22% in experimental vs control groups in 19 studies

- The number needed to treat to prevent one case of depressive disorder was 22
- Moderator analyses revealed no systematic differences between universal, selective, or indicated prevention

Prevention of new cases of depressive disorders does seem to be possible

School based: depression/anxiety

Corrieri et al., 2013, Health Promotion International

Review of 28 studies
75% universal

- 65% effective for depression
- 73% effective for anxiety
- small effect sizes
- 0.12 and -0.29 respectively

Effective means lower scores of the intervention group compared with the control after post-intervention OR follow-up

School based Australian studies: depression/anxiety

Nehmy, 2010

Depression

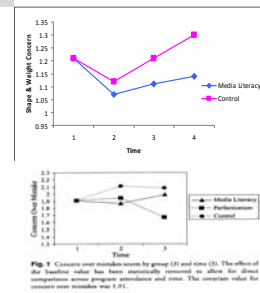
19 studies; 74% universal

- 47% no effect
- 42% treatment effect
- 10% prevention effect

Anxiety

9 studies; 67% universal

- 11% no effect
- 67% treatment effect
- 22% prevention effect



FRIENDS: gold-standard CBT approach for universal prevention of anxiety

Feelings	Recognising/responding to own feelings and feelings of others: acceptance and choosing positive coping behaviours
Remember to relax	physiological signs of emotions: diaphragmatic breathing, progressive muscle relaxation, massage, relaxation imagery
I can try my best	attention training (awareness in present moment, focusing on positive things in our environment) and cognitive restructuring
Explore solutions	Coping Steps, Problem Solving, Friendship Skills, Building Confidence, Conflict Resolution, Role Models, Support Teams
Now reward self	Self-reward focusing on Interpersonal rewards
Do it everyday	Skills are most effective when practised every day
Smile!	Stay calm, and talk to support teams; Identification of future challenges and planning strategies

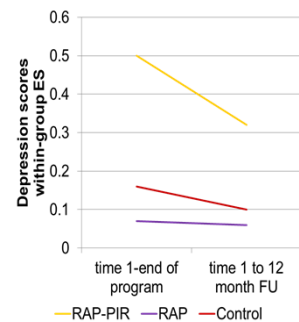
Depression

- Resourceful Adolescents Program (RAP) + peer interpersonal relatedness (PIR)
- Adolescents coping with emotions (ACE)

Shocket et al., 1997

Rose et al., 2014

Hannan, Rapee, & Hudson, 2000



Perfectionism

Not a focus on symptoms but the underlying risk factor

Intended to be "transdiagnostic": impact on negative affect and thus reduce risk for a variety of problems

- Anxiety
- Depression
- Disordered eating
- Self-harm
- Stress



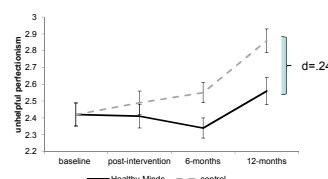
1	costs of unhelpful perfectionism; finding benefits in mistakes/failure
2	thinking errors associated with perfectionism
3	influences (media, social media, family, schools, and friends) in promoting perfectionism; becoming a 'social activist'
4	evolutionary function of emotion; choosing helpful behaviours
5	helpful thinking with a focus on flexibility
6	procrastination, over commitment, and gratitude
7	How self-criticism undermines performance, self-compassion
8	Personal values; continuing use of skills learnt

Evidence

Nehmy & Wade, BRAT, 2015

With Year 8-10 boys and girls

- At 6-month follow-up intervention group had significantly lower perfectionism, self-criticism and NA than controls
- Differences in perfectionism were retained at 12-months



Mindfulness

Kuyken et al., 2013, B J Psychiatry

3-month follow up, school based, 12-16 years

variable	Adjusted mean difference (95% CI)	p
Well being	3 (0 to 6)	0.05
Stress	-1.8 (-3.6 to 0)	0.05
Depression	-1.4 (-2.3 to -.05)	0.005



1	Puppy training	Training attention Also benefits for learning via improved attentional capacity	Mindfulness practices <ul style="list-style-type: none"> switching attention to different parts of the body Two minute breathing attention
2	Turning towards calm	The David Attenborough attitude – curiosity, friendliness and patience, allowing them to be as they are, creating respectful space	Mindfulness practices <ul style="list-style-type: none"> "Feet on floor, butt on chair" body scan technique
3	Recognising worry	The tricks our mind plays that lead to stress and anxiety. Techniques to deal with them.	Mindfulness practices <ul style="list-style-type: none"> 7/11 breathing (slowing down the outbreath)
4	Being here now	Switching out of autopilot and being fully present in our lives.	Mindfulness practices <ul style="list-style-type: none"> Mindful eating portable quick method to scan breathing/feet to help switch brain from thinking mode to sensing mode)
5	Moving mindfully	Using mindfulness in sport or performance; mindful awareness of everyday activities	Mindfulness practices <ul style="list-style-type: none"> Samurai walking (awareness of body during slow walking)
6	Stepping back	A new way of relating to our thoughts	Mindfulness practices <ul style="list-style-type: none"> Watching thought traffic How to stay at the bus stop and get off thought buses
7	Befriending the difficult	Recognising our own stress signature; respond mindfully rather than reacting habitually	Mindfulness practices <ul style="list-style-type: none"> Making friends with the feelings of stress
8	Pulling it all together	How and why to use for future	Mindfulness practices <ul style="list-style-type: none"> Write a letter of advice to self with how to apply these new skills to manage things that matter personally

replication


294 students (mean age of 13.64 years), evenly split across gender, broad range of socioeconomic status

Facilitator completed 4 day Teach.b course in Oxford

Compared to control, no improvements on any outcome measures at post-intervention or 3-month follow-up

Johnson, Burke, Brinkman, & Wade, in preparation

only 8% of participants reported doing home practices once a week or more compared to 21% of UK sample: 2nd trial has 14-35% compliance



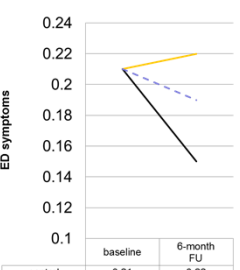
Mindfulness applied to body image in older female adolescents

Three classroom sessions at 6-month follow-up compared to control:


Mindfulness condition demonstrated significant reductions in weight and shape concern, dietary restraint, thin-ideal internalisation, eating disorder symptoms and related psychosocial impairment

Dissonance condition showed significant reductions in sociocultural pressures


Atkinson & Wade, in press, IJED



	baseline	6-month FU
control	0.21	0.22
mindfulness	0.21	0.15
dissonance	0.21	0.19





1	Internal experiences relating to their bodies and common coping strategies; Effects of avoidance and rumination	1. Identify personal coping strategies and associated cost 2. Daily practice of 3 minute breathing space 3. Practicing awareness and acceptance while undertaking a routine task
2	Thoughts and feelings are just mental events that come & go; Experiential exercise to acknowledge/accept thoughts about a personal unpleasant body experience	1. 3 minute breathing in response to distressing thoughts about their body 2. Present moment awareness with a pleasant or useful body experience
3	Cons of body-related judgement and self-criticism; Guided experiential exercise: a non-judgemental and accepting stance while visualising a scenario in which they commonly experienced body-related concern	1. Continue 3 minute breathing space practice 2. Top 5 list of acceptance statements when body dissatisfied 3. Practice awareness and acceptance when viewing self in full-length mirror



Eating disorders

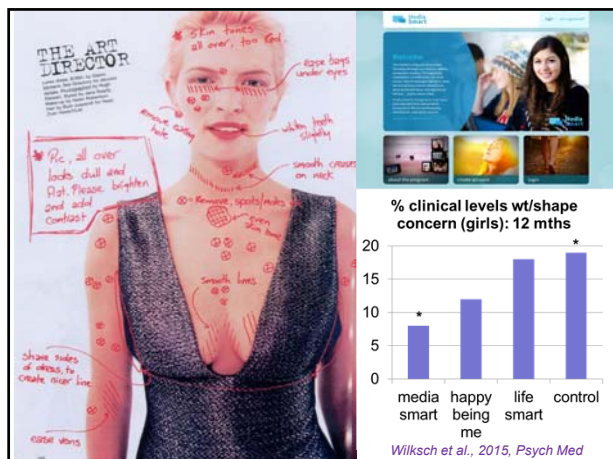
Cause for optimism as evidence has accumulated over the last 15 years





UNIVERSAL PREVENTION	Degree to which evaluated	Robustness at follow-up (follow-up period)
Broad approach		
Influence of peers	Low	Promising (3-month)
Media literacy	Substantial	Promising (30-month)
Self-esteem	Low	Medium (12-month)

Yager et al, 2013, Body Image



SELECTIVE/INDICATED	Outcome	For whom?
CBT: psycho-education on healthy eating	Healthy Weight: reduced ED onset relative to controls through 3-year follow-up (7% vs 15%); 60% reduction over the 2-year follow-up <i>Stice et al., 2012, 2013</i> Student Bodies: prevent onset of any ED over 2-year period if BMI ≥ 25 , compared to 11.9% of the control group who developed an ED <i>Taylor et al., 2006</i>	Young women with body image concerns
Cognitive dissonance related to thin ideal	Body Project: 60% reduction in DSM-IV EDs over a 3-year follow-up period <i>Stice et al., 2012</i>	Females ≥ 16 years with body image concerns

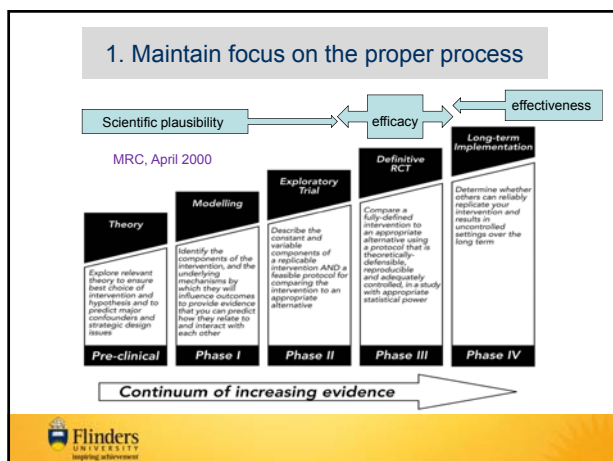
The state of play promising, but

- In universal prevention, >12-month follow-up is rare, no examination of impact on case status
- Decreased effect sizes when task shifting to "in-house" providers or online applications
- Not enough independent replications
- Competition in the market place, requires greater focus on transdiagnostic outcomes
- Dissemination: How do we maintain programs in real life settings?

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Where to from here?

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2. Optimize prevention: inform with neurobiology

Recovery in AN associated with

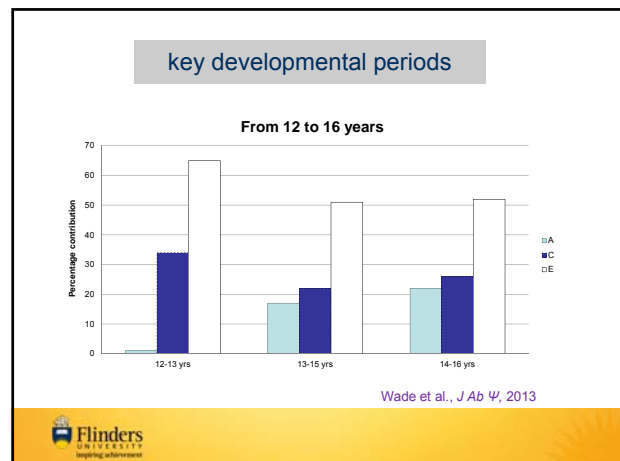
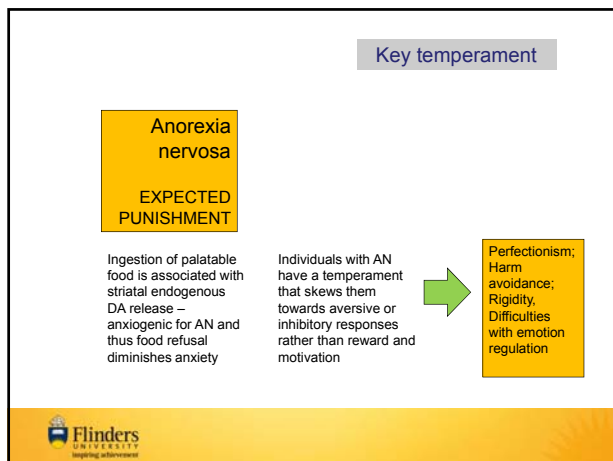
- increased brain serotonin (5-HT)
- decreased brain dopamine (DA)

Kaye et al., 2013

DA: Brain scans showing decreased dopamine levels in AN patients.

5-HT: Brain scans showing increased serotonin levels in AN patients.

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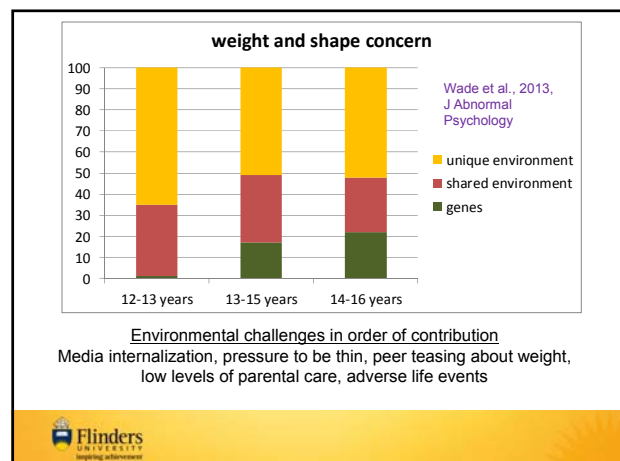


key environments

Study	GxE and disordered eating
van Strien et al 2010	DRD2 genotype x maternal/paternal psychological control → emotional eating
Karwautz et al., 2001	5-HTTLPR x attachment experiences → AN
Suisman et al., 2011	G x parental divorce → body dissatisfaction
Markus et al., 2012	5-HTTLPR x stress → obesity
Stoltenberg et al., 2012	5-HTTLPR x childhood trauma → eating problems
Akkerman et al., 2012	5-HTTLPR x adverse life events → eating problems
Klump et al., 2007	G x puberty (estrogen) → disordered eating
Raccine et al., 2011	5-HTTLPR x dietary restraint → binge eating

E a r l y s t r e s s

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3. Key transdiagnostic targets

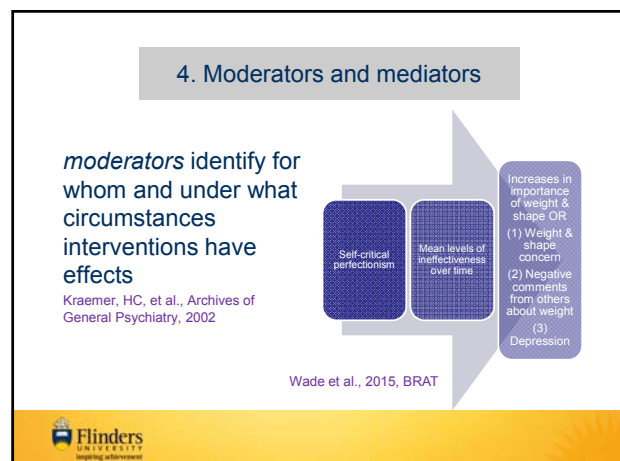
High rates of comorbidity

Causes and risk factors are shared across and between psychological disorders

Evidence for common, 'higher-order' pathological mechanisms

- 'unified treatment of emotional disorders': cognitive appraisal, tolerance of emotional states, exposure
Barlow et al., 2011; Wilamowska et al., 2010
- depression, anxiety, and bulimia nervosa commonly share several characteristics including: categorical (black-and-white) thinking, avoidant coping, low distress tolerance, a general negative cognitive bias, social comparison, and clinical perfectionism

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5. Strengthen universal effects

Pace interventions over
time with booster sessions

Homework compliance

Parental involvement

School environment



Questions?