

**The role of physical activity in  
supporting resilience to, and recovery  
in and from, mental health difficulties,  
with specific reference to a local mind  
association boxercise class**

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# Reflexivity and Bias

## Where am I coming from?

- Education and training (PGCE, MSc – BMus, MA, Cert Coaching)
- Professional and voluntary roles; specialist teacher, communication and well-being consultant; coach; community advocate)
- Mental health experience (depression; OCD; psycho-dynamic psychotherapy; CBT; MBCT; existentialist therapy; SSRIs)
- Personal use of 'positive psychology' activities (mindfulness; gratitude; character strengths; physical activity)
- Personal use physical activity (running with an athletics club and Parkrun)
- Personal philosophy (existential, phenomenological, embodied, inter-subjective psychology)
- Personal politics (red-green 'neo-Marxism' and 'deep environmentalism')
- Personal spirituality (atheist Buddhist)

So ... be alert to my potential (un)conscious biases!

# ***Mens sana in corpore sano***

(a healthy mind in a healthy body)

You should pray for ***a healthy mind in a healthy body***.

Ask for a stout heart that has no fear of death,

and deems length of days the least of Nature's gifts

that can endure any kind of toil,

that knows neither wrath nor desire and thinks

the woes and hard labours of Hercules better than

the loves and banquets and downy cushions of Sardanapalus

What I commend to you, you can give to yourself;

For assuredly, ***the only road to a life of peace is virtue***.

Juvenal (10.356-64)

# Popular discursive formations (1)

Physical activity includes  
differently-abled people,

and people from black and  
ethnic minority communities,

but only when they are  
engaged in elite,  
competitive sport?

# Popular discursive formations (2)

Physical activity is  
expensive.

Physical activity is  
narcissistic.

# Popular discursive formations (3)

Physical activity is a  
form of health fascism  
and should be  
ridiculed?

# ***'Mens Sana in Thingummy Doodah'***

*'Come on, we're going jogging!'*

*'Lil, I thought you'd dropped all that?'*

*'We're not going far, come one!'*

[Jogging out of the health farm]. *'How much further?'*

*'Onward and upward.'* [Jogging up the hill into the Cafe]

*'So that's sausage, egg and chips, sausage beans and chips, double eggs and chips twice, four teas and four rounds of bread and butter; white or brown?'*

*'White, with additives.'*

Wood, 1989, *Victoria Wood Presents*, Episode 1, 'Mens Sana in Thingummy Doodah'



# Perspectives from phenomenological philosophy/psychology

- Sartre states that '***I am my body***, not that I *have* a body' (Moran, 2000, p. 389)
- Merleau-Ponty emphasises **our *embodied relationship with the world*** (Smith et al., 2009, p. 18).

# Conceptual issues.

In the domain of physical activity and mental health are the concepts of:

- *resilience* to mental health difficulties
- *recovery in* mental health difficulty (and the distinction between *recovery in* and *recovery from* mental illness) (the recovery model of mental health practice) (Davidson, O'Connell, Tondora, Lawless, & Evans, 2005)
- a distinction between the continua of '*flourishing*' ↔ '*languishing*' and '*mental illness*' ↔ '*no mental illness*' (the dual continua model of mental health) (Keyes, 2005)

distinct, overlapping or co-terminus?

# Recovery model of mental health

## *Common Elements of Recovery*

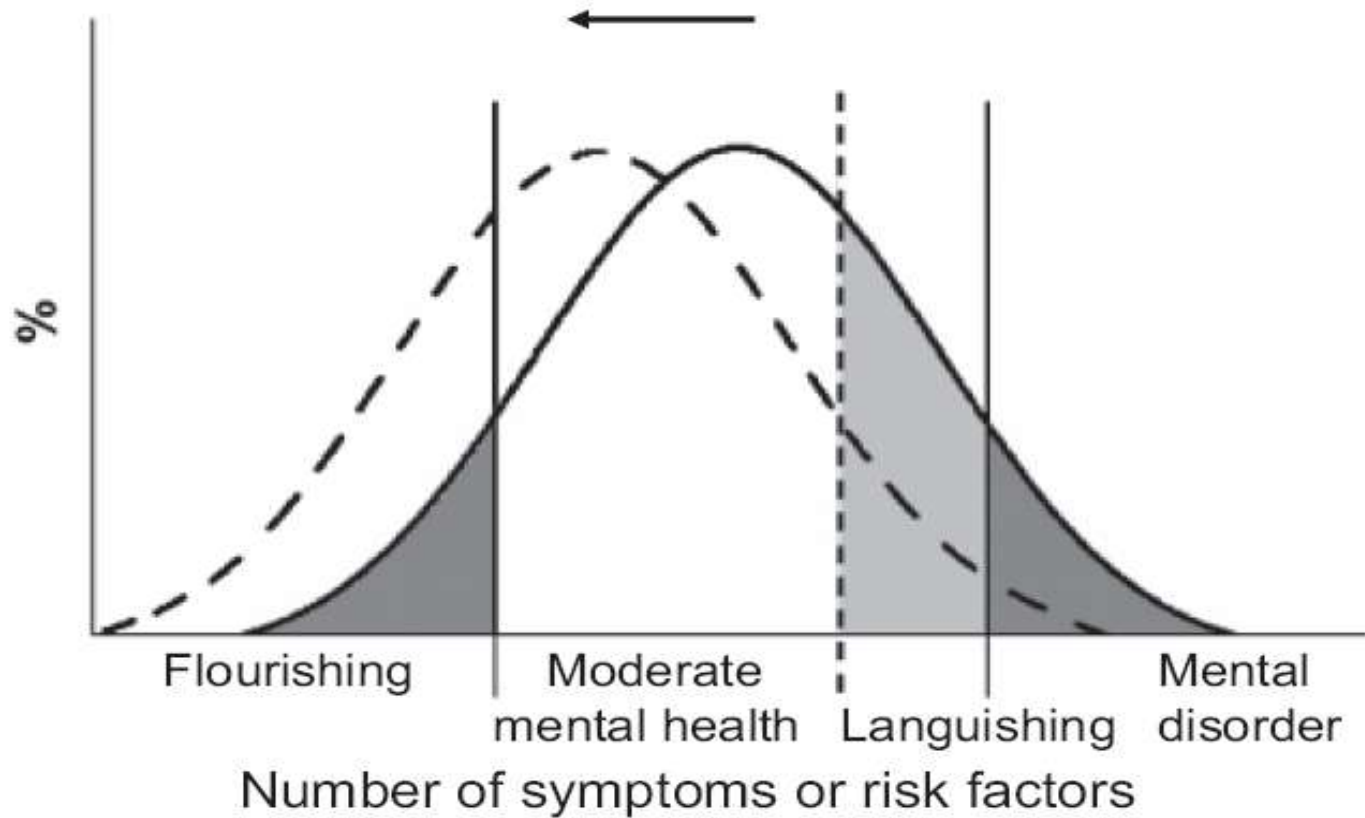
(summarised Davidson, O'Connell, Tondora, Lawless, & Evans, 2005, p. 484):

- *Renewing hope and commitment*
- *Redefining self*
- *Incorporating illness*
- *Being involved in meaningful activities*
- *Overcoming stigma*
- *Assuming control*
- *Becoming empowered and exercising citizenship*
- *Managing symptoms*
- *Being supported by others*

# Dual continua model of mental health

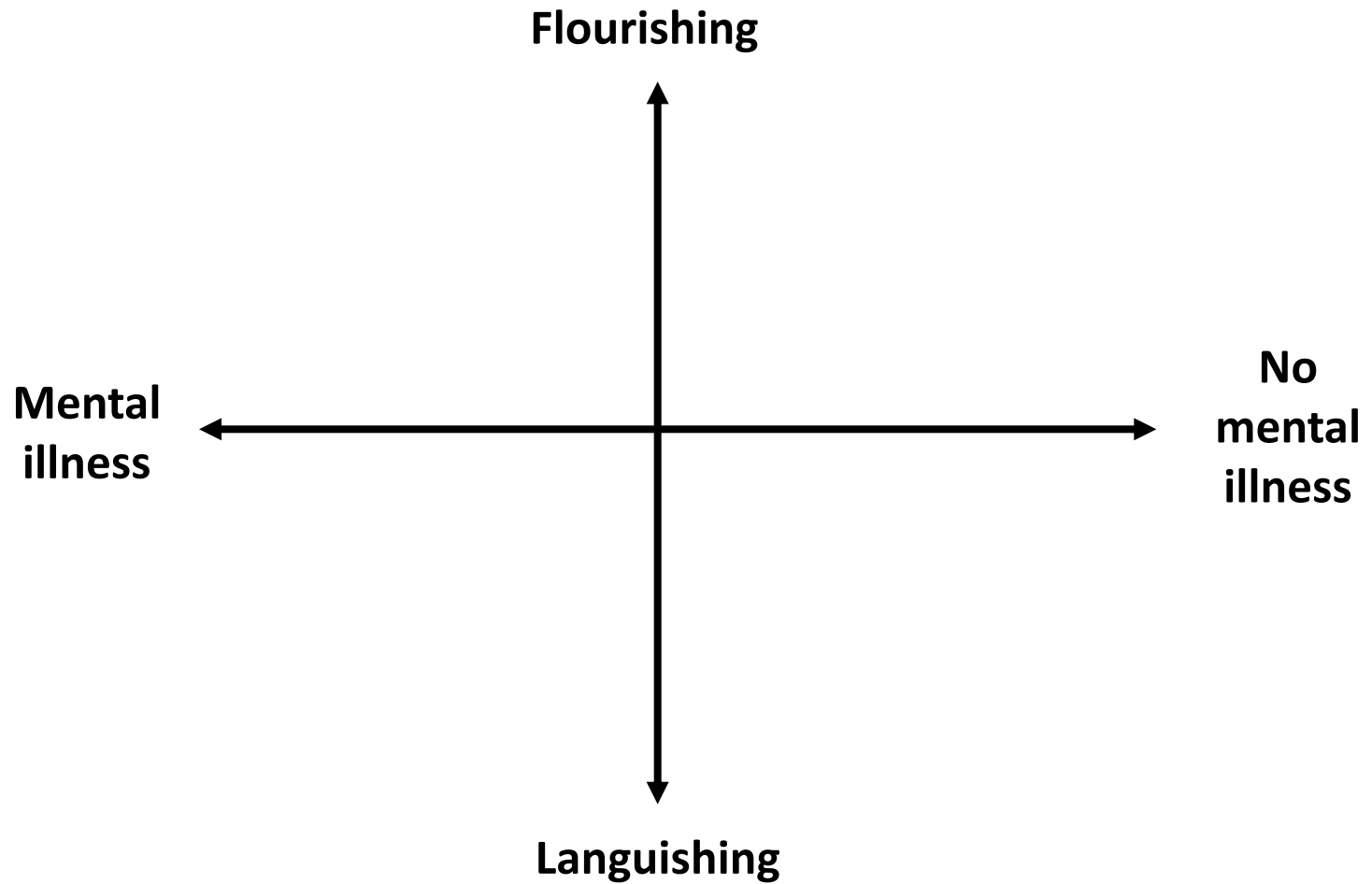
- Mental health  $\neq$  (just) the absence of mental illness?
- Is good mental health flourishing - on a single continuum of mental health/illness? (Huppert, 2006)
- Or are there two continua:
  - the presence of mental ill health  $\Leftrightarrow$  absence of mental ill health, and
  - languishing  $\Leftrightarrow$  flourishing? (Keyes, 2005)

# Single continuum model of mental health/mental illness



(Huppert, 2008) (diagramme: Thompson, 2012)

# Dual continua model



(Keyes, 2005) (slide: Thompson, 2012)

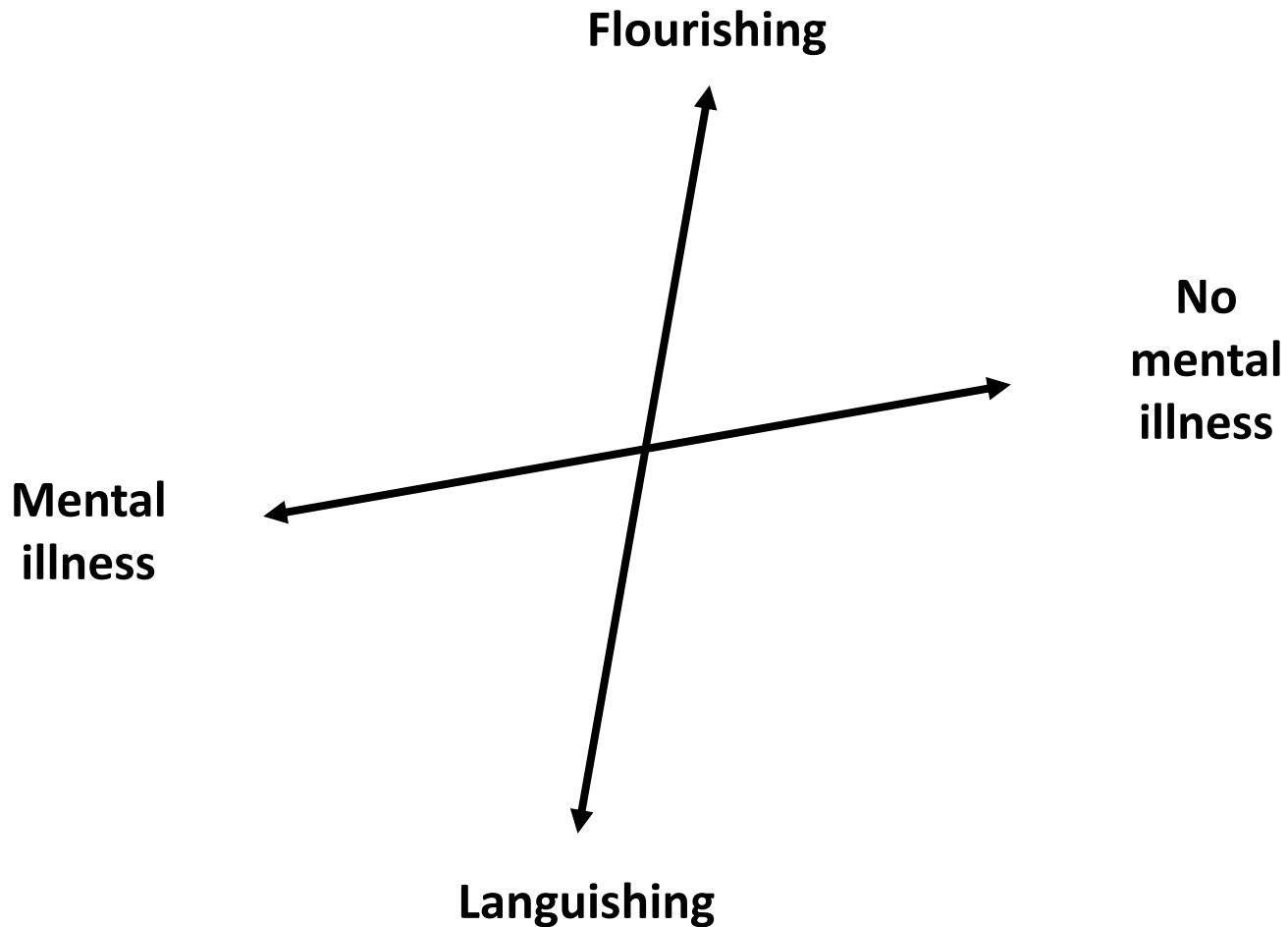
*“[It is] important to note that these two dimensions are not uncorrelated ...*

- It would be strange if they were, since it would suggest that people with very serious mental health difficulties could simultaneously be completely flourishing*

*Rather, Keyes suggests that they correlate at  $r \approx 0.50$*

- Therefore, there is roughly 25% share variance between the dimensions.” (Thompson, 2012)*

# So, in practice, more like this



(Keyes, 2005) (slide: Thompson, 2012)



# Keyes model of positive mental health

*Factors and 13 Dimensions Reflecting Mental Health as Flourishing*

Dimension	Definition
	Positive emotions (i.e., emotional well-being)
Positive affect	Regularly cheerful, interested in life, in good spirits, happy, calm and peaceful, full of life.
Avowed quality of life	Mostly or highly satisfied with life overall or in domains of life.
	Positive psychological functioning (i.e., psychological well-being)
Self-acceptance	Holds positive attitudes toward self, acknowledges, likes most parts of self, personality.
Personal growth	Seeks challenge, has insight into own potential, feels a sense of continued development.
Purpose in life	Finds own life has a direction and meaning.
Environmental mastery	Exercises ability to select, manage, and mold personal environs to suit needs.
Autonomy	Is guided by own, socially accepted, internal standards and values.
Positive relations with others	Has, or can form, warm, trusting personal relationships
	Positive social functioning (i.e., social well-being)
Social acceptance	Holds positive attitudes toward, acknowledges, and is accepting of human differences.
Social actualization	Believes people, groups, and society have potential and can evolve or grow positively.
Social contribution	Sees own daily activities as useful to and valued by society and others.
Social coherence	Interested in society and social life and finds them meaningful and somewhat intelligible.
Social integration	A sense of belonging to, and comfort and support from, a community.

(Keyes, 2005) (slide: Thompson, 2012)



# Hedonia/Subjective wellbeing

=

satisfaction with life (a cognitive judgement)

(children: satisfaction with school) (Heubner et. al, 2009)

+

high positive affect (emotions)

+

low negative affect (emotions)

(Diener et al., 2006)

# Frederickson's 'broaden and build' theory of positive emotion

Positive emotions '*broaden* people's ideas about possible actions, opening our awareness to a wider range of thoughts and actions than is typical' and *build* resilience.

The benefits of increased positive emotion include:

- Enhanced creativity
- Broadened scope of visual attention (leading to greater creativity in verbal tasks)
- Broadened outlook on relationships (self-expansion, leading to greater perception of overlap between self and other)
- **Increase capacity to bounce back from life's challenges (e.g. by undoing negativity, including undoing the physiological effects of negative events)** (Frederickson, 2009)

# Eudaimonia: Authentic Happiness & PERMA

- Pleasant life (positive emotion & gratification)
- Good life (absorption, engagement, flow)
- Meaningful life (using your strengths in the service of something greater than yourself)

(Seligman, 2003; Hefferon & Boniwell, 2011)

- **P**ositive Emotions (pleasure)
- **E**ngagement
- **R**elationships
- **M**eaning
- **A**ccomplishment

(Seligman, 2011)

# Eudaimonia: Psychological Well-Being (PWB) Theory

Psychological well-being =

- Autonomy
- Environmental mastery
- Personal growth,
- Positive relations with others
- Purpose in life
- Self-acceptance

(Ryff & Keyes, 1995; Ryff & Singer, 2008)

# Eudaimonia: Self-determination Theory (STD)

Evolutionary adaptive function of three basic needs:

- Autonomy
- Competence
- Relatedness

(Deci & Ryan, 2000)

# Eudaimonia: Flow

The balance of skill and challenge, and it's  
impact upon well-being. (Csikszentmihalyi, 2002)

[tʃiːksɛntməˈhaɪ.iː/ \*\*CHEEK-sent-mə-HY-ee\*\*](#)



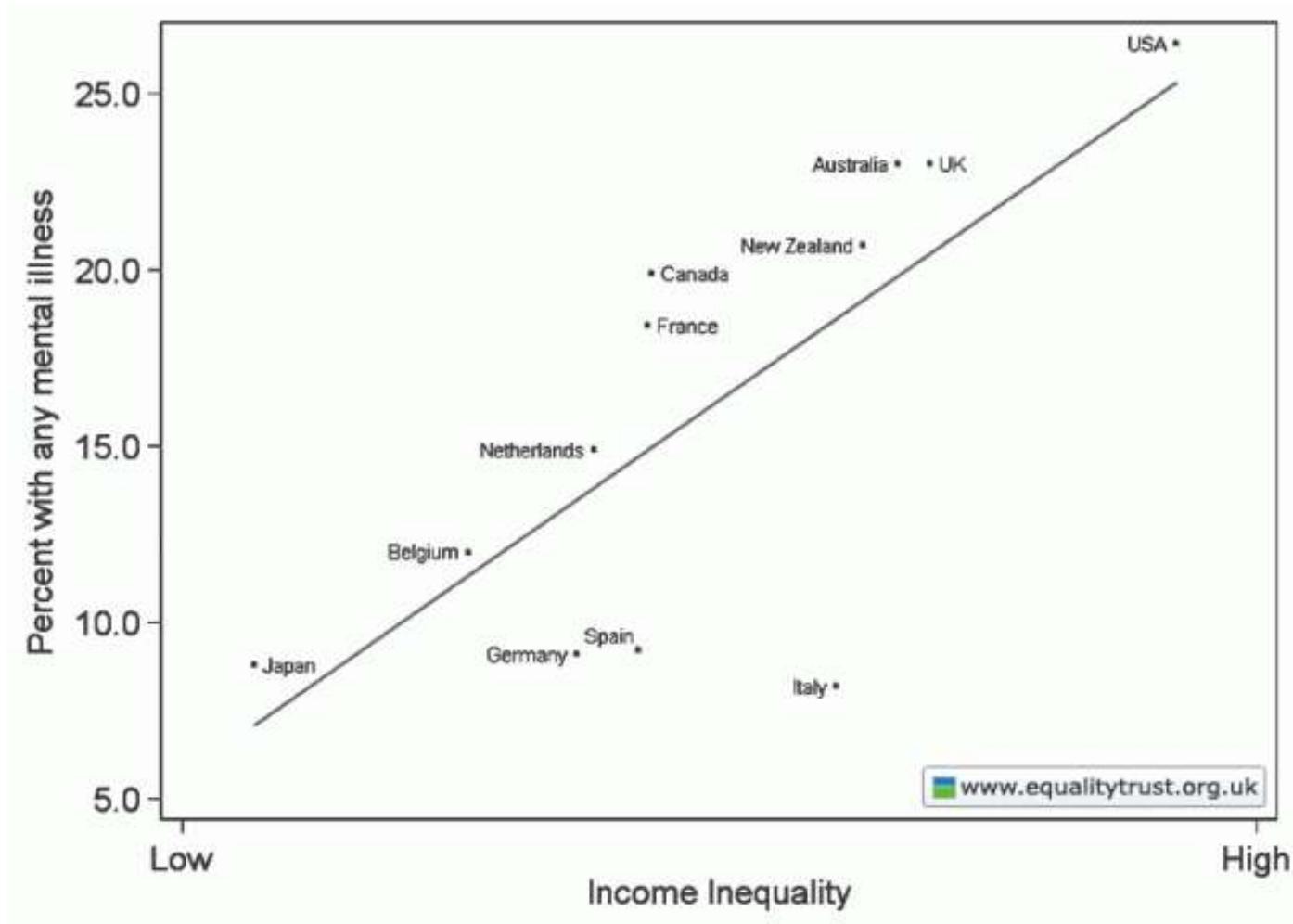
# What leads to SWB and PWB?

## The foresight review of research.

- Connecting (building social connections)
- Being active (physical activity)
- Taking notice (savouring)
- Keeping on learning (engaging the brain)
- Giving (acts of kindness, voluntary work)

(Aked et al., 2008)

# Macro-system ecological factors: e.g. income equality and mental illness



(Picket & Wilkinson, 2007; Wilkinson & Picket 2009)

# **Physical Activity (PA)**

# The benefits of physical activity

Regular (aerobic) physical activity results in:

- **Enhanced subjective wellbeing** (positive affectivity) and **psychological wellbeing** (body image/self-esteem; self-efficacy; self-confidence etc.)( Mutrie & Faulkner, 2004) **(contributing to resilience?)**
- **Improved cognitive functioning** in adults (Boutcher, 2000) and **children** (Ratey & Hagerman, 2009)
- **Reduced stress reactivity** (Ratey & Hagerman, 2009)
- **Reduced depression** (Babyak et al. 2000) and **anxiety** (McDonald & Hodgson, 1991)

Physical activity and improved mental health  
(with people with mental health difficulties)  
- possible causal mechanisms

**Neurobiological/physiological mechanisms**

# Neurobiological/physiological mechanisms:

- The **endogenous opioids hypothesis** (e.g. endorphins)
- The **monoamines hypothesis** (i.e. dopamine, norepinephrine & serotonin)
- The **thermogenic hypothesis**

(as summarised in Leith, 2010)

Physical activity and improved mental health  
(with people with mental health difficulties)  
- possible causal mechanisms

## **Psychosocial mechanisms**

## Psychosocial mechanisms:

- **improved self-efficacy beliefs/self-mastery/self-confidence/self-esteem** (physical self-worth)
- **cognitive-behavioural hypothesis** ('exercise generates positive thoughts and feelings, which in turn counteract negative mood states' (Leith, 2010, p. 17, citing North, McCullagh, & Tran, 1990; Simons, Epstein, McGowan, Kupfer & Robertson, 1985)) / **improved subjective well-being/greater positivity ratio**



- **increased social support** (in group physical activity)
- **increased ‘flourishing’: improved psychological well-being** (cf. dual continua model of mental health) (Hefferon, Mallery, Gay & Elliott, 2012)

See La Forge, 1995, cited in Biddle & Mutrie, 2008, and Leith, 2010, for reviews of research into causal mechanisms.

# Recent empirical research

- **exercise reduces depressive symptoms** (Mead, Morley, Campbell, Greig, McMurdo & Lawlor, 2009) – although there is still controversy concerning the relationship between physical activity and depression (Blumenthal & Ong, 2009)

# Recent systematic and critical reviews of research

- A systematic review (Schuch, Vasconcelos-Moreno & Fleck, 2011) suggests that **physical activity improves the quality of life of those with unipolar depression**
- A critical review (Alexandratos, Barnett & Thomas, 2012) suggests that the **social interaction, meaningful use of time, purposeful activity and empowerment that can result from exercise contributes to improved quality of life for people with severe mental illness**

# Themes that emerge from qualitative research

- *social support, interaction and connectedness;*
- *achievement;*
- *empowerment, self-confidence, self-efficacy, self-determination, agency and autonomy;*
- *physical self-worth and self-esteem;*
- *positive affect;*

- *optimism;*
- *sense of purpose and meaning, including developing or rebuilding a sense of identity*
- *release of anger;*
- *symptom management, especially in schizophrenia;*
- *the role of the exercise instructor,*
- *the environment and culture of the physical activity*

Alexandratos et al., 2012; Carless, 2008; Carless & Douglas, 2004, 2008a, 2008b, 2008c, 2008d, 2010; Crone et al., 2005; Crone & Guy, 2008; Crone, Tyson & Holley, 2010; Ellis, Crone, Davey & Grogan, 2007; Faulkner & Biddle, 1999; Faulkner & Sparkes, 1999; Fogarty & Happell, 2005; Hodgson, McCulloch & Fox, 2011; Holley, Crone, Tyson & Lovell, 2011; Rees, Smith & Sparkes, 2003; Stathopoulou, Powers, Berry, Smits & Otto, 2006; although the studies and reviews of Carless, 2008; Crone et al., 2010; Ellis et al., 2007; Faulkner & Biddle, 1999; Faulkner & Sparkes, 1999; Fogarty & Happell, 2005, and Holley et al., 2011 refer specifically to schizophrenia and/or psychosis).

- *post-traumatic growth* (e.g. Hefferon et al., 2008),

All of the images in this presentation are stock images in the public domain (mostly from 'Google images' searches). None of the photos are of participants in my research.

An example of a group physical activity programme for adults with severe and enduring mental health difficulties:

# **boxercise**

(Hefferon, Mallery, Gay & Elliott, 2012;  
Elliott & Hefferon to be submitted for peer review, 2013)



- The research reported on in this paper was one strand of a wider evaluation of a Local Mind Association's (LMA) boxercise programme, which is part of its Active Minds project (a range of leisure, sports and social activities).

# Hefferon et al., 2012

- This strand the evaluation (by the University of East London) of this boxercise programme (Hefferon et al., 2012) examined the motivations, expectations and experience of participants of the boxercise programme through inductive thematic analysis of data collected in pre- and post boxercise programme focus groups.

# Hefferon et al., 2012

- The participants identified the importance of
  - instructor for the class
  - the environment of the gym.
- The participants also discussed the changes that they experienced as a result of participating in the boxercise programme, including:
  - ‘being found’,
  - developing psychological and emotional strength
  - heightened awareness of their health.

# Elliott & Hefferon, 2013

The following slides relate specifically to the research of Elliott & Hefferon, to be submitted for peer review, 2013.

This study focused upon the **perceived benefits of boxercise**, in order to identify **how the physical activity of boxercise might improve the wellbeing of people with mental health difficulties**, through promoting **resilience to enduring mental health difficulties and 'recovery from' or 'recovery in' mental illness**

# Context

- The boxercise programme consisted of **6** (and latter **10**) **2hr weekly sessions** at the gym of an ex-world boxing champion.
- The sessions included **structured boxing training (sparring)** and **circuit work** for fitness.
- The boxing training was described as a **non-contact activity**, with participants hitting bags or pads.
- **Peer buddying** was provided to support participants' attendance at sessions, if requested.

# Methods

- **Interpretative Phenomenological Analysis (IPA)** (Smith, Flowers and Larkin, 2009) was used to interpret the participants' **lived experience** of undertaking a group boxercise class, to explore **how the participants understood improvements to their mental health** resulting from this experience.
- As IPA is a **double hermeneutic** process, in that the participants' interpretation of their life worlds is then interpreted by the researchers, it is important to acknowledge that knowledge produced by this study is reflexive; 'it acknowledges its **dependence on the researcher's own standpoint**' (Willig, 2008, p. 69).

- The study took a **critical realist approach to data**, in that it intends to ‘produce knowledge of what and how people think about the phenomenon under investigation’ (Willig, 2008, p. 69), and a **social constructivist approach to concepts of mental health and mental illness** (Maddux, Snyder & Lopez, 2004).

# The particular relevance of **phenomenological approaches** to research into physical activity

- Sartre states that '***I am my body***, not that I *have* a body' (Moran, 2000, p. 389)
- Merleau-Ponty emphasises **our *embodied relationship with the world*** (Smith et al., 2009, p. 18).



# Participants

- **6 participants** (following the recommendation for smaller sample sizes in IPA studies ( $n = 3-10$ ) (Smith et al., 2009)).
- **Mean age** of participants = **41** (SD = 7.56).
- All of the participants had **commenced their boxercise sessions** (of 6-10 weeks) **at least ten months before being interviewed**, although two of the participants were continuing to attend boxercise sessions, one regularly (Billy), and one sporadically (Ellen).

# Characteristics of participants

Name	Age	Months between boxercise & interview	Sex	Ethnicity	Employment status	Mental health difficulties	Other significant factors
Adam	33	10 months	M	White British	Unemployed	Psychosis and depression	Drug-related psychosis. Cessation of drug use.
Billy	54	17 months	M	White British	Volunteering	Depression, panic attacks	
Cathy	43	10 months	F	White European	Unemployed	Depression, anxiety, panic attacks	Brain tumour. English as an additional language.
Debbie	39	31 months	F	White British	Unemployed	Depression	Awaiting start of deep brain stimulation treatment (in a research trial).
Ellen	42	31 months	F	White British	Unemployed	Depression and anxiety (self harming)	Survivor of sexual abuse.
Fred	35	29 months	M	White British	Unemployed	Depression	Head injury.

**2 participants** utterances were characterised by considerable **expressive organisational difficulties**, including significant word retrieval difficulties. Whilst **expressive aphasia** (with anomia) was not discussed by them, such an explanation of their presenting language difficulties would be consistent with their neurological histories (**brain tumour and head injury**) (NHS, 2012).

# Themes

<b>Master themes</b>	<b>Subordinate themes</b>
<b>1 The boxercise instructor</b>	<b>1.1 Coaching style.</b>
	<b>1.2 Meaning-enhancing status.</b>
<b>2 The nature of boxercise</b>	<b>2.1 An enjoyable activity.</b>
	<b>2.2 (Non-verbal) achievement.</b>
	<b>2.3 One-to-one sparring with Wayne.</b>
	<b>2.4 Feeling better in body and mind.</b>
	<b>2.5 Boxercise as a gateway.</b>
<b>3 The social context</b>	<b>3.1 Shared experience.</b>
	<b>3.2 Support from the LMA.</b>
<b>4 Meaning and purpose</b>	<b>4.1 Helping others</b>
	<b>4.2 Identity and role</b>
	<b>4.3 Benefit finding and posttraumatic growth</b>

# Findings - general

- All of the participants reported that the experience of boxercise had improved their mental health;
- 5 of the participants reported that they had continuing mental health difficulties; these participants could be described as *recovering in* (Davidson et al., 2007) **mental illness**.

- 1 participant implied that he had mostly *recovered from* his difficulties (psychosis), although he described his psychosis as mainly being the result of drug use (cannabis), and his recovery from psychosis as partly the result of his cessation of drug use.

## ***1.2 Coaching style***

- The coach **inculcated positive affect** amongst the participants, as Cathy and Ellen note:

*'[T]he positiveness that 'e, the exercise gives 'an [Wayne] 'imself, his personality, we'll like (pause) we come up, we positive, we like we feel like (pause) we are the owners of the world, it's true (laugh).'* (Cathy)

- *'[Y]ou're with [Wayne] who makes you smile, it's just like, er (pause) big breath, ye know. 'Coz usually I'm like a hedgehog, I'm curled up in a little ball, it's sort, yeh, 'e makes ye come out of yourself, so (pause) 'an 'e, 'e makes ye realise like I know that I'm crap in gettin' there regularly, ye know, gettin' out the flat regular, I'm crap at that and sometimes I'm crap at time keepin' as well (laugh) but there's no 'arm in tryin', so (pause) that's what it make you think, it's like, why not give it a go 'cause I managed it ...' (Ellen)*



- The instructor's **empathy, encouragement and treatment of participants as individuals**, especially in the instructor's one-to-one sessions with participants (in association with the sense of achievement that the nature of boxercise offers the participants, see 2.2) **appeared to raise the participants' self-esteem**

- *'I think [Wayne] is just so upbeat, but he's genuine at the same time, it's not false. He listens to you. He treats everybody as an individual; he welcomes everybody. He includes everybody, and it just (pause) I think he makes everybody feel important. ... [A]nd he knows when you're not have a good day and, you know, he knows not to push you or (pause) but you know, it's, very, well, I don't think it's ever, um, I've gone in there feeling really low sometime. But by the time I've come out I always feel better. So, where we're sad about whether physical activity is (pause) beneficial (pause) I think it is the combination of the two [i.e. exercise and support from Wayne].'* (Debbie)

## ***1.2 Meaning-enhancing status.***

- Wayne's **status** (as an **ex-world champion boxer**) appeared to **enhance the significance and meaning of their achievement** in boxercise (see 2.2). Wayne also inculcated self-efficacy belief through **proxy-efficacy** which led to heightened psychological well-being (purpose and meaning) - particularly as Wayne was a **local 'guy'**.

- *'[sparring with Wayne] makes {?} you feel um (pause) quite happy and successful that you're actually fightin' with an ex world champion like, it could have like Mike Tyson you could've been fightin' against with, it wasn't Mike Tyson, it was a guy from [locality name] (pause) like an ex world champion from [locality name]. Which is (pause) pretty good like.'* (Fred)

## ***2.1 An enjoyable activity.***

- Undertaking **sparring** and using **exercise machines** during boxercise sessions seemed **intrinsically enjoyable**, partly because participants were **able to achieve** something (see 2.2). Their enjoyment was further enhanced by the **sense of social connection** experienced during the exercise (see 3.1), and the **coaching style** of Wayne (see 1.1), and enjoyment of boxercise lead to the experience of **positive affect** and increased **resilience to negative emotion**

- *'[T]hree minutes on this and once in the ring (pause) you've got there, you've done it (pause) so that, it's all achievement, it's all, positivity (pause) ... I'm doin' this which is good for me, it's all about (pause) yeh (pause) feelin' you've (pause) progressed forward instead of dwelln' (pause) on the crap that you 'ave to deal with (pause). It's like a little twinkle in all the (pause) fog ...'*  
(Ellen)

- leading to increased motivation for self-care:
- *'[I]t's just great, I, I really like it. I look forward to getting up in the morning [when going to boxercise classes] er be like to, look good, dress properly. It, it gives ye, ye know, the motivation to do that and yes nice to (pause) erm (pause) ye know, sorta going to the door and knowing that you're doing that...'* (Billy)

## ***2.2 (Non-verbal) achievement***

- Making **incremental progress** in sparring skills and physical fitness (achieving personal goals with **internal motivation**, and perhaps **motivation introjected by Wayne**) led to **positive emotion** (thus resilience and recovery), **psychological well-being** (personal growth, Ryff, 1989) and **self-determination**.



- *'I would say it's vital like (pause) for people to actually do something like that with their lives like, ye know, 'cause ye gotta have something, but then again it might not necessarily be sport ... [Y]e j, just need some kinda something that your mind's, like, takes hard work to achieve it but if you stick at it for a long enough and put hard work in ye, get, like goals, like so ye feel like you've got some sense of achievement in life...'* (Adam)

- Moreover, participants with cognitive and linguistic difficulties might find talking therapies (e.g. CBT), or achievement through employment or education, particularly challenging. Carless & Douglas (2010) note that achievement in physical activity can be ‘connected to an embodied sense of proficient movement, feel or outcome’ (p. 64)

- **the embodied (and non-verbal) nature of boxercise afforded particular opportunities for achievement to participants who may have cognitive or linguistic difficulties as a result of neurological issues , developmental learning difficulties, or the effect of mental illness; achievement for people with mental health difficulties may be problematic.** Carless & Douglass (2010)

- *'I think there were times with lessons at college be it {?}, I did find it, a bit er, p'raps difficult to understand. Er. I, I, try 'an be as diligent as I could. Er (pause) and er at times I did well, but er I lot of time I did sorta worry about things er. Um (pause) but er (pause) think with the boxercise it's just so good it ye can exercise, um (pause) er, you can look at things a lot more clearly, it's ye go out ye um (pause) ye just workin out and ye can put a good session on a lot of er the machines and its good, ye just relax ...' (Billy).*

***2.3 One-to-one sparring with Wayne:  
somatopsychic empowerment, achievement,  
distraction and venting anger.***

- **Sparing** is a component of physical activity that is **unique to martial arts** and is a non-contact form of fighting that often **involves learning complex patterns**. The opportunity to spar in the ring with Wayne seemed to afford the participants opportunities for **somatopsychic empowerment** and **non-verbal achievement** (see 2.2), given additional consequence by Wayne's status (see 1.2)

## *hegemonic masculinity?*

- It might be expected that the power narrative of boxercise might also promote **hegemonic masculinity** (Carless & Douglas, 2010), which **might problematise the potential benefit of boxercise for women participants**, however, none of the three women participants reported any disbenefits from the masculine culture of the activity and its location

## *distraction*

- the **motoric complexity** of learning the sparring patterns seemed **to distract the participants from negative emotions or cognitive ruminations**. The motoric complexity of the sparring patterns requires a high degree of embodied concentration.



- *'... in the ring, and um (pause) 'e does the pads with you, so there's combinations, there's like four jabs, two jabs, an' then an upper an' a hook, an you're learning and then you can do like when 'e comes at you with the pads you do the dodging, so it's just like y, y, you gotta keep ye mind on that ... I suppose it's taking ye mind from (pause) bringing ye down with bad thoughts.'* (Ellen)

- *'I mean you have to concentrate when you're in the ring so you can't think about anything else, and I think, the rest of the time, there's so much goin' on, and people talking to each other. It is being distracted and that's what, what you're looking for all the time. And I can't find that any other way, ... Because I mean, that's it, it is listening to those voices in ye head that say the same things all the time (emphatic) about how rubbish you are, and, you know, that's what gets you about depression, if someone could turn those off, you'd be on to a winner. But, so, yer, boxercise, it's good for that, definitely so. That's a huge benefit.'* (Debbie)

## *releasing anger*

- Sparring with Wayne (as well as punching bags) was a way of **releasing anger** or **'excess energy'** for some participants. Whilst this was reported by only two participants, the significance of this phenomenon for them was great. For Ellen releasing anger seemed related to her **recovery from the effects of sexual abuse**, and partly facilitated **PTG**.

- *'[W]hen I first got in the ring with [Wayne] he was sh, 'e teaches you techniques starting of how to jab, how to this (mimed punch) and then 'e was going oh it's just like, really going for it, and 'e goes what {?} are you angry about and I said, it's me fucking father, and he says, come on then let's beat the shit out of 'im, and we had a real good (pause) and then that got out of me, and then it was learning techniques.'* (Ellen)

- For Fred, sparring with Wayne enabled him to release ‘excess energy’, by which he appeared to mean **anger and frustration associated with isolation and depression**, and possibly the **impact of his head injury** (including perhaps frustration associated with his apparent expressive aphasia).

- *'then you 'ave a little session with [Wayne] (pause) about five or ten minutes like (pause) a little spar with 'im and {...?...} goads {?} ye and go {?} on {?} to hit 'im (pause) to hit his pads like (pause) it was a good (pause) a good release, good (pause) good to get out of there, and build up a sweat, and loose, loose (pause) some (pause) ye know (pause) you, l, l, loose some spare energy that you had inside you.'* (Fred)

*empowerment or inculcating aggression?*

- **However**, there is strong empirical support, including research entailing hitting punch bags whilst thinking about a person who had angered the participant (Bushman, 2002), for the contention that **venting anger does not [mainly] reduce angry feelings** (Bushman, 2002), **and may even increase the expression of anger** (Lohr, Olatunji, Baumeister & Bushman, 2007).

## *increased assertion?*

- Ellen also reported an incident when she had struck a neighbour who had been ‘threatening’ her. It is difficult to determine here whether what Ellen is describing is an example of **appropriate self-defence** and **increased assertion, or inappropriate aggression**, perhaps induced by sparring and punch bag hitting.



## ***2.4 Feeling better in body and mind***

- As well as feeling **stronger in body and mind**, the participants also felt feeling **'fitter' and 'better' in body and mind**, partly perhaps because of weight loss and improved bodily movement, leading to heightened feelings of physical self-worth and thus heightened self-esteem.

- *'I found that (pause) by doing the, the training like you can, you notice yeself feeling fitter, feeling stronger, which makes you feel a bit better about yeself, ye get, bit, like higher self-esteem from doing it.'* (Adam)

*replacing psychological 'pain' with physical 'pain'?*

- Cathy also suggests that **reducing psychological pain, and replacing the psychological pain of depression with physical pain** (in the course of getting fitter), was significant to the relationship between developing physical fitness and feeling psychological better.

- *'[I]t feel like you done something good and it, it's like, like I, I did have {?} er body ache, ye know, pain, physical pain because of the exhaustion or the depression thing, and then, the, the box exercise, er kind of (pause) make it milder, the pain, it's kinda disappeared, you know, you have pain, but other pain, pain from exercise, like I said, oooo those muscles, are, you know, they're all here, you know, and you see, you do, you do feel fit, you know, like, erm, I'm very proud of with my jeans (stood up and pointed to jeans) (laugh). Good this? [I can see! (laugh)]. I was a size sixteen (laugh) [Wow!] Yer, be, because er, you know, I went from a size eight to a size sixteen in two months.'* (Cathy).

## *2.5 Boxercise as a gateway.*

- Whilst only two participants have continued attending boxercise sessions for some participants **boxercise led to participation in other physical activities** as a result of it **developing their belief in the value of physical activity to their mental health**

- *'Well, it's [his mental health] improved a lot. A, a lot, a lot more happier than (pause) back then (pause) I, I, I do a lot more exercise, I do mostly walking 'cause (pause) you get to see (pause) the, the whole of life and it's a lot easier. And also joined a jogging class as well at [a local park]. We 'ave a jog every Saturday morning (pause) which is quite good. ... .. I, d, don't catch the bus now, I walk to where I wanna go, go (pause) 'cause I like it, I like walking now, I like exercising. It has pleasure, it has pleasure (pause) and not pain.'* (Fred)

### ***3.1 Shared experience: increased connectedness and increased social confidence***

- **social support / connectedness / shared experience / interaction / positive relations with others / relatedness / social confidence**
- *'[I]t was, it was, was a lot, a lot better being part of a group. One on one it wouldn't have been (pause) as good at all but with a group there was a social aspect to it so you could (pause) you could spar with different people and (pause) talk to different people (pause) er it was a lot better er in a group settin' then on ye own. But yer (pause) a social aspect to it so you got to meet people.'*  
(Fred)



## *social isolation*

- A sense of social connection was particularly important to these participants because their **experience of mental health difficulties and unemployment had resulted, for some, in extreme social isolation** (partly as a result of the economic unaffordability of going anywhere):
- *‘Cause I was stuck in a little world. (pause) I was like (pause) I, I don’t meet anyone. I don’t do much at all. I’m trapped. I wanted to (pause) g, release myself (pause) and (pause) feel good again.’ (Fred)*

## *social connections: 'life lines'*

- *'It actually makes ye think about yourself and like I, like all the shit that's 'appened I always thought I was (pause) worthless (pause) but then you 'ave to think well no I've survived and I've done this and I've done that, and I found Mind and [Mick] and [Charlotte] and [Doreen] and (pause) then [Wayne] and you've got these, it's like a tree, with these branches and you might 'ave been a little saplin' lookin' a bit wilty and then, you {?}, sorta like, little branches, ye know it's sorta like little life lines.'*  
(Ellen)

## *social connections: collective resilience and recovery*

- *'Er, yeh, it was good, because you had other people (pause) sort of in the same boat as yeself really so like ye didn't, didn't feel so like (pause) alienated there on ye own like it sort of more (pause) camaraderie I suppose together.'* (Adam)

## *building social confidence*

- *'[W]hy I want er to box-exercise, um, um I did have like er, um, er, it was quite, it's like I'm talking to you now but before I wouldn't do it. It, and so, there was a big issue about me and being like, um (pause) around people.'*  
(Cathy)

## ***3.2 Support from the LMA.***

- The fact that the boxercise programme was **embedded within a voluntary-sector mental health organisation** afforded participants the opportunity to receive instrumental and emotional support. For some participants, **instrumental support** from LMA workers included **reminding the participants' to attend**, was important. The **emotional support** from LMA workers included, for some participants, **being listened to**.

## *4 Meaning and purpose*

- **Purpose and meaning** are important themes in the qualitative literature on **physical activity** (e.g. Crone & Guy, 2008; Carless & Douglas, 2008a, 2010; Hodgson et al., 2011) and in **eudaimonic theories of wellbeing** (e.g. Ryff, 1989; Ryff & Singer, 2008; Seligman, 2003 & 2011); and being involved in meaningful activity is crucial to **mental health recovery** (Davidson, O'Connell, Tondora, Lawless & Evans, 2005).

- Meaning in boxercise was engendered in part by the status of the instructor (4.1.2) but also by **the opportunity it gave participants to help others and adopt meaningful identities and roles.**
- Moreover it afforded a meaningful context, for some, that may have **supported benefit finding and PTG.**

## *benefit finding and posttraumatic growth*

- Whilst there is little research about the relationship between mental illness and **benefit-finding** and **PTG**, a recent quantitative study has suggested that **benefit finding might be associated with recovery in mental illness** (Chiba, Kawakami & Miyamoto, 2011), and **those who find benefit from adverse life events may develop ‘an appreciation of their own strengths and resilience’** (Lechner, Tennen & Affleck, 2009, p. 633)



## *4.1 Helping others.*

- Participation in a group boxercise class enhanced the participants' sense of meaning and purpose through **affording the participants the opportunity to help others.** The importance of helping others in boxercise was common across the group:

- For Ellen, developing a **sense of meaning through kindness, and receiving kindness from others**, had a more powerful resonance, that of **survival**.

- *'... like I always think, life's crap, better off dead, but then you meet people who do things for people (pause) and then when you do things you feel, like the buddyin', like I did the ten week course and then you went there and you just showed people how to use the stepper or say come on this is fun or get in the ring (pause) and it's just nice to be posi, like (pause) it's like sorta karma type of thing, 'e [her father] created all this shit, and instead of me bein' (pause) whatever I could 'ave gone down a really dark road I've sorta taken this road and it's (pause) not too bad, I suppose, I'm ploddin' along and it's like, doing good things dampens his, all the crap he created, it's like squashin' it away, squashin' 'im away.'* (Ellen)

- It might be suggested that Ellen's receipt of help from others, and perhaps the empathy that she felt for other participants (the **empathy-altruism hypothesis**, Batson, Ahmad & Lishner, 2009), resulted in her wanting to help others. Helping others is associated with **raised positive emotion** (Otake, Shimai, Tanaka-Matsumi, Otsui, & Fredrickson, 2006), which **increases resilience (4.1.1)** and **contributes to the process of PTG** (Linley & Joseph, 2004); for Ellen helping was taking the positive path at a 'fork in the road', suggesting PTG.

- The embedding of the boxercise programme within an organisation such as Mind also offered the participants the opportunity to develop **meaning and purpose by exercising citizenship** (a key aspect to recovery, Davidson et al., 2005) through being engaged in **developing societal awareness of mental health difficulty**, a macro-level form of helping.

- *'[I]t's no good people doing things and then not talking about it [mental health difficulties], 'cause if people don't talk about it people don't know about it and it won't get promoted and obviously it all needs funding, so, ... I'm more of a mindset this time, to ... take this opportunity to do everything that I can, to get something good out of it. So it wasn't just, for me. I felt that I could (pause) I suppose, be useful (emphatic tone). I think that's a big thing, you tend to think that you're not, you're not sort of (pause) you're not good at anything or you know, it's more like you're outside of society rather than actually being quite useful at promoting something, so there is a positive to having it.'* (Debbie)

## 4.2

## *4.2 Identity and role*

- Taking up the role of **mental health campaigner** rather than a mental health patient: **being something other than a 'mental patient'** is crucial to mental health recovery. (Repper and Perkins 2003, p.49)
- Taking up, or re-establishing, **the identity of an athlete**, which has been reported in other studies (Carless, 2008; Carless & Douglas, 2008a; 2010)
- Being a **survivor** rather than a victim

- *'I always thought myself as a victim but now I know I'm a survivor. So I always see it as a little blue flame by ye solar plexus, and my little blue flame, no matter 'ow crap 'e was, 'e never put it out, no matter 'ow little it was it was still there, and it's sorta gettin' a little bit bigger, it's not goin' wouff, but it's sorta gettin' a lit {?}, it's not dis {?} (pause) goin' down anyway, it's still there and it's got a little bit bigger, so that's how I see it.'* (Ellen)



## ***4.3 Benefit finding and post-traumatic growth (PTG)***

- 2 participants explicitly reported experiences that might be described as **PTG** (Tedeschi & Calhoun, 2004) and **1 found of benefit** in her depression, despite her continuing distress.

- *'I would say I'm a different person now, to what I woulda been if I didn't go through it. In er (pause) s'p I suppose some ways better, maybe, some ways not, er, er (pause) it er helped me sorta like (pause) think about more the important things in life, and t's like made me sorta, kinda, think about (pause) more spiritual things about God and stuff like that and it tried te, whereas before I didn't pay things like that no mind it sorta like it made me take like stock of life and stuff like that.'* (Adam)

- Whilst Adam, made it clear that his **recovery and growth** was associated with his experience of **struggling with chemical dependency and psychosis**, and his **cessation of drug use and discovery of spirituality**, which occurred before he commenced boxercise, the **boxercise class did help him maintain**, and possibly, extend his new more **positive outlook on life**, as was demonstrated by his belief that **boxercise was doing something 'worthwhile'**, as opposed to his previously **'monotonous' life of social isolation**.

# Conclusions

The improvement to the participants' wellbeing seems to be accounted for, in the participants' explanation of their experience, by an interconnected web of factors, specifically the opportunities that the class afforded participants to develop:

- **positive emotion;**
- **a sense of achievement;**

- **distraction from negative emotions and cognitions;**
- **empowerment** (including heightened self-confidence and increased self-efficacy beliefs);
- **social connectedness** (including **improved social confidence**) and
- a sense of **meaning and purpose.**

- For some participants this class appeared also to facilitate or sustain **post-traumatic growth** or **benefit finding** in their experience of mental health difficulties.
- For all the participants the experience of the boxercise class seemed to promote their **resilience to mental health difficulties**, and **support their recovery in or from their ongoing mental health difficulties**.

# Caveats

- the **benefits** that the boxercise class afforded **could also arise from other forms of group physical activity**, although boxercise did seem to offer some **unique opportunities**:
  - the learning of **motorically complex sparring patterns** offered participants **enhanced opportunity for distraction from negative emotions and cognitions**, and
  - enhanced **opportunities to experience embodied (non-verbal) achievement**.

- Moreover, the martial character of sparring seemed to inculcate **somatopsychic empowerment**.
- However, there is **ambiguity in the role of sparring**, as an opportunity for achievement, positive affect and empowerment, and, along with punch bag hitting, as an opportunity for releasing anger and frustration...



- nomothetic research suggests that **releasing anger does not necessarily reduce angry feelings** (Bushman, 2002), and **may even increase the expression of anger** (Lohr et al., 2007). Moreover, boxercise might even **encourage participants to engage in aggression** if boxercise inadvertently led participants to believe that aggression could improve their affective state (Bushman, Baumeister & Phillips, 2001).

- Some of the benefits of boxercise apparent in the participants' explanations related to **specific ecological features** of this particular boxercise class e.g.
  - the opportunities that boxercise gave to develop embodied, non-verbal attainment, may have been particularly significant as a result of the **cognitive and linguistic difficulties that some of the participants in this study appeared to have.**

- This **particular boxercise instructor's capacity** to engender positive affect, self-esteem, self-confidence and self-efficacy amongst participants may be the result of specific personality factors
- the **instructor's extraordinary status** (as a world boxing champion)

- the **need for empowerment** amongst the participants in this study, whether achieved through the somatopsychic effect of feeling physically stronger, or through other psychosocial processes facilitated by boxercise, may have been a particular function of the ecology of these participants' life worlds: **most of the participants in this study were disempowered through a combination of experiencing unemployment, poverty, stigma and social isolation**, and for them the role of **empowerment for wellness** (Prilleltensky, 2008) may have been particularly important.

- This study only concerns those who found benefit from boxercise. Sport has often been a means of **‘sustaining hegemonic masculinity through endorsing aggressive behaviour and talk’** (Carless & Douglas, 2010, p. 93) and this has potential psychological disbenefits, especially for women.

- Whilst none of the participants reported any disbenefits from the aggressive component of boxercise sparring, it might be hypothesised that other female, or male, participants may have experienced boxercise less positively.

- **Boxercise may prove to be an efficacious physical activity intervention in the promotion of resilience and recovery with people with mental health difficulties, especially with those who may have cognitive or linguistic difficulties in addition to, or as part of, their mental health needs.**

- Moreover, **boxercise may be of particular benefit to those who are disempowered**, through social alienation, unemployment or other factors, as a result of the somatopsychic strengthening effect of sparring



# Using PA to promote resilience and recovery: implication for mental health practitioners

- **Person-activity fit.** (What sort of PA suits particular individuals)?
- **Multi-disciplinary referral.** (Who would most benefit from PA. Consideration of the suitability of different types of PA for differing types of mental health difficulty presentation?)

- **Health and safety?** Suitability of PA for individuals' physical health needs (GP/consultant check/signing off).
- **Who would provide the sports/activity coaching?** (Partnerships with private, local authority and voluntary sector sports venues, clubs and organisations).
- What **instrument and emotional support** would be required to engender take up and maintenance of a PA programme?