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Questioning weight science

Something that's fundamental to dismantling the harmful associations between body size and health is questioning the current weight science that these assumptions are based on. Studies which explore a link between weight and health can be observational or experimental. An observational study (see example #1) often generates a hypothesis which might then be tested in an experimental study (see example #2).

On the surface, the results from a weight study might seem pretty straightforward. If you take a closer look at an observational study and consider what influencing factors have been considered or not, it raises questions about the results. Questions might also be raised about the results of an experimental study, given that **weight is not a behaviour.**

Below are two simplified examples of each weight study design and how the results from these types of studies might not be what they seem.

Weight loss study example #1

Group A:
higher weight people

Analyse the difference in the prevalence of a certain health condition or risk factor between the two groups

Group B:
"healthy" weight people

If the prevalence of the health condition or risk factor is higher in the group of higher weight people then the conclusion is that being at a higher weight increases your risk of developing the health condition or risk factor. This is then basis for the assumption that losing weight will improve the health condition or risk factor in people who are at a higher weight.

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Weight loss study example #1

Why might people at a higher weight have poorer health outcomes?

One explanation is **weight stigma**

Negative assumptions about health, intelligence, personality traits are made about people in larger bodies. This leads to people in larger bodies experiencing discrimination, shame, and hurt. This might be experienced on a daily basis.

Weight stigma directly impacts physical health eg. raised cortisol (stress hormone), inflammation, raised blood pressure, raised cholesterol. A need to protect against weight stigma may result in someone avoiding seeing their doctor unless it's really urgent or avoiding physical activity where they'll be seen by others.

Weight stigma increases the likelihood or severity of body image issues, depression, anxiety and suicidal thoughts.

So, can the researchers in this type of study be sure that it's someone's weight, and not the stigma they've experienced because of their weight, that has lead to them being in poorer health compared to someone at a "healthy" weight?

Weight loss study example #1

Why might people at a higher weight have poorer health outcomes?

Another explanation is **previous weight loss attempts**

Due to weight stigma, many people in larger bodies try to lose weight, which usually involves dieting (even if it's not a "diet"). Most of the time, intentional weight loss actually leads to unintentional weight gain. Someone might cycle through losing then gaining weight multiple times over their lifetime.

Chronic dieting and weight cycling can lead to:

- Low bone mass - may impact bone health
- Loss of muscle tissue - may impact metabolism
- Raised cortisol - may impact heart health, blood sugar, gut health, immune function, sleep, stress
- Impaired cognitive function
- Development of an eating disorder

So, can the researchers in this type of study be sure that it's someone's weight, and not the effects of previous attempts to lose weight, that has lead to them being in poorer health compared to someone at a "healthy" weight? Would we see different results if we instead compared them to higher weight people who hadn't dieted or weight cycled?

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Weight loss study example #2

Higher weight people, all with the same health condition or risk factor eg. type 2 diabetes

'Healthy lifestyle' intervention

Most or all participants lose weight during the study, some lose more than others

Improvement in health condition or risk factor eg. lower fasting blood sugar

The conclusion from this intervention is that losing weight improves the health condition or risk factor, ie. there's a causative relationship between weight and health. It's assumed that the closer someone gets to their "healthy" weight range, the better their health will be.

'Healthy lifestyle' intervention

Weight loss study example #2

Diet component could involve:

- All food is provided to participants
- A meal plan is provided to participants
- Counselling from a dietitian

Exercise component could involve:

- Participation in regular group or solo exercise
- An exercise plan to do at home
- Counselling from an exercise physiologist

Participants may also receive counselling from a **psychologist**

How sustainable are these changes to health behaviours long term?

Consider:

- Have the participants' capacity for the health behaviours increased, or just their understanding?
- Do the changes fit comfortably within their normal life?
- What happens when the support from those health professionals stops?
- Did the intervention address the underlying thoughts/feelings related to those health behaviours?

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Weight loss study example #2

Higher weight people, all with the same health condition or risk factor eg. type 2 diabetes

'Healthy lifestyle' intervention - often not maintained long term

Weight loss **during the intervention**, likely only maintained for 6 - 12 months

Improvement in health condition or risk factor - may return to baseline if intervention stops

What we could conclude instead is that certain behaviours improve health outcomes and may lead to changes in weight as a byproduct. Unless the changes to these healthy behaviours can comfortably be sustained long term, the improvements in health outcomes and change to weight may not be sustained either.

Even if we accepted that being at a higher weight causes health problems and losing weight improves health, we have no proven way to help someone achieve and maintain a lower weight long term without risking their physical or mental wellbeing. Prescribing weight loss based on current weight science sets an unrealistic expectation and is more likely to have the opposite effect (weight gain).

People of all shapes and sizes - not just those in larger bodies - benefit from support and positive encouragement to focus on healthy behaviours rather than weight (if they want to). This is a core principle of **Health At Every Size.** Recently, studies which experiment with applying a weight-neutral approach show that this has long-term, positive benefits to physical and mental wellbeing.