



Self-Weighing: A “Weighty” Issue to Consider in Health Promotion Practice

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INTRODUCTION

Self-monitoring is an intervention widely promoted for weight management. It encompasses tracking dietary intake, physical activity, and one's body weight. Compared to other self-monitoring activities such as keeping daily food and physical activity records, however, checking body weight is the least burdensome (Pacanowski, Linde, & Neumark-Sztainer, 2015). The minimal amount time and effort involved may be a reason why many people weigh themselves regularly. In addition, progress monitoring, which involves comparing one's current position to a goal in order to assess whether any changes in action or behaviour are needed, has been found to support goal achievement in various domains (Benn, Webb, Chang, & Harkin, 2016). This may also explain why many people self-weigh even if they are not participating in a particular program in which the goal is weight loss (Benn et al., 2016). Self-weighing allows for the detection of weight changes and of eating or physical activity patterns or specific situations that may lead to such changes (Zheng et al., 2015). Observations of one's weight may provide motivation to continue engaging in behaviours that support positive outcomes (which, to many, means weight loss or maintenance) and to make adjustments to those that may lead to weight regain (Zheng et al., 2015).

People commonly relate the number they see on the scale with how successful they are in their journey towards better health, as they define success in terms of how much the number decreases and their health by how much they weigh. This is in spite of the fact that weight alone is a poor measure of a person's health as it neglects consideration

for other aspects, such as mental, spiritual, and emotional wellbeing (Linna et al., 2013).

Research indicates that self-weighing is effective in promoting weight loss in adults with elevated body mass indexes (BMI) and preventing weight gain (Pacanowski et al., 2015).

When looking at how self-weighing affects a person, however, it is important to consider not only the physical impacts, but also the behavioural and psychological outcomes. While self-weighing has been found to be associated with health-promoting behaviours such as choosing fewer foods that are high in calories yet low in nutrient density, it has also been linked with unhealthy weight control behaviours such as skipping meals (Pacanowski, Loth, Hannan, Linde, & Neumark-Sztainer, 2014). This practice may also highlight issues that individuals have with their body shape and weight (Benn et al., 2016). Those with weights that place them above the “normal” BMI range may be especially vulnerable to its psychological impacts, as it draws attention the degree to which their body deviates from the widely-endorsed definition of desirable or healthy (Benn et al., 2016).

IS SELF-WEIGHING HELPFUL OR HARMFUL FOR PSYCHOLOGICAL WELL-BEING?

Based on their systematic review of 17 research articles, Zheng and colleagues (2015) concluded that self-weighing is associated with weight loss and not with adverse psychological consequences, noting observations that body satisfaction tended to increase in study participants while depressive symptoms and shape concerns decreased. Included in their review were randomized controlled trials

(RCTs) involving adult participants who were classified as overweight or obese (that is, with a BMI of 25 kg/m² or greater), 12 of which focused on weight loss or weight maintenance, while the other five focused on the prevention of weight gain. Of note, because participants in these studies were adults seeking treatment for overweight or obesity, the findings do not necessarily apply to other populations.

Pacanowski and colleagues (2015) recently completed a review of research studies that measured both self-weighing and psychological wellbeing to assess whether self-weighing is helpful or harmful and elucidate the impact on a broader range of populations. The 20 articles included in the review were studies published in peer-reviewed academic journals that reported a relationship between self-weighing and at least one psychological outcome. What follows is a summary of their review.

The psychological outcomes that were explored were grouped into three categories: 1) Affect: Anxiety, Depression, and Mood State; 2) Self-esteem and Body Evaluation; and 3) Disordered Eating Symptomatology and Eating-related Behaviours and Cognitions.

SELF-WEIGHING AND AFFECT: ANXIETY, DEPRESSION AND MOOD STATES

In the first category were 10 studies that evaluated self-weighing and mood (positive or negative affect, mood in general, anxiety or depression, or a combination of these psychological states). Four studies found a negative relationship between self-weighing and mood state (in that self-weighing was associated with poorer mood states), including a RCT in which 30 young adult women were assigned to either a daily self-weighing condition or a non-weighing condition. Greater increases in anxiety and depression were observed in the self-weighing group. Another two were large cross-sectional surveys of adolescent and young adult populations that found associations between frequent self-weighing and higher levels of depressive symptoms. On the other hand, five of the studies (three RCTs involving overweight adults, a large population-based survey of middle-aged women, and a survey of young adult women) found no relationship, and one found a positive relationship. The latter was a study of a weight gain prevention intervention that enrolled 314 adults who had lost weight, and indicated that more frequent self-weighing was linked with lower levels of depressive symptoms. Collectively, these findings suggest that the relationship between self-weighing and mood may

be at least partially explained by an individual's BMI and by participation in a weight loss intervention.

SELF-WEIGHING, SELF-ESTEEM, AND BODY EVALUATION

The second category was comprised of 14 studies, four of which investigated self-weighing and self-esteem, and 10 of which looked at self-weighing and measures of body evaluation. Of the four studies that looked at self-weighing and self-esteem, three found a negative relationship. Among these studies was the RCT described above, which randomized young women to either a daily self-weighing condition or a non-weighing control condition. At the end of the two-week trial, a significant reduction in self-esteem was noted in the self-weighing group compared to the control group, providing evidence that self-weighing may lead to poorer self-esteem in young women. In the remaining study that investigated self-weighing and self-esteem, which was a cross-sectional survey of young women, no relationship was found. Outcomes from this set of studies indicate that self-weighing may be detrimental to an individual's self-esteem. In regards to the other 10 studies that examined self-weighing and body evaluation, four (all cross-sectional) found a negative relationship, four (all RCTs) found no relationship, and two (RCTs) found a positive relationship. Of these latter two studies, one enrolled 91 adults classified as overweight and assigned them to either a daily self-weighing condition or a delayed treatment control condition, and those in the self-weighing group had higher body satisfaction at the end of the six-month trial period while those in the control group had diminished body satisfaction. From the available evidence, it appears that a direct relationship between self-weighing and body satisfaction is more likely to be observed in individuals who are overweight and seeking treatment than in those who are not overweight. This raises the question of the role of weight change in the relationship between self-weighing and body satisfaction.

SELF-WEIGHING, DISORDERED EATING SYMPTOMOLOGY, AND EATING-RELATED BEHAVIOURS AND COGNITIONS

In the third category were 13 studies that looked at disordered eating symptoms, eating-related behaviours, and individuals' beliefs about their personal relationship with food, and how these might be connected to self-weighing. Six of the studies (one longitudinal and five cross-sectional) provided evidence

suggesting that increased self-weighing is associated with higher levels of maladaptive eating. For example, in one of the cross-sectional studies, in which the sample was a large population of adolescents, those who indicated self-weighing with greater frequency were more likely to report engaging in dieting and other forms of unhealthy weight control behaviours than those who did not frequently self-weigh. A link between self-weighing and binge eating in participants who were not overweight was also found. Similarly, in a large survey of young adults, it was observed that those who frequently weighed themselves were more likely to diet and engage in unhealthy weight control behaviours than those who did not. In addition, more frequent self-weighing was associated with binge eating in female participants. Three of the 13 studies in this category found no relationship between self-weighing and maladaptive eating. These included one RCT that compared outcomes of daily weighing for two weeks and no weighing in 30 young adult women, and another that compared weekly weighing to no weighing in 79 young adult participants. Self-weighing did not produce changes in such behaviours as dieting, binge eating, or eating in response to external or emotional cues instead of physical hunger. Based on these studies, it does not appear that directing individuals to self-weigh will necessarily lead to the development or worsening of disordered eating. The remaining four studies (two RCTs and two cohort analyses) found a helpful relationship between self-weighing and eating-related behaviours and cognitions. It should be

noted that participants in these studies were either overweight and seeking weight loss treatment or had lost weight.

Overall, the goal of this review by Pacanowski and colleagues was to assess the relationship between self-weighing and psychological outcomes that has been described in academic literature. When looking specifically at affect, self-esteem and eating-related behaviours and cognitions, a majority of the studies found that self-weighing may be associated with a detrimental effect, and fewer found a positive impact. In the studies that found self-weighing helpful, it appears that weight change was an important factor as to why that was so.

CONCLUSION

Pacanowski and colleagues (2015) argue that recommending frequent self-weighing as a health-supporting behaviour needs to be considered in a more nuanced way. It is likely that self-weighing is helpful for some individuals; meanwhile, it may be inadvisable for others to engage in this practice. Indeed, a recent meta-analysis corroborates this idea, as self-weighing was found to be more likely to be associated with reduced self-esteem and increased psychological stress in certain groups, including adolescents, “normal weight” individuals, and those self-weighing outside participation in a weight management intervention (Benn et al., 2016). It will be important for further research on self-weighing as a weight management strategy to consider psychological outcomes at the same time.

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REFERENCES

1. Benn, Y., Webb, T. L., Chang, B. P. I., & Harkin, B. (2016). What is the psychological impact of self-weighing? A meta-analysis. *Health Psychology Review*. doi: 10.1080/17437199.2016.1138871
2. Linna, M. S., Kaprio, J., Raevuori, A., Sihvola, E., Keski-Rahkonen, A., & Rissanen, A. (2013). Body mass index and subjective well-being in young adults: a twin population survey. *BMC Public Health*, 13, 231. doi: 10.1186/1471-2458-13-231
3. Pacanowski, C. R., Linde, J. A., & Neumark-Sztainer, D. (2015). Self-weighing: Helpful or harmful for psychological well-being? A review of the literature. *Current Obesity Reports*, 4, 65-72. doi: 10.1007/s13679-015-0142-2
4. Pacanowski, C. R., Loth, K. A., Hannan, P. J., Linde, J. A., & Neumark-Sztainer, D. R. (2015). Self-weighing throughout adolescence and young adulthood: Implications for well-being. *Journal of Nutrition Education and Behavior*, 47, 506-515.
5. Zheng, Y., Klem, M. L., Sereika, S. M., Danford, C. A., Ewing, L. J., & Burke, L. E. (2015). Self-weighing in weight management: A systematic literature review. *Obesity*, 23, 256-265. doi: 10.1002/oby.20946

Professional Perspectives on Self-Weighing

We asked health practitioners who frequently work with clients seeking assistance with weight management to “weigh in” on this practice.

Do you endorse or discourage self-weighing in your practice?

Jessica Begg, Dietitian, Shift Nutrition (Calgary, AB):

I discourage it. I find that no matter what the number is when someone steps on the scale, it's not going to be positive for recovery. I do, however, often weigh my clients and not tell them the number, so that they can feel comfortable that someone is paying attention to the scale for them and will alert them if their weight is not behaving in a predictable manner. (It always does, so that never is an issue.)

Dr. Susan Wnuk, Psychologist, Toronto Western Hospital Bariatric Surgery Program (Toronto, ON): We [in the Bariatric Program] encourage no more than weekly weighing. Because the purpose of the bariatric surgery is to initiate weight loss that improves obesity-related medical conditions, then over the long-term to maintain that weight loss, it's helpful for patients to monitor their weight.

When is self-weighing appropriate (if ever)?

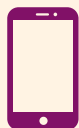
JB: I don't feel that regular self-weighing is appropriate for anyone. If you know you are eating and exercising in a healthy way, your weight will be in a healthy and normal zone. You don't need a scale to tell you this, nor will your weight fluctuate to necessitate keeping track of it.

SW: It really depends on why someone is weighing and how often. It also depends on whether they have an eating disorder or other mental health issues.

How do you communicate to clients about self-weighing?

SW: We strongly encourage patients to focus on outcomes other than a number on the scale, especially improved health, energy and mobility. We provide education about maintaining a weight range that is realistic and healthy instead of a specific BMI or weight. Sometimes that number might be higher than patients initially hope for and we address the issue in more depth when individual patients are weighing more than weekly or are extremely fearful of weighing. In these cases, we explore to see if this is related to concerns that weight loss isn't happening fast enough, extreme fears of weight regain, or if weight is used to evaluate self-worth. Body weight should be used as only one source of information when assessing someone's health.

Dr. Joanne Gusella, Psychologist, Private Practice (Halifax, NS): I have clients focus instead on their energy level; how they feel when walking up a flight of stairs; how well their body is functioning; and their ability to sleep and wake up in morning and eat regular meals. Do they eat to nourish, rather than to numb feelings, enjoy social time, have a healthy life-work balance? I tell clients that when their mind/body has a regular healthy routine to follow, and they accept that there will be times that they will break from that routine and then get back on track, that the body will self-regulate weight without the need for a scale, and emotions will also be easier to regulate because eating and living will be less chaotic.



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