

van Strien, T., Winkens, L.H.H., Broman Toft, M., Pedersen, S., Brouwer, I.A., Visser, M., & Lähteenmäki, L. (2016). The mediation effect of emotional eating between depression and body mass index in Denmark and Spain. *Appetite*, 105, 500-508.

### **Summary:**

There is increasing evidence that there is a causal chain between depression, emotional eating and obesity. This means that the association between depression and obesity can be explained by emotional eating. Emotional eating is eating in response to negative emotions such as depressive feelings. Feeling depressed is normally associated with loss of appetite and subsequent weight loss, however, a depression subtype exists, which is characterized by the atypical features of increased appetite and subsequent weight gain. Emotional eating may be a marker of this atypical depression subtype because it shares with this depression subtype the atypical feature of increased appetite in response to distress such as feelings of depression. In this study we assessed whether the causal chain between depression, emotional eating and obesity can also be found in two European countries with a different prevalence of depression, namely Denmark (high prevalence of depression) and Spain (low prevalence of depression).

We used data from 1396 Danish (742 males and 654 females with a mean age of 53 years) and 1409 Spanish participants (746 males and 663 females with a mean age of 37 years). We assessed self-reported emotional eating (Dutch Eating Behavior Questionnaire), depressive symptoms (Center for Epidemiologic Studies Depression Scale), body mass index (BMI) and change in appetite. All analyses were performed separately for the two countries.

In both countries there was a causal chain between depression, emotional eating and BMI. In Denmark this chain was stronger for participants with increased appetite and for females than for participants with decreases/no change in appetite and for males. This supports depression with atypical features as possible explanation for emotional eating in this causal chain.

In Spain there was no support for depression with atypical features as explanation of the causal chain, because the strength of the chain between depression, emotional eating and BMI was not influenced by change in appetite nor by gender. Instead, *post-hoc* analyses suggested that the strength of the chain was influenced by 'stress of unemployment', with stronger effects for unemployed than for employed people.

The finding that the association between depressive symptoms and body mass index in both countries was explained by emotional eating suggests that depression interventions should take emotional eating into account. Emotional eating can be easily, reliably and validly assessed with the Dutch Eating Behavior Questionnaire. People who have both a high degree of depression and a high degree of emotional eating can be treated with Emotion Regulation Therapy.