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## When you carry the weight of the world not only on your shoulders

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## Summary of main findings

In the first part of this thesis, we focused on associations between BMI and both general and weight-related internal traits and thoughts, and the role of depression in these associations. These internal traits and thoughts were cognitive reactivity and personality (chapter 2 and 7) and body image (chapter 3). In **chapter 2** we found that, in 1249 persons with and without current depressive and/or anxiety disorders, personality and BMI were not consistently related. In depressed/anxious patients, we found that higher scores on cognitive reactivity subscales hopelessness and aggression were associated with higher BMI. In contrast, in healthy controls, we found that all cognitive reactivity subscales were inversely associated with higher BMI. These results were only present in persons with obesity but not in those with overweight or normal weight, suggesting that relationships between high cognitive reactivity and weight only occur in persons with a substantial higher than normal BMI.

In **chapter 3**, using data of 882 remitted depressed patients, 242 currently depressed patients and 325 healthy controls, results showed that a higher BMI was strongly associated with a larger perceptual body size as well as with more body image dissatisfaction. Independent of this, depressive symptom severity contributed to larger perceptual body size, and both depression diagnosis and symptom severity contributed to more body image dissatisfaction. There was no interaction effect between BMI and depression in associations with both perceptual body size or body image dissatisfaction.

After establishing the associations of depression and BMI with several internal traits and thoughts, in the second part of this thesis (chapter 4, 5, 6 and 7) we aimed to study the associations between depression and behavioral factors, and the role of BMI in these associations. In 1750 participants of the NESDA study in **chapter 4**, we found that, as compared with healthy controls, patients with a current and remitted depressive disorder reported significantly more emotional and external eating, but not restrained eating. The higher the depression severity, the higher emotional and external eating, and these associations were independent of a range of sociodemographic, health and unhealthy lifestyle variables, including BMI. Results showed that neuro-vegetative depressive symptoms, associated with depression with atypical features, contributed relatively more to emotional and external eating, while mood and anxious symptoms contributed relatively less to emotional and external eating. Results of the prospective 9-year follow-up data analyses showed little differences between the different depressive course groups ranging from first depressive episode to chronic course. However, the duration of depressive symptoms did

seem to affect the levels of emotional and external eating, with higher duration being associated to higher levels.

In **chapter 5**, using 990 participants of the MooDFOOD depression prevention trial, all suffering from overweight or obesity, we found that persons with a history of major depressive disorder had higher levels of emotional and uncontrolled eating (a concept comparable with external eating), and lower levels of cognitive restrained eating as compared to those without a former depression diagnosis. Higher severity of depressive symptoms was associated with more emotional and uncontrolled eating, while those with higher depressive symptoms showed less cognitive restrained eating. The associations were comparable and not significantly different across the four European countries. We confirmed that neuro-vegetative depressive symptoms were more strongly related to emotional and uncontrolled eating compared to the other symptoms. As opposed to our previous study (chapter 4), almost no significant associations were found between specific mood symptoms, associated to depression with melancholic features, and eating styles.

Investigating 1442 adults with and without depressive disorders in **chapter 6**, results showed that depression severity and current depressive disorder were associated with a worse diet quality as measured with the Mediterranean diet score (MDS), higher intake of sweet foods and higher intake of fast-food/snacks. Emotional and external eating were associated to higher intake of fast-foods/snacks, external eating was also associated to higher total energy intake. Restrained eating was associated to lower total energy intake and intake of sweet foods, and higher MDS. Chapter 6 in addition showed that the association between depression and intake of fast-food/snacks was (partly) mediated by external eating. An indirect association between depression and total energy intake through external eating was also found.

Finally, in **chapter 7**, in 1658 adults with and without current depression, we found a robust association of both current depression as well as depressive symptoms with 4-year weight gain. Except for alcohol intake, this association was independent of the large range of 21 psychological, lifestyle and biological variables and antidepressant use included in this study. There also seemed to be a small indirect effect of TCA use, relating to a limited reduction of the direct association between depression and weight gain, although the effect had little overall impact.