7.2 Summary of Findings

The first aim (chapter 2) was to investigate secular trends in the exposure to risk and protective factors of depression and whether these trends are associated with secular trends in the prevalence of depression. Three birth cohorts of 55-64-year-olds from the population-based Longitudinal Aging Study Amsterdam were examined on depression prevalence using identical methods in 1992 (n=944), 2002 (n=964) and 2012 (n=957). A two-stage screening design was used to identify subthreshold depression (SUBD) and major depressive disorder (MDD). We found that compared with 1992, MDD became more prevalent in 2002 (OR: 1.90, 95%-CI: 1.10-3.28, p=0.022) and 2012 (OR: 1.80, 95%-CI: 1.03-3.14, p=0.039). This was largely attributable to an increase in the prevalence of chronic diseases and functional limitations. Socioeconomic and psychosocial improvements, including an increase in labor market participation, social support and mastery, hampered MDD-rates to rise more and were also associated with a 32% decline of SUBD-rates in 2012 as compared to 2002 (OR: 0.68, 95% CI: 0.48-0.96, p=0.03). We concluded that among late middle-aged adults, there is a substantial net increase of MDD, which is associated with deteriorating physical health. If morbidity and disability continue to increase, a further expansion of MDD-rates may be expected. However, improving socioeconomic and psychosocial conditions may benefit public health, as these factors were protective against a higher prevalence of both MDD and SUBD.

The second aim (chapter 3) was to investigate birth-cohort differences in the incidence of depression and their explanatory factors. A cohort difference in depression incidence (score ≥ 16 on the Center for Epidemiological Depression scale) was examined by comparing two identically measured cohorts of non-depressed 55-64-year olds, 10-years apart, with nine-years follow-up. Baseline measurements took place in 1992/93 (early cohort, n=794), and 2002/03 (recent cohort, n=771). According to the dynamic equilibrium model of depression, potential explanatory factors were distinguished in risk and protective factors. We found a 29% risk reduction in incident depression in the recent cohort, which was primarily related to an increase in protective factors, including an increase in education, mastery and labor market participation. If risk factors, including chronic diseases and functional limitations, had not increased the incidence would have declined further. We concluded that protective factors counterbalanced risk factors in declining depression incidence rates. However, maintaining a good physical health must be a priority to further decrease depression rates.

The third aim (chapter 4) was to investigate secular trends in excess mortality of late-life depression and, if a secular trend was present, to investigate gender differences in the trend, and to find explanatory factors for the trend. We examined secular trends in
excess mortality of depression by using a cohort-sequential-longitudinal study of 4,084 community-dwelling older adults in the Netherlands based on data from the Longitudinal Aging Study Amsterdam (LASA). Six measurement cycles were included from 1992/93 until 2008/09, each linked to the overall 5-year mortality, covering a 16-year time span. We found a downward trend in excess mortality of MDD, adjusted for age and gender, which could not be explained by education, health and lifestyle factors, nor antidepressants use. Gender differences in the trend were not found. No trend in excess mortality of SUBD was found. We concluded a favorable development in excess mortality of community-dwelling older adults with MDD, while those with SUBD did not show a clear trend in excess mortality.

The fourth aim (chapter 5) was to investigate a wide range of vulnerability and stress related variables in a longitudinal design with up to 17-years of follow-up to identify both predictors of MDD and recovery in a population-based sample of older people with SUBD. We examined N=341 eligible participants with SUBD from the Longitudinal Aging Study Amsterdam (LASA) over a 17-year observational period. We found that N=153 (44.9%) recovered from SUBD, N=138 (40.5%) remained chronically SUBD, and N=50 (14.7%) developed MDD. Women, high neuroticism, more chronic diseases, high body-mass-index, smoking and less social support predicted conversion to MDD. Men, low neuroticism and absence of pain predicted recovery from SUBD. We concluded that although older people with SUBD are clearly at risk of developing MDD, the majority did not, even after a long and thorough follow-up. Given the risk factors that were uncovered, targeting and prevention of MDD in those at very high risk is feasible.

The fifth aim (chapter 6) was to examine the long-term prognosis of late-life depression, in terms of both main reasons for attrition and course types, in clinically depressed patients over six-years. We examined the six-year prognosis of 378 patients with late-life depression and identified prognostic factors of an unfavorable course, using data from The Netherlands Study of Depression in Older persons (NESDO). We found that at six-year follow-up, 46.8% had dropped out, 15.9% had an unfavorable course, i.e. chronic or recurrent, 24.6% had partial remission, and 12.7% had full remission. The relative risk (RR) of mortality in depressed patients was 2.5 when compared with non-depressed comparisons. An unfavorable course of depression was associated with a younger age of depression onset, higher symptom severity of depression, pain, neuroticism, and loneliness at baseline. Additionally, partial remission was associated with chronic diseases, and loneliness at baseline when compared with full remission. We concluded that the long-term prognosis of late-life depression is poor, with regard to mortality and course of depression. Chronic diseases, loneliness, and pain may be used as putative targets for optimizing prevention and treatment strategies of relapse and chronicity.