General discussion
In this thesis, the accessibility and effectiveness, i.e. outcome in terms of level of symptomatology and treatment duration, of specialized mental health care for older adults were studied. This chapter summarizes the main findings of the individual studies, and discusses methodological issues and implications for research and clinical practice.

**Summary of the main findings**

**Accessibility of mental health care for older adults**

Based on the order of level of care, the first study in this thesis (chapter 2) investigated the accessibility of mental health care for older adults, using data collected in general practice. We studied developments between 2002 and 2010 in the identification of mental health problems in older adults by general practitioners (GPs), their prescribing of pharmacological medications and referrals to other mental health care providers. Data were used from the NIVEL Primary Care Database, which extracts data from GPs’ electronic medical records in a representative sample of Dutch practices. The study showed that overall there was no change in the prevalence of mental health problems as registered by GPs. The prevalence of some specific diagnoses increased (dementia and alcohol abuse), while others decreased (anxiety and emotional distress). The former could be related to an actual increase of these problems among older adults due to a cohort effect (alcohol abuse) and population ageing (dementia). The latter could be related to decreased prescribing of benzodiazepines for anxiety and emotional distress, since these medications were no longer reimbursed by the basic health insurance. This could have made registration of these diagnoses by the GP less urgent.

Furthermore, the study showed that referral rates of older adults with mental health problems to specialized mental health care increased, while referral rates to other primary care providers remained consistently low. This was a remarkable finding, since the Dutch government was already promoting the treatment of mental health problems in primary care instead of specialized mental health care at the time the data for this study were collected. However, considering that the referral rates to specialized mental health care were lower compared to younger age groups, despite the high prevalence rates of mental disorders in later life, this increase was considered to be in the use of resources.

The second study, based on data from the Psychiatric Case Registers (PCRs), showed an increase in the numbers of older adults treated in specialized mental health care between 1990 and 2004 (chapter 3). This increase could not be fully ascribed to an ageing society, since the proportion of older adults receiving specialized mental health care had also risen. Possible explanations for this finding are a decline in the availability
of informal care, a cohort effect, or the introduction of new interventions for people who had previously gone untreated. Finally, better recognition of mental disorders by older adults themselves and GPs may also have contributed to this phenomenon. Nonetheless, this explanation was not supported by our study on general practice (see above), although the dates of both studies only partly overlapped. Furthermore, the study showed that until 2002, deinstitutionalization of mental health care for older adults took place, with the result that older adults received more outpatient care instead of inpatient care. As a consequence, treatment could be provided to a larger group without a rise in costs.

Data from the MEntal health care Monitor Older adults (MEMO) showed that older adults who entered outpatient specialized mental health care were relatively more often female, single and older compared to the general population (chapter 4). Somatic comorbidity was highly prevalent among clients who entered specialized mental health care, which adds to the complexity of pharmacological treatment. It was found that older immigrants were not sufficiently reached, which is most likely explained by cultural barriers, such as stigma and denial.

**Measuring effectiveness in specialized mental health care for older adults**

The PCRs showed that the majority of older adults in specialized mental health care receive outpatient care, but no data were available to shed light on whether they benefit from this care. Therefore, we developed MEMO (chapter 4). With MEMO, data were collected on a national level to gain insight into the effectiveness of treatment in everyday practice in outpatient mental health care for older adults. Clients with gerontopsychiatric disorders (i.e. no dementia or other cognitive disorders as a primary diagnosis) referred to the department of old age psychiatry in the participating mental health care organizations were included. They were assessed at baseline and monitored at 4, 8 and 12-month follow-up, so called Routine Outcome Monitoring (ROM). For all clients, mental and social functioning were measured with the Health of the Nation Outcome Scales for older adults (HoNOS 65+). Clients with a depressive disorder were additionally monitored with the 15-item version of the Geriatric Depression Scale (GDS-15). Data collection was supported by a web-based system for clinicians, which enabled direct feedback to the clinicians to monitor clients throughout treatment.

A survey of the clinicians involved showed that they hardly used the graphical feedback from the web-based system (chapter 5). Integration of the direct feedback into the electronic patient records and more training on the interpretation and use of feedback in daily practice were seen as primary issues for further improvement. Furthermore,
many clinicians appreciated the support of a research assistant who reminded them to collect the data and entered the scores into the web-based system when they preferred pen and paper versions.

In chapter 6, we studied HoNOS 65+, the primary outcome measure used in MEMO, in more detail. We showed that the use of individual items of HoNOS 65+ is preferable for evaluating care outcomes (chapter 6). Given its internal consistency, the total score still remained acceptable as a more general measure of impairment. Nonetheless, the study found no support for the use of subscales, in which individual items of HoNOS 65+ are combined, to evaluate care outcomes.

Interestingly, rating outcomes differed between professionals according to educational background (nurses/social workers versus physicians/psychologists) for some of the most prevalent gerontopsychiatric disorders, despite training in the use of the instrument. This calls for HoNOS 65+ to be filled out by professionals in the same discipline when evaluating the progression of a client in daily practice.

**Effectiveness of specialized mental health care for older adults**

After the critical appraisal of the design and outcome measures of MEMO, studies on the effectiveness of care were conducted (chapter 7). The functioning of two thirds of the clients largely improved after treatment. HoNOS 65+ yielded effect sizes of 1.08 and 1.23 for the total group and the subgroup of depressed clients, respectively. On GDS-15, filled out by clients with a diagnosis of depression, an effect size of .92 was found. This indicates that clients rated their degree of improvement somewhat lower than the attending clinician, but still a large average effect size was found.

Better functioning at baseline, comorbid personality disorder, somatic comorbidity and the experience of negative life events during treatment predicted poorer outcomes in both the total group and clients with depression on HoNOS 65+, explaining 16% of variance. An explanation for the finding of better functioning at baseline predicting poorer outcome could be that there is less room for improvement. The finding of the influence of comorbid personality and somatic disorders argues for specific treatment strategies in which these are taken into account. On GDS-15 the same predictors minus comorbid personality disorder were found, probably due to low prevalence rates in this subgroup.

In chapter 8, we examined which factors predicted treatment completion within one year of referral to specialized mental health care in clients with affective disorders (i.e. any mood disorder, any anxiety disorder or any adjustment disorder). It appeared that mainly organizational culture rather than client characteristics and clinical functioning predicted treatment completion. In ‘type 1’ organizations, the treatment of two-thirds
of newly referred clients was completed within one year, and only higher symptom severity of the affective disorders predicted long-term care. In 'type 2' organizations, the treatment of one-third of clients was concluded within one year, which was in contrast to type 1 organizations, independent of the severity of the affective disorder. Remarkably, less severity of 'other' symptoms predicted long-term care. The most likely explanation seems to be difference in culture between organizations. In-depth interviews should be conducted to shed more light on these differences in culture.

**Methodological issues**

All three registers used in this thesis have their strengths, but also some limitations, which should be taken into consideration when interpreting the results concerning the accessibility and effectiveness of specialized mental health care for older adults. These issues are described in this section.

**NIVEL Primary Care Database**

The strength of the Nivel Primary Care Database is its representativeness for the general Dutch population and general practices regarding age and gender. A large number of general practices, patients and variables are included over many years. Participating GPs are trained in coding, and data are checked annually for completeness and reliability. Nonetheless, two limitations should be acknowledged for proper interpretation.

First of all, the NIVEL Primary Care Database does not provide information on the type of psychosocial or psychological intervention, nor on the severity of the mental health problems. Collection of such data is difficult to standardize and therefore difficult to collect within routinely recorded input from health care providers.

Secondly, the representativeness of our data on referral of older adults to other mental health care providers might be limited for the following reasons. First, not all practices registered information about referrals. Furthermore, referrals to psychotherapists and organizations for addiction treatment were not included in our analysis, since they were not available for all years. Second, GPs are only obliged to record first referrals and not subsequent referrals, which may have led to an underestimation of referrals to specialized mental health care. Moreover, registration of referrals to community mental health nurses is optional, and in the Netherlands social work services are accessible without a referral from a GP. Therefore, the estimated referral rate is probably an underestimation of all referrals made by GPs and especially with regard to other primary care providers.
Psychiatric Case Registers

The strength of the PCRs is that they have been active for many years in three regions in the Netherlands: Drenthe, Maastricht and environs and Rotterdam/Rijnmond. In these well-defined regions all client contacts with organizations for specialized mental health care are registered and all mental health care organizations in these regions participate in the registers.

However, some forms of mental health care, such as care provided in residential homes, nursing homes or private practices, are not included. Therefore we cannot be sure whether changes in service provision or consumer behaviour caused the changes in service utilization. And although the combination of all three registers makes the data representative for the Netherlands as a whole, some differences in inhabitants with psychiatric problems in these regions compared to other parts of the Netherlands cannot be excluded. Also, PCRs cannot give insight into the treatment a client receives within the different types of care nor can they show whether a client benefits from the care. In addition, PCRs only register data of clients who actually receive specialized mental health care and therefore do not give insight into the number of older adults who have a mental health problem and should have received care.

MEMO

The strength of MEMO is that it is the first nationwide study to focus on the effectiveness of everyday specialized mental health care for older adults. A large number of mental health care organizations participated in MEMO, with a wide spread across the country.

However, there are also some limitations to the representativeness of the data. Participating organizations did not include all new clients who were suitable for MEMO. The response rate is unclear, which may have caused some selection bias. For example, organizations may have omitted ‘difficult’ clients, which may have resulted in more favourable outcomes for effectiveness. Unfortunately, participating organizations were unable to retrieve this information from their own registers. Besides, clients with a primary diagnosis of dementia or other cognitive disorders (psychogeriatric disorders) were not included in MEMO. This should be explicitly acknowledged when our results are compared to those obtained elsewhere, as in many countries, departments of old age psychiatry do not have separate programs for gerontopsychiatric and psychogeriatric populations.

Using a questionnaire that is filled out by clinicians to determine the effectiveness of treatment is often criticized for being biased in a positive way, since clinicians were not ‘blind’ to the intervention or the scores at pre-treatment. Nonetheless, the results
obtained with the self-report GDS-15 were comparable, which suggests that this type of (information) bias is limited.

Furthermore, we did not require the use of a validated diagnostic instrument, such as the Mini International Neuropsychiatric Interview (MINI). Therefore, the accuracy of the DSM diagnosis as registered by the organization may not be optimal. This may affect secondary analyses of subgroups, but not our primary aim. Our main outcome measure (HoNOS 65+) is a general, non-specific outcome instrument that can be used across diagnoses, since we were interested in all older adults receiving treatment in outpatient old age psychiatry for gerontopsychiatric disorders.

The large loss to follow-up of clients during the study could also have biased results on effectiveness in a positive way. Dropout was partly due to deaths and premature withdrawal from treatment, but also because organizations themselves were unable to collect the data. This may have led to selection bias. Including all clients with loss to follow-up in the analyses did reduce the mean effect-sizes, but they could still be labelled as large. Therefore, the loss to follow-up minimally influenced our results. Unfortunately, a large loss to follow-up seems inherent to a naturalistic study design.

Finally, in MEMO there is no control group. Therefore, it is unclear whether improvement in functioning is due to the mental health care treatment received, or whether it was a natural course. Clients enter mental health care at a low point in their problems, so some degree of improvement is to be expected anyway. As stated in chapter 7, we do believe that the improvement is so large that this cannot all have been the result of natural course. And although a control group is lacking, the results of MEMO indicate which groups of older adults benefit more or less from treatment, which is useful information for clinical practice. For instance, our results indicate that specific treatment strategies targeted at personality problems or comorbid somatic disorders may further increase the effectiveness of mental health care for older adults. For these vulnerable groups in particular, evidence based treatment is lacking.

**Implications for research and practice**

Some implications for research and clinical practice can be derived from the studies in this thesis, including the following recommendations:

- Conduct a population-based study to determine the number of older adults in the community who suffer from any type of mental disorder, how many of them receive mental health care and from which provider, and whether this matches the preferences of the clients themselves and their symptom severity.
• Obtain more information on the effectiveness of specific treatments in the daily practice of mental health care.
• Provide support for clinicians in generalized mental health care in the treatment of older adults with mental health problems.
• Improve the implementation of ROM in general.
• Improve the use of ROM-data by clinicians in daily practice.
• Improve ROM for benchmarking.
• Study the influence of organizational culture on care outcomes.

In the continuation of this section, these implications will be further elaborated on.

The need for a population study

In the general introduction we referred to the filters described by Goldberg & Huxley.7 The first three filters in the accessibility of mental health care for older adults are: 1) the decision of the older adult to seek help; 2) the ability of the GP to detect mental health problems; and 3) referral to other mental health care providers.

The data registers used in this thesis provided a picture of the prevalence of diagnosed mental health problems by GPs (filter 2) and referrals to other mental health care providers (filter 3). For instance, data from the NIVEL Primary Care Network provided information on the prevalence of diagnosed, subclinical minor and major depression (3.5%) and anxiety (2.9%) as registered by GPs, which seemed to be substantially lower than the prevalence of 12% and 10% respectively found in the Longitudinal Aging Study Amsterdam (LASA), a study conducted among the Dutch general population of older adults.8,9 This discrepancy may be caused by different, non-mutually exclusive factors: 1) not all older adults with a mental health problem perceive the need for care and consult their GP10-11; 2) the GP does not recognize the presence of a mental health problem because of factors such as ageism (the perception that these problems are a natural part of the aging process), the presence of physical illness, stigma surrounding psychological problems or lack of knowledge regarding treatment options12-18; 3) GPs do not always register a diagnosis in their Electronic Medical Records, although they may actually have identified a mental health problem as indicated by the prescription of medication and notes in free text.19-20

However, the registers used in this thesis could not give a complete picture of the total number of older adults in the community who suffer from mental disorders, how many of them actually receive mental health care and from what provider, and whether
this matches their preferences and symptom severity. A population study would be needed to answer these questions. The existing population study LASA[1] covers only a small selection of mental disorders and the data are relatively old. The Netherlands Mental Health Survey and Incidence Study (NEMESIS) originally focused on people up to the age of 65 years, with meanwhile a relatively small cohort of 65 to 75 year olds, but not the oldest old. It would therefore be highly recommended to develop a NEMESIS study of older adults, including the oldest old of 75 years and older, to attain an even better understanding of the accessibility of mental health care for older adults.

**More information on the effectiveness of specific treatments in daily practice**

To gain more insight in the effectiveness of specialized mental health care for older adults, information on the specific treatment clients received is needed. For instance to provide insight into whether specific treatments are effective or not in old age psychiatry, or whether clients are treated according to valid guidelines. As reported in chapter 4, in MEMO minimal information was collected on the treatment a client received. Reason for this was to make data collection less burdensome for clinicians. Data were collected on the basis of a list of eight general categories (1. individual psychological treatment, 2. psychological treatment in a group, 3. relationship therapy, 4. electro-convulsive therapy, 5. activating techniques, 6. individual supportive counselling, 7. supportive counselling for the client and his or her support system, 8. psychopharmacological treatment). For each of these categories, the clinician had to check whether a client had received that type of treatment in the last four months. Results on type of treatment in relation to outcome or treatment duration were not reported in this thesis, because the validity of the data was questionable and the categories were not discriminative enough. Therefore, more detailed information is needed on type of psychological therapy or psychopharmacological medication and the sequence in which treatments are given during treatment.

**Support for clinicians in generalized mental health care in the treatment of older adults with mental health problems**

As described in the general introduction, current policy is focused on the substitution of treatment in specialized mental health care settings with ‘lighter’ forms of care in so-called generalized mental health care. As the study in chapter 2 showed, relatively few older adults with mental health problems are referred to primary care providers (currently belonging to generalized mental health care). In 2010, 1.6% of older adults

[1] www.lasa-vu.nl
with mental health problems were referred to primary care providers, compared to 9.0% of younger adults. This low referral rate indicates that the majority of professionals working in generalized mental health care are not experienced in the treatment of older adults. However, psychological treatment of older adults requires adjustments such as: more treatment in groups, use of different terminology, a greater emphasis on psycho-education, applying more motivational techniques, more repetition of the skills learned and simplification of assignments and homework. Training of professionals in generalized mental health care is recommended to meet the specific needs of older adults. The substitution of care also underlines the importance of monitoring the effectiveness of treatment of older adults at this level as well.

**Improving the implementation of ROM in mental health care**

As described in the general introduction, national policy currently promotes the implementation of ROM in mental health care nationwide, with the intention of gaining insight into and promoting the effectiveness of the care delivered. The question has been raised whether a single type of data collection can serve both clinicians and clients in individual treatment as well as facilitate benchmarking, because each objective requires specific study designs. MEMO indicates that targeting multiple goals with one data collection is problematic. MEMO was designed for research purposes, but by introducing measurements in between pre and post measurement, we hoped that clinicians would find the information useful for their individual treatment and that this would increase their motivation and hence the implementation of MEMO. However, as our study showed (see chapter 5), the majority of the clinicians did not use the feedback on scores, mainly because the measurement points every four months did not suit their treatment evaluations. Moreover, not all clinicians thought that scores on HoNOS 65+ were useful for their clinical practice (“too general information”) and would have liked to see other instruments added. On the one hand, this indicates that it is hard to design a single data collection to serve multiple goals and multiple organizations nationwide. On the other hand, science moves forward, and solutions can be found. For example, the use of different instruments to assess depressive symptoms can be made comparable by the use of standardized scores.

Lessons learned from the implementation of MEMO can also serve as input to improve the implementation of ROM in general. MEMO was implemented completely top-down and some participating organizations got data collection better off the ground than others. Therefore, we conducted a study on the supporting and hampering factors in the implementation of MEMO, which was similar to the study of Oudejans et al. in addiction care. Our study showed that the following factors had the greatest impact on
the implementation of MEMO: knowledge about the project among clinicians support from the team manager and material resources.\textsuperscript{30} When these factors were present they were supportive, but when they were absent they were automatically hampering. This indicates that, for a successful implementation of ROM, it is important that all clinicians are informed about the reasons why it is implemented and also that everyone receives the same information. This prevents ambiguities from arising. Team managers should take care that the right information is given to all clinicians and make sure that they constantly keep clinicians informed about the process. They also should facilitate practical support for clinicians, such as administrative support, training and feedback on results. Moreover, material resources, such as a digital system in which data are automatically processed and that is linked to the Electronic Medical Record, enhance the implementation of ROM.

**Improving the use of ROM-data in daily practice**

In line with other publications, the results of MEMO underline the need for training of clinicians in interpreting the scores of instruments and teaching them how to use this information in clinical practice (see chapter 5).\textsuperscript{31-32} A breakthrough collaborative, in which teams from different organizations form a network, which facilitates the exchange of best practices and also the diffusion of scientific evidence into clinical practice, may facilitate this process.\textsuperscript{33}

**Improving ROM for benchmarking**

When focusing on the use of ROM for benchmarking, an ongoing discussion is whether self-report instruments are better used to evaluate effectiveness, because these would give more objective results than if a clinician were to fill out the scores.\textsuperscript{26} In MEMO, the effect size of HoNOS 65+, filled out by the clinician, was somewhat higher compared to the effect size of GDS–15, completed by the client, but did not lead to different conclusions about progress. This finding refutes concerns about manipulation of outcome data by clinicians to perform better. Nonetheless, an option would be that a research assistant fills out the questionnaires instead of the clinician.\textsuperscript{34} The advantage of this is that the assistants would be ‘blind’ to the treatment a client receives and would reduce the burden of clinicians. However, it should be taken into account that a lot of coordination is required to make sure the results of the questionnaires are available to the clinician at the time of contact with the client. Also, in old age psychiatry some of the clients are attended at home, which complicates coordination and requires an additional time investment from these assistants. For some diagnostic subgroups, administration of outcome questionnaires by telephone can be accurate, but in general, the results are disappointing.\textsuperscript{35}
Benchmarking is said to be impossible to conduct without knowing which confounders should be controlled for – so-called case mix variables. Case mix variables control for the relative difficulty of the population that an organization may have to deal with. MEMO indicates that in older adults, level of functioning at intake, comorbid personality disorder, somatic comorbidity and the experience of life events during treatment influence outcome (see chapter 7). Together, these factors explained 16% of the variance, which is rather high given the general nature of the measures we included. The use of more detailed measures for these factors will probably increase the variance explained, encouraging their use as case mix variables.

**Studying the influence of organizational culture on care outcomes**

Our study in chapter 8 showed that different types of organizations can be distinguished when it comes to concluding the treatment of clients. In MEMO, no data on characteristics of the organizations are present, which makes it impossible to conduct further study on our findings. Also, based on our data, we cannot decide which type of organization is preferred: ‘type 1’ organizations, in which the majority of clients complete treatment within one year and symptom severity predicted long-term care, or ‘type 2’ organizations, in which the majority of clients still receive treatment after one year and fewer ‘other’ symptoms predicted long-term care. For instance, it could be that clients in ‘type 1’ organizations re-enter care again soon after their treatment is terminated, or that clients in ‘type 2’ organizations are kept in care unnecessarily long. Therefore, the influence of organizations’ characteristics and culture on care outcomes should be studied in more detail.

**To conclude**

This thesis gave insight into developments in the accessibility and effectiveness of mental health care for older adults. We now know how many older adults are registered in general practice as having mental health problems (the number remains stable over time) and how many of them are referred to other mental health care providers (increasingly to specialized mental health care). We also know how many older adults enter specialized mental health care and what type of care they receive (increasingly outpatient mental health care). However, a population study would be needed to determine how many older adults in the community actually suffer from a mental health problem, how many of them actually receive mental health care, from what provider, and whether the care matches their preferences and symptom severity. Only then can statements be made about the under- or overtreatment of mental health problems in older adults.
This thesis also shed light on the effectiveness of treatment in outpatient old age psychiatry. Based on our results, the vast majority of clients benefit from care (in two-thirds of clients functioning improves substantially). Our study also highlighted which factors influence outcome (level of functioning at baseline, comorbid somatic disorder, comorbid personality disorder and the experience of negative life events during treatment). We also know which factors predict whether treatment is concluded within one year (organizational culture probably has a bigger influence than client characteristics).

A great challenge for the upcoming years is the implementation of a nationwide ROM in all levels of mental health care that does justice to the target group of older adults (including psychogeriatric disorders), is workable for clinicians and provides useful feedback, and also produces relevant information for benchmarking and research. This thesis adds to the discussion on the relevant developments in health care policy.

References


