

# SUMMARY & GENERAL DISCUSSION

In the last chapter of this thesis the main findings will be summarized and discussed. We developed and tested a Collaborative Care Program (CCP) managed by (community) mental health care nurses with the aim to improve the quality of care for a population of patients with severe personality disorders. The management of recurrent suicidal behaviour is one of the most urgent and challenging issues among patients with personality disorders. In this regard, we aimed to increase our understanding of suicidal behaviour combined with borderline psychopathology by means of two epidemiological studies.

Initially, we will summarize the main findings of each chapter in this thesis. Subsequently, we will discuss our findings regarding outcomes and feasibility of CCP in relation to the specific characteristics of patients with severe personality disorders, organizational aspects of treatment and care, and characteristics of nurses. Finally, methodological considerations and recommendations for future research will be elucidated.

## Summary of the main findings

**Chapter 1** described the study protocol of our comparative multiple case study investigating the feasibility and preliminary results of a CCP for patients with severe personality disorders.

**Chapter 2** elucidated the content of CCP in more detail. The CCP was elaborated in a manual for professionals and patients. It consists of several aligned structured interventions divided in three stages: preparation, treatment and evaluation. The preparation stage includes seven activities in order to provide a treatment frame. These activities are: introduction of CCP, forming of a Collaborative Care team, making a time line concerning the treatment history of the patient, explication of collaboration agreements, drafting a crisis card, need assessment and establishing the treatment plan. The treatment stage consisted of four main components: early recognition and intervention of problem behaviours, problem solving treatment, life orientation and psychoeducation. The goals, as described in the treatment plan, are evaluated every three months within the Collaborative Care team.

In **Chapter 3** we presented the preliminary results of the CCP compared to Care as Usual and investigated the factors within the CCP which were indicative for positive or negative results. We found a significant decrease in borderline symptoms in the CCP-group compared to Care as Usual. Several other process indicators showed clinically relevant effect sizes in favour of CCP: 'satisfaction with care' and 'quality of the therapeutic relationship' among patients; 'satisfaction with care' and 'perceived burden' among informal carers; and 'quality of the therapeutic relationship' among nurses. Three core elements of the CCP contributed to the positive

results: 1) improved goal orientation in the treatment process; 2) a stronger appeal to patients' self-management skills; and 3) improved skills in establishing and maintaining effective therapeutic relationships. Although far from 100% successfully implemented, our data suggest that not only patients, but also their informal carers and the nurses involved in the treatment benefited from CCP.

In **Chapter 4** we analyzed the process of execution of CCP, and identified hampering and fostering factors in this process. In 57% of the cases CCP was moderately to well applied as opposed to 43% of the cases in which CCP was poorly carried out. The execution of CCP was most successful in the preparation stage. Four interdependent factors were identified explaining the process of application. Factors were related to: 1) the context in which CCP was executed; 2) the patient population; 3) the CCP itself and 4) the individual application of CCP by the nurses. The key to successful execution appeared to be the individualized application of CCP by the nurses. At the same time, this step proved to be the most complex due to a more general unfamiliarity with working according to a protocol and problems in adjusting this specific protocol to the individual patient, poor agenda setting and the avoidance of core problems, e.g. discussing suicidal behaviour or lack of progress in treatment. In conclusion, although challenging, effective execution of CCP was achieved in a part of the nurses and preliminary results of CCP are encouraging. This indicates that CCP is feasible and might be beneficial to patients, their informal carers and nurses.

**Chapter 5** described the perceived needs of care and health care utilization of persons with suicidal ideation compared to those without suicidal ideation in a large sample of patients with current depressive or anxiety disorders, derived from the NESDA study. We found that persons with suicidal ideation had higher odds for perceived unmet and met needs than persons without suicidal ideation. We also found that persons with suicidal ideation had more intensive contact with mental health care providers than persons without suicidal ideation. Our data also clearly showed that differences in perceived needs and health care utilization were largely explained by severity of the axis-I symptomatology.

In **Chapter 6** we studied the role of comorbid BPD traits in relation to recurrent suicide attempts in a large sample of patients with depression and/or anxiety disorders. In line with our expectations, borderline personality traits were strongly associated with recurrent suicide attempts within this large cohort of persons with lifetime depressive and anxiety disorders. Borderline traits become progressively more important in patients with increasing numbers of suicide attempts. Of the different BPD traits, particularly internalizing anger problems were significantly and

independently associated with recurrent suicide attempts. The other characteristic that showed a significant and independent association with recurrent suicide attempts was a lifetime diagnosis of dysthymia.

## Discussion of the main findings

### *CCP as a promising treatment model for patients with severe personality disorders*

Given the severely-ill patient group and the lack of treatment options we decided to develop a Collaborative Care Program for this target group, and next to conduct a comparative multiple case study as a first step to assess whether CCP may be an adequate treatment model for patients with (severe) personality disorders. It is striking that, even with a very small sample size ( $n=26$ ), the CCP had a statistically significant effect on borderline symptomatology when compared with CAU. In combination with clinically relevant effect sizes regarding the variables 'satisfaction with care' and 'quality of the therapeutic relationship', we may conclude that CCP is a promising intervention in the treatment of patients with severe personality disorders. This is an encouraging message, since the subgroup of patients for whom CCP was developed occasionally falls into a void between psychotherapy and current alternative treatments of relatively poor quality.

The specific features, problems and needs of our target group of patients with severe personality disorders, require a systemic intervention, like Collaborative Care, with more emphasis on the care perspective than on the cure perspective. In the following sections, we will discuss our findings regarding outcomes and feasibility of CCP in relation to the specific patient characteristics, organizational aspects and characteristics of nurses.

### *CCP and specific patient characteristics*

Collaborative Care was originally developed for the treatment of patients with chronic complex conditions, like anxiety, depressive and bipolar disorders. Our patient population with severe personality disorder and a mean treatment history of over 15 years fits within this comprehensive target group of patients with chronic and complex conditions. We have shown that acceptable execution of CCP was achieved in the majority of cases, and was most successful in the preparation stage. We have also shown that the results of CCP were promising. In the following we will discuss to which extent CCP appeared to be an adequate answer to the specific characteristics of patients with severe personality disorders.

The activities of the preparation stage were aimed at providing a shared treatment frame from which the treatment could start. Due to features of a borderline personality disorder, e.g. fear of abandonment and unstable interpersonal relationships, 'noise' in the communication easily arises, and consequently reduces continuity and effectiveness of care. Moreover, due to frequently present comor-

bidity and social problems regularly many care providers are involved. Therefore it was of importance to improve the collaboration with both stakeholders and informal carers because it might diminish the fragmented communication, clarify responsibilities and promote coordination of care. As it turned out, this increased collaboration as elaborated in CCP appeared to be an adequate answer, probably because of the exchange of information, unambiguous attitude of professionals and shared treatment objectives. The more intensive involvement of informal carers within the Collaborative Care team led to more mutual understanding and to a decline of the burden among informal carers.

Considering the long treatment history of patients and the associated elevated risk of suicide due to (unsuccessful) treatments, making a so-called timeline was considered especially helpful. In this timeline previous experiences about disease and treatment were summarized and discussed to identify helpful coping strategies, effective treatment-elements, and supportive therapeutic relationships. Based on this timeline the current therapeutic relationship with the nurse was evaluated and collaboration agreements were made. It helped patients to recognize recurrent patterns in ineffective coping strategies and to explicate expectations regarding collaboration towards the nurse. Because of the difficulties patients have with maintaining stable interpersonal relationships and their ambivalent care seeking behaviour, the importance of an adequate working alliance is evident. The way in which the establishment of a working alliance and treatment frame was elaborated in CCP appeared to be appropriate and feasible for almost all patients.

The different components of the treatment stage of CCP have appealed to the promotion of self management and problem solving skills of patients. However, occasionally, due to their ongoing dependency of mental health care, many patients identified themselves strongly with their patient role. As a result they seemed to have unlearnt skills necessary to take responsibility for their own lives and to cope with daily problems. Moreover, patients showed ambivalence towards the appeal to self management skills, which were challenged during e.g. problem solving treatment. They realized that the key to recovery was partly into their own hands, while they simultaneously showed resistance against the use of self-management and they expected that the nurse would solve their problems. They reported fear of failure and fear for new disappointments when their plans would not work as a result of which they did not try to execute the plans made. In some cases, nurses assumed that patients did not dare to change their situation out of fear that the treatment would stop when they would be doing better. With regard to the element of life orientation as elaborated in CCP, patients have regularly mentioned that making plans for the future was on bad terms with their daily struggle for life as a result of chronic suicidal feelings. Despite these ambivalences, the appeal to their responsibility and self management was valued positively.

The increased attention to the evaluation of treatment objectives and increased goal orientation during treatment made patients more aware about why and with which objectives they received care. At the end of the research period several patients concluded that they were capable to survive without treatment and to go on with their lives on their own.

Our findings regarding ambivalences of patients with severe personality disorders seem consistent with the findings from the first NESDA study regarding perceived needs of suicidal patients. Suicidal patients report more met and unmet needs than non-suicidal patients, despite frequent health care utilization (Stringer et al, 2013). Meeting the needs of suicidal patients appears to be difficult due to patients' prototypical cognitions of being untreatable, being too worthless to be treated, being incapable of profiting from any help, fear of stigma, etc. (Bruffaerts et al, 2011). In our second NESDA study we have clearly shown that borderline traits are associated with recurrent suicide attempts (Stringer et al, 2013). This implies that borderline related chronic suicidal behaviour exists, which contributes to the risk of demoralization and limits the possibility of future-oriented thinking (Paris, 2004; MacLeod et al, 2004). Professionals are at risk of being contaminated by this demoralization. In our CCP study we have explicitly addressed this recurrent suicidal behaviour: the 'therapeutic road trip' has made patients as well as nurses responsible for a safe 'journey'; suicidal behaviour has been routinely monitored and subsequent attention has been paid to crisis management and early recognition and intervention of suicidal behaviour. Although we did not find significant results on the outcome measures referring to suicidal behaviour, difference scores at both follow ups were in favour of CCP. In addition, we found medium effect sizes for 'satisfaction with care' and 'quality of the therapeutic relationship' which might imply that patients appreciated the increased attention to their suicidal feelings. Among nurses, the quantitative data regarding the effects on attitudes towards suicidal and self harm behaviour did not change spectacularly, but the quality of the therapeutic relationship was assessed more positively. In the qualitative interviews nurses reported increased confidence and skills to discuss suicidal behaviour, partially explained by the support of supervision where nurses were encouraged to raise the subject.

Finally, as recent research indicates, many patients with a personality disorder suffer from long-term functional and social impairments, despite several treatments. These functional and social impairments seem to be less responsive to change (Zanarini et al, 2010; Gunderson et al, 2011; Bateman, 2012). Several patients in our CCP study confirmed this limited responsiveness to change regarding their impairments.

Moreover, despite our effort to develop an easily-accessible intervention program, it appeared that some patients of our target population even had dif-

difficulties with the appeal to self management as elaborated in CCP, especially those with a low IQ, severe cognitive problems and those who suffer from very poor ego-strength. In those cases it appeared to be difficult to offer CCP in such an individualized way that it matches each patient's needs and capabilities. Maybe a very small proportion of patients is vulnerable to such an extent that a supportive holding environment is the highest attainable. Professionals and especially nurses should then be focussed on and supported in handling and limiting the destructive and disruptive behaviours of these patients and in preventing demoralization.

To resolve ambivalence, prototypical cognitions, dependency and functional and social impairments requires huge efforts, dedication and specialized expertise of the involved professionals. Our CCP provides a partial response to the perceived problems of patients with severe personality disorders. While occasionally patients are ambivalent towards the benefits of CCP, simultaneously they confirm that the program stimulates their autonomy and self management. It promotes taking more control of their lives.

Taking into account our experiences regarding the appropriateness of CCP for patients with severe personality disorders, an important question which has to be answered is how efficiency could be increased by allocating patients to the best suitable treatment. Allocating patients to the best suitable treatment reduces the risk of unfinished treatments and drop out. Subsequently, efficiency and adequate use of scarce financial sources will be increased (Barnicot et al, 2011). For example, psychotherapy contributes to higher quality of life, reduced psychopathology and destructive behaviour, and sustainable changes in personality, but the diverse models differ in the amount of support they offer and the degree in which confrontational techniques are used. The choice for a specific model should be attuned to the patient characteristics present, e.g. ego-adaptive capacities, motivation and abilities to establish and maintain a working alliance to increase the chance for success (van Manen et al, 2012; Barnicot et al, 2012).

The patients of our target population have characteristics which make them even more vulnerable, in particular regarding these ego-adaptive capacities, motivation and abilities to establish and maintain a working alliance. Combined with (axis I) symptom severity, problems in the social context, and socio-demographic features, e.g. limited social support, unemployment, financial problems and lower education level, they may not be eligible to any of the available psychotherapies in advance (McMurrin et al, 2010; Barnicot et al, 2011; van Manen et al, 2012). Psychotherapy occasionally even causes iatrogenic harm, because the strong emphasis in psychotherapy on self-reflection, autonomy and motivation underestimates the enormous deficits of many borderline patients (van Luyn, 2007). It could be more efficient and perhaps even advisable to directly refer these patients to alternative

treatments. These treatments should aim at improving quality of life, promoting rehabilitation and recovery and controlling risks in order to prevent unsuccessful experiences and avoidable high costs. These alternatives to psychotherapy are to some extent available: our CCP, (F)ACT with integrated psychotherapy, or Interpersonal Community Psychiatric Treatment (Horvitz-Lennon et al, 2009;Koekkoek et al, 2012;Knapen, 2013).

Concerning the patients for whom even CCP was too hard to accomplish, it is good to realize that there is no such thing as a quick fix which fits all. As Bateman suggests, based on all current knowledge and experiences of the past decades concerning the treatment of patients with personality disorders, there is still an urgent need to generate an increasingly coherent theory of the borderline personality disorder, underpinned by an understanding of mechanisms of behavioural change. Especially the functional and social impairments which appear to be less responsive to change need to be better understood in order to find solutions to resolve these impairments. This improved theory should then be translated into carefully crafted therapeutic packages (Bateman, 2012).

In conclusion, with our CCP we expand the supply of available treatments for patients with (severe) personality disorders, but modesty is warranted given the severe and complex problems of these patients.

#### *CCP and the organization of (Community) Mental Health Care*

One of the objectives of Collaborative Care is to optimize the continuity and coordination of care. The intended collaboration with stakeholders required pro-active communication and collaboration across partitions of different health care organizations, e.g. addiction health care services, supervised independent living facilities and family practitioners. Although nurses occasionally had difficulties to fulfil the role of Collaborative Care manager, collaboration with stakeholders increased and consequently continuity and coordination of care improved, according to the nurses. The forming of a Collaborative Care team, including the patient, his/her informal carer, the nurse and the psychiatrist contributed to the improved continuity and coordination of care. New information or views upon the patients' problems came up from informal carers or stakeholders, and collaboration agreements were more easily fulfilled because everybody was involved in making these agreements and thus commitment regarding the treatment plan improved. This also contributed to increased goal orientation.

However, some remarks have to be made in relation to the positioning of CCP within the CMHC setting. As we have stated in the general introduction, the patients of our target population do not easily fit within illness-oriented treatment programs due to the severity of their illness and their multiple comorbidities. Therefore, CCP has been positioned within a CMHC setting. This seemed appropriate

because of its perspective on care instead of cure, outreaching possibilities and the fact that nurses within this setting are responsible for the main part of treatment. This made the positioning of the nurse as Collaborative Care manager uncomplicated. The CCP offered the previously missing structure in the treatment of these patients. However, based on our findings and experience during this research project there are also several arguments why the positioning of CCP within a CMHC setting might be subject of debate.

A first counter-argument for positioning CCP within CMHC is the main focus of treatment. The focus of CMHC is predominantly on the treatment of patients with axis I disorders, such as schizophrenia, other psychotic disorders, bipolar and depressive disorders. The treatment of patients with axis I disorders requires a different therapeutic approach than patients with severe personality disorders. The nurses have repeatedly mentioned shifting between these approaches as difficult. Moreover, one of the findings of chapter 5 was that the treatment of patients with severe personality disorders within a CMHC setting requires a different organizational policy: policy regarding degree of outreach, intensive outpatient treatment and short admissions, and criteria for in- and outflow have to be adapted in such a way that they are suitable for the population of patients with severe personality disorders. This finding is consistent with previous findings regarding the psychiatric management of patients with severe personality disorders (Horvitz-Lennon et al, 2009; Koekkoek et al, 2009a; Fiselier et al, 2010). Especially the management of recurrent suicidal behaviour, specific to patients with severe borderline personality disorder, requires adequate risk assessment which differs from the risk assessment of suicidal behaviour as part of axis I disorders. Patients with BPD have a chronically elevated risk for suicide, but on top of this chronic risk an acute risk can occur in relation to a major depressive episode, substance abuse, recent negative life events or discharge (Links and Kolla, 2005; Gunderson, 2008). To disentangle the suicidal presentations of patients with BPD requires advanced skills and experience (Paris, 2007). To manage the suicidal risk organizational preconditions and policies are required (Jobes, 2006; Paris, 2007).

Accordingly and as a second counter-argument, nurses experienced limited support of academically trained specialists in the treatment of personality disorders during the application of CCP. More support is advisable concerning specific expertise regarding maintaining effective therapeutic relationships and dealing with the accompanying countertransference feelings, risk assessment and associated decisions about (involuntary) admissions because of suicidal threats. Due to the organizational structure of CMHC this support is indeed insufficiently available. Only towards the end of the research period, psychologists and incidentally the psychiatrist attended the supervision sessions. Continuous supervision concerning the treatment of axis II psychopathology was considered as a precondition for adequate treatment

of patients with severe personality disorders. Supervisors with sufficient specific expertise and experience are generally not close at hand within a CMHC setting.

The best possible positioning of CCP within mental health care partially depends on local organizational differences. But it mainly depends on how one categorizes this patient population: do they belong to the population of patients with (severe) personality disorders or do they belong to the severe mental illness (SMI) population with several distinctive features? The recent initiatives to develop treatments which would better suit this patient population have followed this same dichotomy. Integration of psychotherapeutic models with (F)ACT is based on the assumption that as many patients as possible should be offered psychotherapy and that existing barriers should be eliminated. Our CCP and e.g. Interpersonal Community Psychiatric Treatment are based on the assumption that these patients belong to the SMI population and that a psychotherapeutic-oriented treatment may overburden these patients and cause iatrogenic harm to them. Irrespective of the organizational positioning or principles of treatments for patients with severe personality disorders, several preconditions are required: a certain critical mass of patients in order to enable professionals to build up experience in the necessary skills and attitude; easy access to inter- and supervision; possibilities to easily upgrade the intensity of (outreaching) care (van Luyn, 2007; Gunderson, 2008; de Bie et al, 2009; Fiselier et al, 2010).

In conclusion, the results of the CCP project indicate improved continuity and coordination of care, because of increased collaboration with stakeholders and informal carers. To optimize the chances for success of CCP the aforementioned skills and expertise must be available in a sufficient degree and organizational policy and back-up must be guaranteed to be able to approach this target group adequately within a CHMC setting.

#### *CCP and characteristics of nurses*

Nurses have a prominent position in Collaborative Care models as they often function as Collaborative Care managers, who are responsible for both an optimal organization of treatment and a proper implementation (Katon et al, 2001). Initially, the nurses included in the study were eager to improve their skills regarding the treatment of patients with severe personality disorders. We have seen that several nurses were capable to implement CCP effectively, especially those with an affinity for personality disorders, a higher education level and an eclectic working style. We have also shown that execution was most successful in the preparation stage of CCP, the stage in which a shared treatment frame is established. Several preparatory interventions of the CCP were highly valued by both nurses and patients. Nurses held the opinion that the CCP helped them by providing necessary structure in taking care of this specific patient group.

Our positive effects of a shared theoretical framework for treatment, improved attention to the therapeutic relationship, and supervision are consistent with findings of previous research (Kerr et al, 2007;Thompson et al, 2008;Amianto et al, 2011;Koekkoek et al, 2012) and to some extent remain valid independent of full implementation of CCP. Another explaining factor for positive results appeared to be the increased goal orientation and subsequently an improved management of the treatment process. This management of the treatment process replaced the unstructured care and took place independently of the strict application of CCP. Managing the treatment process was a recurrent theme during the supervision sessions. The importance of managing the treatment process has been confirmed as a key factor in the treatment of patients with personality disorders (Bateman, 2012;Kaasenbrood and van Meekeren, 2012).

We have argued that nurses need to be capable to apply composite intervention programs, in order to meet the specific problems and needs of the patient population. Many of these problems and needs belong (at least partially) to the nursing intervention domain, as they are related to living with the consequences of a chronic psychiatric illness: a combination of (mostly reduced) psychopathological symptoms and severe social and interpersonal problems. With an eye to the future we may be optimistic about the capacities of nurses applying composite intervention programs, because the tasks mentioned in the new nursing profiles bear close resemblance with the core elements of Collaborative Care (Lambregts and Groten-dorst, 2012). Future education programs should train nurses thoroughly in the required skills and attitude necessary for applying composite intervention programs, e.g. Collaborative Care and (F)ACT models. Besides general knowledge regarding diverse psychopathologies, this training should include organizational skills, skills regarding methodical execution of protocolized interventions and skills regarding clinical reasoning and eclectic working. Prejudices towards patients with BPD need to be addressed in education programs (Bodner et al, 2011;McGrath and Dowling, 2012). The ambition of the Dutch government to increase the quality of bachelor nursing education programs might support this development.

Nevertheless, we have also seen that several nurses had substantial difficulties carrying out CCP with the patients of our target population. There are several explanations for these difficulties. Partially they can be attributed to three main system flaws. Firstly, due to the current lack of distinction in tasks and responsibilities between nurses with a vocational education level and those with a bachelor education, the bachelor competencies have been neglected by nurses themselves, as well as by managers. Bachelor-educated nurses have not been encouraged (or (financially) rewarded) to use their competencies effectively. Secondly, the current bachelor education programs do not offer nurses adequate knowledge and skills regarding the specific patient population or skills regarding the application of com-

posite intervention programs. As a result the current nurses are disadvantaged with respect to up-to-date knowledge and skills. Thirdly, until recently standards were scarce to determine the desired level of professional functioning. Since several composite intervention programs are now available to nurses, it also becomes possible to set these standards for professional functioning. Educational institutions know which levels should be attained and managers know what to demand from bachelor-educated nurses. Apart from these system flaws and more widespread than only the findings of our CCP study, under the guise of professional autonomy or high work pressure, nurses occasionally exhibit non-commitment towards their responsibility to work according to protocols and guidelines (Goossens et al, 2008; Koekoek et al, 2009a; Koekoek et al, 2009b).

To date, CCPs have predominantly been tested for effectiveness among patients with anxiety, depressive or bipolar disorders and mainly in primary care settings (Thota et al, 2012; Woltmann et al, 2012). Nurses have shown to be capable to effectively fulfil their role as collaborative care managers in those CCPs (Ijff et al, 2007; van Orden et al, 2009; Huijbregts et al, 2012). However, compared to CCPs for those disorders, the application of CCP to patients with severe personality disorder might overburden nurses with only the current bachelor education. The persistent threat of suicide (attempts) and accompanying risk assessment concerning safety issues, the feelings of countertransference specific to borderline psychopathology, multiple comorbidities and ambivalent care seeking behaviour require enhanced capacities compared to other psychopathology. In the same way as psychotherapy often pushes patients to their limits, one could argue that nurses are being pushed to their limits by the task of carrying out the CCP for this specific patient population. The question is, however, whether the borders should be extended by raising the expectations towards bachelor-educated nurses or whether we should accept these borders by writing off bachelor-educated nurses with respect to this specific patient population in favour of clinical nurse specialists? In line with the new professional profiles it is justified to pose that future bachelor-educated nurses should be competent to execute composite intervention programs irrespective of the target population. In line with the new professional profiles in which two levels of nursing are distinguished, clinical nurse specialists could coach nurses on the job in the application of CCPs (Lambregts and Grotendorst, 2012).

In conclusion, several nurses were capable to implement CCP effectively to patients with severe personality disorders. To enhance effective implementation of CCP, nurses should be well educated and facilitated by means of supplementary training, access to inter- and supervision, and sufficient support of other disciplines and managers. According to the objective to professionalize the nursing profession, we may then expect adequate professional responsibility and we need no longer accept non-commitment

## Methodological considerations

The combination of a clinical intervention study with epidemiological studies has shown to be a good choice to achieve our research objectives because of their complementary nature. The epidemiological studies confirmed a number of aspects related to the understanding of suicidal behaviour of which we could make good use in the development of the CCP and which helped in the interpretation of our results. In particular, the increased awareness and knowledge of the complexity regarding meeting the needs of suicidal patients, and the importance of borderline traits regarding the risk of recurrent suicide attempts. Even in a sample of patients with anxiety and depression where initially borderline psychopathology was one of the exclusion criteria, apparently more than ten percent had comorbid borderline traits. These comorbid borderline traits were one of the main independent and statistically significant predictors of recurrent suicide attempts.

With respect to the clinical intervention study the following remarks should be made. To our best knowledge this is the first CCP for patients with borderline personality disorder or NOS personality disorder. In this stage of intervention development and testing, insight in both the feasibility and the preliminary effects of this type of intervention is needed. Therefore, we chose to conduct a comparative multiple case study as a first step in the assessment of feasibility and preliminary results of the CCP for patients with severe personality disorders. A comparative multiple case study is suitable when testing a new intervention, implemented in complex patient situations, in order to obtain a profound insight into its value (Stake, 2006). A comparative multiple case study combines qualitative and quantitative data. The most important strength of this design is that it provides descriptive and explanatory data regarding both the process of implementation and preliminary outcomes of the intervention program. By means of method and data triangulation, the connection between the application and the preliminary outcomes of the CCP were explained in comparison with Care as Usual. With a stepped analysis plan we were able to reveal the 'black box' of the application of the intervention program in order to understand which characteristics and influencing factors are indicative for positive or negative outcomes.

In contrast with a randomised clinical trial, patients in this comparative multiple case study were not randomly assigned to CCP or CAU. Two existing CMHC teams were recruited, nurses of one of which were trained to conduct CCP. Within both conditions caseloads of the participating nurses were screened for eligible patients. These patients were approached in random order for participation in the study. Characteristics of patients, nurses and teams were highly comparable on most characteristics measured, but bias due to unmeasured confounders cannot be ruled out.

A second limitation is that we deliberately included a small number of patients in the study, which reduces the power of statistical tests comparing the effects of CCP with CAU. However, the advantage of this small sample was that we were able to provide a profound insight in the cases at individual as well as at group level. Unfortunately, the intended 32 patients were not attainable due to limited participation of control patients: patients gave no informed consent and nurses were reluctant to allow their patients to participate in research, because they expected no benefits when participating in the control condition.

A third limitation is the involvement of the primary investigator: she developed the manuals, served as the supervisor of the supervision sessions, interviewed the patients and was leading in all analyses. However, to warrant the quality of research the following precautions were made: assigning the interview with nurses to an independent co-author, peer reviewing of all analyses with this co-author, peer reviewing findings within the research group, assessing the inter-rater reliability of the classification of application, and member checking.

A fourth limitation, of a slightly different order, is the establishment of diagnoses necessary for inclusion. In our study we intended to conduct SCID-II interviews for establishing axis II diagnoses, but it appeared to be unattainable due to high burden among patients and time-consuming interviews. Instead we derived the primary and secondary DSM diagnoses from the electronic health records and asked the primary clinician to confirm the accuracy of these diagnoses. The Borderline Personality Disorder Severity Index (BPDSI) was used as an additional assessment. Patients had to score a minimum of 15 points to be eligible for inclusion in the study. The mean BPDSI score at baseline was 25.5 (SD 7.4). This same BPDSI score was also one of the main outcome indicators as it represents a measure of severity of BPD manifestations. The CCP of concern in this thesis was developed for patients with severe (borderline or NOS) personality disorders. However, one could discuss about the definition of severity in respect to personality disorders. Our cut off score of 15 for inclusion was 5 points lower than in the trials of Giesen-Bloo et al (2006) and Nadort et al (2009), suggesting on the one hand that we may have included a less severe population than these trials. On the other hand, however, our sample had a mean treatment history of over fifteen years and a mean baseline score on the Global Assessment of Functioning of 52 (range 20-70), indicating serious symptoms and impairments. Despite this long treatment history, they still did not achieve recovery, indicating difficult-to-treat chronic complex conditions and thus implying high levels of severity.

A final remark should be made about the generalizability of the results of this study. Although a relatively small number of patients was included in this study, these patients were rather representative for the broad range of chronic complex conditions among patients with severe personality disorders. Moreover, we did not

find significant differences between patient characteristics of the experimental and control conditions. Generally, patients with personality disorders receiving CMHC are rather comparable regarding symptoms and severity level, comorbidity and treatment history. So, although preliminary, our results might be generalized to the population of patients with severe personality disorders currently receiving CMHC.

## **Recommendations for future research**

In addition to research aimed at an improved understanding of the borderline personality disorder, research might focus on more detailed qualitative and quantitative research into those patients who (still) do not benefit from available treatments. Do the deficits have a progressive character in time, are these deficits a result of iatrogenesis or are they present at onset? Depending on the answers to these questions, possible solutions could be designed. Patient and professional characteristics as well as context variables should be taken into account. Interesting subsequent questions will be how to prevent patient role identification and how to stimulate self-management and recovery in its broadest sense among patients with limited ego-strength, perceived problems with autonomy and dependency and severe cognitive problems.

Research should also focus on competence development of nurses. The future of mental health nursing will be dominated increasingly by using composite intervention programs. Which skills are necessary to effectively carry out such programs and how should these skills be trained? How could professional responsibility be acquired and enlarged by means of which education tools or incentives? The proposals for competencies of the aforementioned professional profiles should be integrated in this research (Lambregts and Grotendorst, 2012).

## **Conclusions**

In this thesis we drew attention to some critical challenges for the nursing profession in implementing a Collaborative Care Program in a population of patients with severe personality disorders. We added a feasible intervention program, which provides necessary structure to nurses in taking care of this patient group. Patients, informal carers and nurses seemed to benefit from this CCP. The used innovative design of a comparative multiple case study appeared to be a valuable design to generate structured pilot data. Following the recommendations for more effective implementation, effectiveness of CCP might be increased and tested in a future RCT.

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