

# International Journal of Nursing and Health Care Research

Boeijen ERK, et al. Int J Nurs Health Care Res 04: 1243.

DOI: 10.29011/2688-9501.101243

## Case Report

### Psychiatric-Mental Health Nurse Practitioners in the Role of Coordinating Practitioners: A Survey Study

Enzio R.K. Boeijen<sup>1</sup>, Miranda G.H. Laurant<sup>1</sup>, Jan E. Sitvast<sup>2</sup>, Berno van Meijel<sup>3,4,5</sup>, Anneke J.A.H. van Vught<sup>1\*</sup>

<sup>1</sup>HAN University of Applied Sciences, School of Health Studies, Nijmegen, The Netherlands

<sup>2</sup>HU University of Applied Sciences, Advanced Nursing Practice Master's Programme, Utrecht, The Netherlands

<sup>3</sup>Inholland University of Applied Sciences, Research Group Mental Health Nursing, Amsterdam, The Netherlands

<sup>4</sup>Amsterdam UMC (VUmc, Department of Psychiatry), Amsterdam Public Health research institute, Amsterdam, The Netherlands

<sup>5</sup>Parnassia Psychiatric Institute, The Hague, The Netherlands

\***Corresponding author:** Anneke J.A.H. van Vught, HAN University of Applied Sciences, School of Health Studies, Kapittelweg 33, 6503 GL Nijmegen, The Netherlands

**Citation:** Boeijen ERK, Laurant MGH, Sitvast JE, van Meijel B, van Vught AJAH,. (2021) Psychiatric-Mental Health Nurse Practitioners in the Role of Coordinating Practitioners: A Survey Study. Int J Nurs Health Care Res 04: 1243. DOI: 10.29011/2688-9501.101243

**Received Date:** 31 May, 2021; **Accepted Date:** 14 June, 2021; **Published Date:** 18 June, 2021

#### Abstract

**Introduction:** In 2017, the role of coordinating practitioner was introduced in the Netherlands in order to improve quality of care for patients who receive treatment in specialized mental health care. Psychiatric-mental health nurse practitioners (PMHNPs) can fulfil this role.

**Aim/Question:** The aim was to obtain insight into how PMHNPs fulfil the coordinating practitioner role and what is needed to improve fulfilment of this role.

**Method:** A survey among PMHNPs in the Netherlands was conducted between July-September 2018. In total, 381 PMHNP filled out the questionnaire; the response rate was 47.6%. Descriptive analyses were performed using SPSS 22® (IBM).

**Results:** 92% Of the PMHNPs fulfilled the coordinating practitioner role and were generally satisfied with their role performance. The following conditions were formulated to improve this role: 1) recognition and trust in the expertise of PMHNPs, 2) a clear description of their role as coordinating practitioner, 3) strengthening multidisciplinary collaboration, and 4) sufficient training budget and opportunities.

**Discussion:** In Dutch mental health care, PMHNPs have strengthened their position as coordinating practitioner in a short period of time. Follow-up research should be conducted to obtain further insights into elements that contribute to an optimal role as coordinating practitioner.

**Implications for Practice:** Having PMHNPs act as coordinating practitioners can contribute to solving the challenges in mental health care regarding coordination of care and effective multidisciplinary collaboration.

**Keywords:** Nurse practitioners; Nurse's role; Psychiatry; Mental health; Surveys and questionnaires

#### Introduction

In recent decades, an increase in patient multimorbidity and

a greater diversity in treatment options has led mental health care to become more complex and specialised [1]. The care for patients with severe and complex disorders is comprehensive and requires a multidisciplinary approach. In addition of medical psychiatric treatment, many of the patients with psychiatric disorders,

also need guidance and support in the field of work, education, housing, social relationships and other ways of participating in the society. In the Netherlands, mental healthcare institutions are responsible for inpatient or ambulant treatment of patients with psychiatric disorders. A mix of professionals work together in the care for patients who receive mental healthcare, for example nurses, psychiatrists with various specialisations, psychologists with various specialisations, social workers, nurses and nurse practitioners. In the Netherlands, the coordination of the treatment for patients with severe mental health problems was considered not adequate [2].

To address the problem of inadequate coordination of the mental care, the role of a practitioner who coordinates the treatments and connect different practitioners, is strongly emphasized. Introducing the coordinating practitioner role is seen as one of the possibilities for improving the quality of the complex care process. Since 2017, the National Quality of Care Statute (2017) in the Netherlands has introduced the position of coordinating practitioner in mental health care institutions. Dutch mental healthcare institutions are required to comply with the Statute. It describes the coordinating practitioner as a mental health care specialist who is responsible for drawing up the treatment plan with the patient, coordinating the patient's treatment in collaboration with other care providers and monitoring the consistency of treatment. The coordinating practitioner is the first point of contact for patients and relatives and are overall responsible for the coordination of the treatment plan and the main part of the treatment but the other collaborating care providers keep their own responsibility for their the services and interventions performed during the treatment process (National Quality of Care Statute, 2017).

The coordinating practitioner role as implemented in the Netherlands is new and unique in the international literature. The role largely corresponds with the role of care manager in collaborative mental health care, in which the care manager is responsible for coordinating the overall team effort and ensuring effective communication among team members [3]. In contrast to the care manger, the role of coordinating practitioner is formally defined with legal liability in Dutch mental health care. The role of coordinating practitioner in the Netherlands is reserved for mental health care specialists who have a Master's degree in mental health care. Besides psychiatrists and psychologists, nurse practitioners (NPs; European Qualifications Framework level 7) specialised in psychiatric and mental health care (PMHNPs) can take on this role. PMHNPs are introduced in several countries, for instance in Australia, Canada, US, Sweden, UK and the Netherlands. They have similar roles such as making a diagnosis, treating, prescribing medication, coordination of the care, conducting scientific research teaching an training care providers, optimizing the quality of care and effective leadership [4-6]. PMHNPs practice at the intersection of care and cure across the entire field of mental health care. The

PMHNP integrates medical, psychiatric and psychosocial nursing treatment and care, such as prescribing medication, performing psychotherapeutic treatment and offering psychosocial support [7]. Their aim is to bridge the gap between psychiatric, psychological and nursing care [8]. The benefits of PMHNP roles are convincing, but organisational structures and embedded professional cultures present barriers and missing conditions to full role optimization [4]. For example a missing vision of the management on the role of the PMHNP or unfamiliarity with the profession, their competences and their legal rights [9]. It is unknown how many PMHNPs factually fulfil the role of coordinating practitioner in the Netherlands and in which context. Furthermore, there is no insight into conditions that could improve their role fulfilment as coordinating practitioner. This information is important for the further development and positioning of PMHNPs in the mental health care field. Optimal use of their competencies would further improve the quality of mental health care. This study aims to offer insight into the current fulfilment of the coordinating practitioner role by PMHNPs and what is needed to improve it.

## Methods

### Design and study population

This study had a descriptive cross-sectional design that used a web-based survey. The survey was conducted between July and September 2018. The HAN Advisory Board Practice Research concluded that the study did not fall within the scope of the Medical Research Involving Human Subjects Act (WMO) (registration code EACO 115.08/18).

### Sample

Most NPs in the Netherlands are registered in the Dutch registry for NPs; there were 1,070 registered PMHNPs at the time of the survey. Approximately 800 of them met this study's inclusion criteria: 1) graduated PMHNP, and 2) employed in a mental health care institution or specialised addiction centre. The study excluded PMHNPs employed in other mental health care practices (e.g. psychiatric wards in general hospitals, medical psychiatric units and general practices). Completing the survey was voluntary and no incentives were offered.

### Survey

A self-developed and content-validated survey was used to collect data. A first draft of the survey was based on a previous survey of the roles NPs play in general health care [10]. The questions were adapted to the role of coordinating practitioner in a mental health care setting. Open-ended (n=8) questions were asked to gain insight in the conditions that could improve the PMHNPs' performance as coordinating practitioner. Closed questions were asked (n=16) to explore the PMHNP's demographic information, setting and fulfilment of the coordinating practitioner role. The next step in developing and validating the survey was

asking several mental health care experts (i.e. three educators of PMHNPs, two mental health care professors, a representative of the Dutch Professional Nurse Practitioner Organisation, and two PMHNPs) to provide feedback on the survey until consensus was reached on the included questions. Subsequently, the survey was pilot tested by nine PMHNPs. Written and oral feedback was used to improve the survey. Thereafter, the survey was finalised. It was administered anonymously using LimeSurvey® (LimeSurvey GmbH). The PMHNPs who took part in the validation and pilot of the survey were not excluded from the main study.

**Data collection**

PMHNPs were invited to participate via email with information about the study and a link to the survey. The goal was to reach all PMHNPs working in the above mentioned mental health care settings (n=approximately 800). For optimal reach, the survey was disseminated through various channels, including alumni of NP educational programmes, the website and network of the Dutch Professional Nurse Practitioner Organisation, and the networks of the project’s research team and advisory board. Four reminders were sent by the above described channels, one every two weeks. Informed consent was implied by completing the survey and uploading the answers in LimeSurvey.

**Data analysis**

Data were anonymised and stored on a research drive, where access was limited to members of the research team (EB, JS, AvV). The researchers checked and cleaned the complete data set prior to data analysis. The first researcher (xx) identified all surveys that 1) did not meet the inclusion criteria 2) contained too much missing data 3) contained duplicate responses. These surveys were excluded from data analysis. Incomplete surveys were included in the analysis if they contained any data beyond the demographic information. Missing data were coded as ‘999’ in SPSS. Descriptive analyses (i.e. range, Interquartile range, mean and percentages) were performed using SPSS 22® (IBM). The data from the open-ended questions were independently analysed by two researchers (EB, JS) in Excel® (Microsoft) using an inductive analysis strategy. The answers to these open questions were coded, and similar and related codes were categorised. The coding decisions were compared and discussed until intercoder agreement was achieved [11]. The findings and meaning of the categories were reviewed and discussed by three authors (EB, JS, AvV). We used the Consolidated Criteria for Reporting Qualitative Research (COREQ) for comprehensive reporting [12].

**Results**

**Study population characteristics**

**Figure 1** shows the numbers of survey responses and the reasons for exclusion. In total, there were 381 eligible responses; the response rate is 48%. Table 1 describes the characteristics of the participating PMHNPs. Of the 381 respondents, 349 (92%)

indicated that they fulfilled the role of coordinating practitioner (Table 1). The majority of respondents worked in a mental health care institution (86%), most often in ambulant treatment (93%) i.e. Flexible Assertive Community Treatment teams, crisis teams, and Intensive Home Treatment teams. The others worked in a inpatient setting (7%) long-term clinical wards, inpatient addiction treatment or High Intensive Care units.

Variable	Total
	(n=381)
Age, mean (SD)	46 (8.8)
Gender, n (%)	
Female	274 (71.9%)
Working experience as PMHNP (years), mean (SD)	4.7 (3.3)
Employment hours/week, mean (SD)	32 (5.2)
Setting, n (%)	
Mental health care institution	326 (85.6%)
Specialised addiction centre	33 (8.6%)
Independent mental health care setting	11 (2.9%)
Other (e.g. child psychiatry or homeless shelter)	11 (2.9%)
Number of PMHNPs acting as coordinating practitioners n (%)	349 (91.6%)
Abbreviations: SD = standard deviation; PMHNP = psychiatric-mental health nurse practitioner	

**Table 1:** Characteristics of surveyed PHMHNPs.

Variable	Total
	(n=381)
Caseload as coordinating practitioner, median (IQR)	40 (25-70)
Minimum-Maximum (range)	1-320 (319)
Number of disciplines within a team, mean (SD)	3 (SD 1.2)
Disciplines acting as coordinating practitioners working together with the PMHNP, n (%)	
Psychiatrist	317 (83.2%)
Healthcare psychologist	236 (61.9%)
Clinical psychologist	156 (40.9%)
Psychotherapist	59 (15.5%)
Other (e.g. addiction care specialist or geriatrist)	58 (15.2%)
Abbreviations: SD = standard deviation; PMHNP = psychiatric-mental health nurse practitioner	

**Table 2:** Fulfilment of the role of coordinating practitioner.

## **Description of the role of coordinating practitioner**

Respondents fulfilling the role of coordinating practitioner managed a median caseload of 40 patients (IQR 25–70, range 1–320 patients). A quarter of the respondents (25%) have a caseload of more than 70 patients, some up to 320 patients. The main reasons to allocate the patients to the coordinating PMHNP are the main diagnose, type and complexity of the care demand and the expertise of the practitioners. Respondents fulfilled the coordinating practitioner role throughout all treatment phases: diagnostic phase (42% of respondents), treatment (87%) and in the stabilisation phase (74%). Respondents practiced in multidisciplinary treatment teams where, on average, three disciplines (SD 1.2) could fulfil the role of coordinating practitioner. Besides PMHNP, the psychiatrist and healthcare psychologist were the most common practitioners who also fulfilled the role of coordinating practitioner (see Table 2). More than a third of the respondents are of the opinion that they could fulfil the role of coordinating practitioner for more patients (37%). The reasons for the possibility to expand the coordinating practitioner role is, according to the respondents, the fact that their organisation is still in the transiting phase and that they are step by step expanding the case load.

## **What is needed to improve fulfilment of this role?**

Respondents were generally satisfied with how they fulfilled the role of coordinating practitioner. However, in the questionnaire they listed a number of conditions that could improve fulfilment of this role. After analysing these conditions, we divided four categories: 1) recognition and trust in the expertise of PMHNPs 2) a clear description of their role as coordinating practitioner, 3) strengthening multidisciplinary collaboration and 4) sufficient training budget and opportunities.

### **1) Recognition and trust in the expertise of PMHNPs**

About a third (35%) of the respondents described a need for recognition and trust from other mental healthcare professionals, managers and board members of healthcare organisations, health insurance companies and local and national health institutions with regard to their expertise and legal rights as a coordinating practitioner. The legal rights implies that the PMHNP is able to conduct, steer and delegate the entire process of diagnostics, needs assessment, treatment, referral, transfer and discharge independently make final decisions. A respondent stated: *“There is a need for recognition of our role by other professionals, who now deny our role in fear of lack of power”*.

Respondents mainly attributed the lack of recognition and trust to a lack of knowledge about recent developments in education of NPs and in legislation with respect to authorisations in treatment. Respondents indicated that support from colleagues and management was crucial to fulfil their role as coordinating practitioner. PMHNPs recognised their own responsibility in this regard by showing their expert nursing competencies and providing

insight into their legal scope of practice. A respondent remarked: *“It is necessary to announce more about the function and roles of the PMHNP; unknown is unloved.”* Clear communication about possibilities and limitations was considered essential for adequate role fulfilment and good collaboration with other mental health care specialists.

### **2) A clear description of their role as coordinating practitioner**

Respondents described the need for a clear description of the conditions, tasks and responsibilities associated with the role of coordinating practitioner for the PMHNP. A respondent stated: *“More clarity is needed about the target group and demarcation of tasks. As a PMHNP you should know your expertise and act like that”*. In particular, respondents expressed the need for a more specific and uniform description and guidelines of patient groups for whom they can fulfil that role. This description is necessary given the huge variation within and across mental healthcare institutions in current positioning of PMHNPs as coordinating practitioners.

We also asked the PMHNP to express their ideas about role description. Some respondents proposed a broad description in order to have enough space to put their own spin on fulfilling the role. Others preferred a narrower role description to provide clarity about the specific expertise and competencies required of each discipline that performs as coordinating practitioner. The latter group argued that a narrower role description would help to prevent the PMHNP from practicing too much within the domain of psychiatry and/or psychology. They viewed this narrow role description as undesirable because it creates confusion and unwanted practices in the demarcation between the roles of different mental health care professionals. One respondent stated: *“A good description of the conditions and the requirements of the role is necessary to test in practice whether or not the PMHNP meets the requirements”*.

### **3) Strengthening multidisciplinary collaboration**

PMHNPs described a need for stronger collaboration in the multidisciplinary team and a need to utilise each other's competences, legal rights within the treatment process and affinities to optimise the role of coordinating practitioner. This could be achieved by identifying and regularly discussing team members' individual expertise and affinity. Multidisciplinary peer review meetings were highly valued as ways of collaboration in which mental health professionals could learn and benefit from each other and structurally evaluate team-level collaboration agreements. A respondent suggested: *“I prefer to have feedback meetings and intervision of my tasks as coordination practitioner to optimize the way of collaboration with the other disciplines”*. This could include agreements about roles, tasks and responsibilities of the different team members when working with certain patient categories, or when a PMHNP should consult a psychiatrist in

prescribing specific psychotropic medication. This would delimit the role that all collaborating disciplines (including the PMHNP) have as coordinating practitioners in mutual interaction. According to the respondents, this could also promote a better matching of patients' care needs with the specific professional competences of the PMHNP.

#### **4) Sufficient training budget and opportunities**

PMHNPs experienced a lack of opportunities for additional training, mainly due to limited budgets for that purpose. A respondent remarked: "Recognition of the expertise is important by a fixed budget". For the professional development as coordinating practitioners, training is required (e.g. to keep up to date in pharmacology and specific treatment interventions). Additionally, some PMHNPs felt that they did not have the required competences necessary to fulfil the role of coordinating practitioner for specific patient categories, such as patients with addiction or severe mental illness, and therefore described a need for more training in that role. Respondents reported: "Institutions provided educational budgets that were often far from adequate, if available at all." Training should not be mono-disciplinary, but focus on multidisciplinary learning that increases knowledge about each other's expertise and competences (among them that of PMHNPs) and strengthening multidisciplinary collaboration.

## **Discussion**

### **What the study adds to existing knowledge**

The role of coordinating practitioner in mental health institutions in the Netherlands was introduced in January 2017. Besides psychiatrists and psychologists, PMHNPs are one of the practitioners that are allowed to fulfil the role of coordinating practitioner. This study adds to existing knowledge that the coordinating practitioner role of the PMHNPs had been widely implemented and accepted in a short period of time. There appears to be a wide variation in how the role is implemented.

PMHNPs were generally satisfied with how they fulfilled the role of coordinating practitioner. However, they listed four conditions that could improve the fulfilment of this role: 1) recognition and trust in the expertise of PMHNPs, 2) a clear description of their role as coordinating practitioner, 3) strengthening multidisciplinary collaboration, and 4) sufficient training budget and opportunities.

### **Discussion of the findings**

Due to the fact that worldwide the coordinating practitioner role of PMHNP with legal liability is quite new in the mental health care, limited literature is available to compare the findings of our study with previous research about the coordinating practitioner role of the PMHNP. The main findings are discussed using literature from broader context. PMHNPs fulfil their

coordinating role in multidisciplinary teams with the exception of certain mono-disciplinary treatments that do not match their expertise (i.e. only drug or psychological treatment). There is enormous variation in their caseloads. Many PMHNPs have very large caseloads-25% have more than 70 patients, some up to 320 patients - which is remarkable because the national quality statute states that coordinating practitioners have to have a substantial share in the treatment and should be the first point of contact. It is debatable whether or not a PMHNP with a caseload of more than 150 patients will be able to fulfil the role of coordinating practitioner as intended. Managing such large caseloads carries the risk of shifting the role from that of a committed professional to one that only performs formal involvement with the patient (e.g. performing tasks for legal or financial purposes), without actual involvement with the patient. A limited caseload is considered crucial for intensive case management and many countries have undertaken extensive reorganisation of mental health services to achieve this. However, there has been limited empirical work to explore this specifically [11].

The results of our survey show that PMHNPs are generally satisfied with the way in which they can fulfil the role of coordinating practitioner in multidisciplinary teams. They shared a positive view of the collaboration with other coordinating practitioners and mental health care professionals. Nonetheless, the PMHNPs reported some issues that should be improved to optimise the fulfilment of the coordinating practitioner role. First, the NP is still a relatively new professional in Dutch mental healthcare [13-15]. Not all psychiatrists, psychologists, other mental health care professionals, management or boards are familiar with the competences and duties of PMHNPs. There is still a lack of knowledge about the contents of their training and their legal rights as NPs [10,16]. Implementation that includes the socialisation of new professions in health care requires time [17]. It is important to emphasise that NPs (including PMHNPs) have already achieved huge goals in Dutch health care in a short time (e.g. legal rights, growing numbers of registered NPs, and recognition of their role in quality standards). Boards and management, as well as professionals themselves, should promote familiarity with NP competencies and the possibilities for their effective deployment in mental health care in the coming years.

Second, there is a large variation in fulfilment of the coordinating practitioner role among PMHNPs. This could explain the need PMHNPs perceive for more guidelines and clarity about the conditions and requirements for fulfilling this role. The professionals' statute and quality statute give a lot of space to fulfil the role of coordinating practitioner. More qualitative research (e.g. with case descriptions in different settings and multidisciplinary focus groups) could contribute to a better insight into optimal fulfilment of the role by PMHNPs and support of PMHNP by fulfilling the role of coordinating practitioner. Third,

there has been a shift from multidisciplinary to interprofessional collaboration in recent years. This shift is also noticeable in mental health care. Hewitt, Sims & Harris (2014) described 13 mechanisms of interprofessional teamwork, including support and value, blurring of roles, coordination and individual learning [18]. They emphasised the importance of discussing the individual expertise and affinity of team members, as well as making team-level collaboration agreements [18]. Adopting these mechanisms in team practice could contribute to interdisciplinary collaboration within teams by matching team members (including PMHNPs) with care needs and/or tasks related to their affinity and expertise. This endorses the need and necessity for the coordinating practitioner role.

Fourth, sufficient training budgets and opportunities are necessary for the professional development of PMHNPs – especially with regard to fulfilling the new role as coordinating practitioner – and for continuing to meet the care demands of their patients in this role. Institutions must support all professionals by creating a learning culture within the organisation [19,20]. Institutions and professional organisations should facilitate the development of expertise among health care professionals, preferably using interprofessional education and training. PMHNPs can also facilitate a learning culture among professionals themselves, because they can bridge the gap between psychiatric, psychological and nursing care within teams and organisations [8,7].

The results of this study could be used in international context, especially regarding describing and optimizing the fulfilment of the coordinating practitioner role of PMHNP to increase quality of mental health care. Since less is described about this important role for PMHNP in existing literature, we strongly recommend to report about this role in international literature to learn from each other and adequately use the competences of PMHNP for high quality mental health care.

### **Strengths and limitations of this study**

This is the first national study into the fulfilment of the role of coordinating practitioner by PMHNPs in the Netherlands. Strengths of this study are the high response rate (47.6%), the demographic variety of PMHNPs that participated in the web-based survey and the absence of reasons to expect selective response bias. Results from the survey were verified by workshop and presentations with PMHNPs. These factors indicate that our findings are representative of PMHNPs in mental health care institutions in the Netherlands. Limitations of this study include those inherent to surveys, especially the inability to ask in-depth questions. Furthermore, multi-interpretation of the questions regarding the topic ‘cooperation agreements’ led to exclusion from the analysis. Future research should focus on in-depth descriptions of how PMHNPs employed in different settings fulfil

the role of coordinating practitioner. This is needed to understand the elements that contribute to optimal fulfilment of that role.

## **Conclusions**

Eighteen months after the coordinating practitioner role was introduced in the Netherlands, 92% of PMHNPs fulfilled it in various settings and throughout all treatment phases. However, the role varied largely within and across mental healthcare organisations, i.e. in size of the caseload and level of autonomy. In general, PMHNPs were satisfied with how they can fulfil the role within multidisciplinary teams. Nonetheless, they listed a number of conditions that could improve the fulfilment of this role: 1) recognition of and trust in their expertise 2) a clear description of their role as coordinating practitioner 3) strengthening multidisciplinary collaboration and 4) sufficient training budget and opportunities. In-depth research is needed to understand the elements that contribute to optimal fulfilment of the role of coordinating practitioner. For practice this implies that PMHNPs that act as coordinating practitioners can contribute to solving the challenges in mental health care regarding coordination of care and effective multidisciplinary collaboration.

## **Acknowledgements**

This study (project number: RAAK.PUB04.044) was funded by the Taskforce for Applied Research SIA (part of the Dutch Research Council (NWO) and financed by the Ministry of Education, Culture and Science).

## **Data sharing**

The data that support the findings of this study are available from the corresponding author upon reasonable request.

## **Conflicts of interest**

None of the authors declare conflicts of interest.

## **Ethical statements**

The HAN Advisory Board Practice Research concluded that the study did not fall within the scope of the Medical Research Involving Human Subjects Act (WMO) (registration code EACO 115.08/18). Completing the survey was voluntary and no incentives were offered. The confidentiality and privacy of the respondents and their responses were assured.

## **Authors’ contributions**

All authors met the criteria for authorship. E. Boeijen, M. Laurant, B. van Meijel and A. van Vught formulated the study. E. Boeijen and A. van Vught carried out the data collection. E. Boeijen, J. Sitvast and A. van Vught carried out the data analysis, and all authors contributed to writing of the manuscript. All authors contributed to interpretation of the results, drafting the manuscript,

and revising the text critically for its intellectual content. E. Boeijen, M. Laurant and A. van Vught had full access to all the data in the study and can take responsibility for the integrity of the data and data analysis. All those entitles to authorship are listed as authors. All authors have approved the final manuscript and agreed with publication.

## References

1. Lake J, Turner MS. (2017). Urgent need for improved mental health care and a more collaborative model of care. *The Permanente Journal*, 21: 17-24.
2. Commission Coordination Mental Health, Ministry of Care, Welfare and Sport, The Hague, 2015.
3. Sunderji N, Kurdyak PA, Sockalingam S, Mulsant BH. (2018). Can Collaborative Care Cure the Mediocrity of Usual Care for Common Mental Disorders? *Canadian Journal of Psychiatry. Revue canadienne de psychiatrie*, 63: 427-431.
4. Lowe G, Plummer, V, Boyd L. (2018). Nurse practitioner integration: Qualitative experiences of the change management process. *Journal Nursing Management*. 26: 992-1001.
5. Mangano E, Gonzalez Y, Kverno KS. (2020) Challenges Faced by New Psychiatric-Mental Health Nurse Practitioner Prescribers. *J Psychosoc Nurs Ment Health Serv*. 58: 7-11.
6. Weber M, Delaney KR, McCoy KT, Snow D, Scharf MR, Brackley MH. (2012) Quality and safety graduate competencies in psychiatric mental health nurse practitioner education. *Arch Psychiatr Nurs*. 26: 350-357.
7. Kappert J, Hoop I de (editors). *Nurse Practitioner professional competency framework*. Utrecht: V&VN; 2019.
8. Elsom S, Happell B, Manias E. (2005). Mental health nurse practitioner: Expanded or advanced? *International Journal of Mental Health Nursing*, 14: 181-186.
9. Bridges S. (2014). Exploration of the concept of collaboration within the context of nurse practitioner-physician collaborative practice. *Journal of the American Association of Nurse Practitioners*, 26: 402-410.
10. Laurant M, van der Biezen M, Wijers N, Watananirun K, Kontopantelis E, van Vught AJ. (2018). Nurses as substitutes for doctors in primary care. *Cochrane Database of Systematic Reviews*.
11. Burns T, Yiend T, Doll H, Fahy T, Fiander M, Tyrer P. (2007). Using activity data to explore the influence of case load size on care patterns. *British Journal of Psychiatry*. 190, 217-222. Creswell, J. (2013). *Qualitative inquiry & research design: choosing among five approaches* (3thed.). SAGE Publications, Inc.
12. Tong A, Sainsbury P, Craig J. (2007) Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Heal Care*, 19: 349-357.
13. Roodbol P. (2018, 25<sup>th</sup> /26<sup>th</sup> August) The maturation of the Nurse Practitioner in the Netherlands [PowerPoint]. 10th ICN NP/APN Conference. Rotterdam.
14. Maier C, Batenburg R, Birch S, Zandera B, Elliotte R, Busse R. (2018). Health workforce planning: which countries include nurse practitioners and physician assistants and to what effect? *Health Policy*, 122: 1085-1092.
15. De Bruijn-Geraets DP, van Eijk-Hustings YJL, Bessems-Beks MCM, Essers BAB, Dirksen CD, et al. (2018). National mixed methods evaluation of the effects of removing legal barriers to full practice authority of Dutch nurse practitioners and physician assistants. *BMJ Open*, 8: e019962.
16. Lovink MH, Laurant MG, van Vught AJ, Maassen I, Schoonhoven L, et al. (2019) Substituting physicians with nurse practitioners, physician assistants or nurses in nursing homes: a realist evaluation case study. *BMJ Open*, 9: e028169.
17. De Bont A, van Exel J, Coretti S, Ökem ZG, Janssen M, et al. (2016). Reconfiguring health workforce: a case-based comparative study explaining the increasingly diverse professional roles in Europe. *BMC Health Services Research*, 16.
18. Hewitt G, Sims S, Harris R. (2014). Using realist synthesis to understand the mechanisms of interprofessional teamwork in health and social care. *Journal of Interprofessional Care*, 28: 501-506.
19. Manley K, Martin A, Jackson C, Wright T. (2018). A realist synthesis of effective continuing professional development (CPD): A case study of healthcare practitioners' CPD. *Nurse Education Today*, 69, 134-141.
20. V&VN. (2019). Het register. Consulted on October 15<sup>th</sup>, 2019.