Behind well-being

Evaluating the impact of “My Positive Health” from the perspective of district nurses

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Preface

The subject of this thesis is about the arrival of positive health, my personal inspiration, giving me the opportunity to create a change in the mind-set of professionals in elderly care. This thesis is written on behalf of the Master Care & Technology 2015-2017.

My background is in health care, started as a nurse and until now, working as a manager in elderly care by BrabantZorg. Elderly care is in need of reviewing values and standards that are leading to professional care, which is often based on medical models. The arrival of Positive Health can be seen as a catalyst towards a more dynamic care landscape, in which elderly patients are approached from the conviction that, although at end of life, it should be as much as comfortable, with a clear focus on leading a pleasurable life, surrounded with people loved. Professional care should embrace the commitment of contributing to these new standards.

During my study, I was able to work with district nurses, a profession which is subject to change and turbulence in the changing landscape of healthcare. I have great respect for the involvement and passion of district nurses towards their working environment and continuous change in policy. However, this does not change the tireless efforts I have experienced.

At first, I would like to express my gratitude to the twelve district nurses who, in addition to their daily work, have created time to cooperate in this research. I would like to thank Vincent Bakx, Adrie van Osch and Lo van Loenen- Martinet for supporting me during my research, as also my gratitude to BrabantZorg for giving me the opportunity to follow this master course.

I would like to thank my fellow students, for the good laughs, keeping the spirit up, working together and support. Special credit to Heidi van de Mortel- van Mullekom and Tim van de Geijn, my buddies with the positive vibes. Heidi for her endless questions and Tim for his critical suggestions. But most important; good humour and 24 hours support. I was not able to do this without you!

I would like to address my special thanks to Ms. M.D. Spreeuwenberg, Lector Zorg op Afstand, Zuyd University, as my study supervisor and second reviewer, for guiding me writing my first master thesis. It was a good match, as a person and tutor, and I learned a lot about focusing, narrowing my thesis subject and keep me on track. Every contact brought me lots of positive energy.

I would also like to thank Charles Willems, Ph.D., and course director MCT, as my first reviewer, for accompanying this master thesis, the lessons and personal attention to keep up motivation during this two-year master course. Furthermore, I would like to thank all the other teachers for bringing their knowledge in my life.

At last, I would like to thank my colleagues and friends for believing in me, but foremost I would like to thank my family: my parents and children for being patient with me, and of course my best soulmate ever, Peter, who lead me throughout the past two years with nothing more than love!

If you never chase your dream, you will never catch them.

Désirée Hobbelen

Table of content

Summary

A new concept of health, named Positive Health, was introduced in 2011 in where health is defined as the ability to adapt and to self-manage, in the face of social, physical and emotional challenges of life (Huber, 2011). This leads to a change from the current approach which is focused on care and disease towards a more preventive approach focused on behaviour and health, with more attention on prevention and self-management.

The aim of this thesis is to describe the introduction of a new definition of health and how this could be translated into a concrete step in supporting district nurses in primary care by testing My Positive health 1.0. This digital instrument was released in October 2016 and is designed by a team of experts and based on used experience the past year. The instrument could be used in conversations between health care professionals and clients/patients, suggesting possible topics for subjective evaluation and, if desired, potential actions for improvement and increase of the health area of the patient. The introduction of Positive Health will, even more, change the role of district nurses, as the demand for care and needs of patients in home care is changing, more focus is placed on homecare, prevention, and self-management.

In this qualitative study, twelve district nurses tested My Positive Health with patients in homecare. Six semi-structured interviews and four group sessions were held to collect experiences from district nurses in relation to the level of awareness on Positive Health, pros and cons of the instrument and level of support by the application. In addition, a quantitative questionnaire (System usability scale) was used to collect data on the usability of My Positive Health.

Thematic analysis is used to analyse the data collected from interviews and group sessions. A SUS questionnaire is used to collect data on usability.

Results show that district nurses perceive My Positive Health as a user-friendly application, supportive in conversations and it broadens their view on health. Nurses received more background information about patients with the advantage to build a stronger relationship and understanding patients better. Nurses are biased about the app-store for elderly people, therefore the app-store is hardly touched.

Discussions and further research must continue on the incorporation of the application in the total care process, the usability of the app-store for elderly patients and the use of My Positive Health for patients with cognitive impairments.

Keywords: Positive Health, homecare, district nurse, competences, acceptance, dementia.

1. Introduction

1.1 Positive Health

There are various definitions of health. By a systematic review, Song& Kong (2015) described a number of different definitions of health, namely; O'Donnell (2009) defined optimal health as ''a dynamic balance of physical, emotional, social, spiritual, and intellectual health''. Through concept analysis, Wang (2005) defined health as ''a process and outcome that involves subjectivity, individuality, objectivity, culture, dynamics, self-control, external control, changeability, and development'' (Song. M, Kong. E, 2015). The current WHO definition which is often used in international literature, describing health as 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' (WHO, 1948), is however, increasingly being criticised, partly because of the problem of operationalisation (Huber et al, 2011). To conclude, there seems to be no consensus about the definition of health and this current and traditional approach is focused on care and disease.

A new concept of health was introduced in 2011 by Huber et al.: 'Health as the ability to adapt and to self-manage, in the face of social, physical and emotional challenges of life'(Huber, 2011). The term "positive health" is derived from this new health concept. It stands for a broad view on health, in which health is no longer considered as a static condition but rather as the dynamic ability to adapt and to manage one's own well-being. It is shown that patients consider these abilities very relevant and appreciate the newly devised concept because it emphasized that people are more than their illness and it considers their strengths instead of their weaknesses. Patients interpret the new dynamic concept of health as one that encompasses life as a whole. If health professionals had experienced disease themselves, their value system also shifted towards an increased appreciation of aspects such as meaningfulness, while physical aspects became less important as part of health. This finding warrants reflection on the content of medical training, as well as on medical practice (Huber et al, 2011).

By shifting the emphasis to resilience and well-being (rather than ill-health), the new health concept helps policy makers and politicians to change their thinking about health care and disease prevention. This change is urgently needed if we are to maintain high-quality care that is also affordable (Huber et al, 2011).

Positive Health distinguishes six main dimensions of health namely; bodily functions, mental functions & perception, spiritual/existential dimension, quality of life, social & societal participation, and daily functioning, all of 32 underlying aspects of health. The six dimensions were defined after a qualitative study from Huber et al (2015) among 140 stakeholders in order to make the concept of Positive Health measurable. 556 health indicators were defined and they were categorized in six dimensions. In this qualitative study, 78% of respondents considered their health indicators to represent the concept of Positive Health (Huber, 2015).

The study of Huber et al (2011) proposes the ideas of Positive Health be applied to the broad concept of health, which can be evaluated subjectively in a web diagram. Because of the need to visualize the six dimensions of Positive Health for practical use, a web diagram was created which contains all six dimensions of health. The web diagram could be used in conversations between health professionals and patients (Huber, 2011). Professionals could support patients by assessing themselves with a grade, due to conversations. By means of the assessment, patients can decide what he or she would like to improve. Figure one shows the six dimensions of Positive Health.

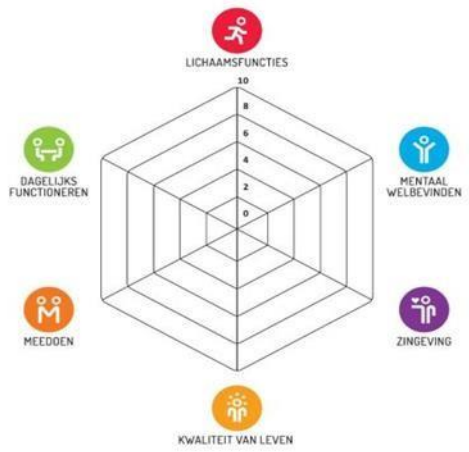

Figure 1; Six dimensions of Positive Health ©IPH

Positive Health brings another dimension to the profession of nursing as nurses are well trained in providing care in the domains of physical well-being and daily functioning. The domains of quality of life, social participation and meaningfulness are still lacking behind. Currently, further research takes place on the effects of the concept. There is little research done on the effects of the concept of Positive Health and how to apply this concept in the work of district nurses. As a reaction in the Netherlands, several initiatives have arisen by different parties, such as general practitioners, municipalities or healthcare organizations with the intention to embrace this concept and its ideas, but these initiatives are fragmented and are only in a starting phase.

1.2 Changing environment district nursing in the Netherlands

There are about 8800 district nurses working in home care in the Netherlands (Actiz, 2015). District nursing has existed for over a 100 years and until into the 60's of the 20th century the district nurse was a widely respected and appreciated profession (Expertisegebied wijkverpleegkundige, V&VN, 2012). Since 1990 the concept of home care was introduced and district nurses were limited within their profession becoming more task-oriented. This shift to home care affected cooperation between general practitioners and district nurses, there was less contact and the degree of autonomy for the district nurse disappeared.

There is a counter movement since the year 2000, and the need arises to organize care more locally in the neighbourhood and district nurses should play an important role in the neighbourhood.

The new vision on health focuses on the functioning, resilience and self-control of citizens, which is based on the capabilities of individuals, and how they can be supported. In the report "Anders kijken, anders leren, anders doen" (Van Vliet, K., Grotendorst, A., & Roodbol, P.,2016), is stated that healthcare is not focused yet on this new perspective. A change will have to take place from the current approach which is focused on care and disease towards a more preventive approach focused on behaviour and health, with more attention on prevention and self-management. Investing in the wellbeing of citizens can prevent or delay disease (V&VN, 2012). The introduction of Positive Health will, even more, change the role of district nurses.

Given this current development in health care and society, the professional role of the district nurse is changing from a task-oriented to a more reflective role. As the demand for care and needs of patients in home care is changing, more focus is placed on homecare, prevention, and self-management. In addition, the role of technological solutions, become larger to keep control of the healthcare costs.

These developments will influence the professional needed competencies of the nurses and carers of the future which will be more focused on factors such as; caregiver, communicator, collaborator, reflective practitioner and practitioner researcher, health promoter, organizer and professional and quality promotor (V& VN, 2012).

A recent study in the Netherlands shows that there is a major challenge to translate competencies into educational programs for vocational education training colleges for care helpers and nursing assistants (Oeseburg, Hilberts and Roodbol, 2015). Teachers and schools are not equipped well to anticipate adequately to the developments that are necessary to meet the needs of the elderly; teachers are not sufficiently qualified to prepare students adequately for practices in elderly care; and despite the statutory curricula qualification files, there is much variation in the quality of the curricula of the vocational education training colleges.

1.3 My Positive Health 1.0

Currently, the ideas of positive health are made digitally. The digital instrument is named; My Positive Health 1.0, representing the six dimensions (IPH, 2016). This digital web diagram is designed by a team of experts and based on used experience the past year. The instrument is released in October 2016. The instrument is not a validated 'instrument', this is too early because of the complexity of the concept. Scientific research, however, continues (IPH, 2016).

The instrument is freely available via the internet and includes simple questions based on the six dimensions of Positive Health. When all questions are answered a score will appear in forms of a spider diagram. Each dimension can be shown separately and there is an app-store available for each individual to use when desired. The app store is filled with apps from the municipal health service (GGD) and websites which contributes to self-management or other forms of support. The meaning of the app store is to provide guidance in a digital way. There is also a possibility to share the outcome of the score with whom people choose, for example, the district nurse or general practitioner.

The instrument could be used in conversations between health care professionals and clients/patients, suggesting possible topics for subjective evaluation and, if desired, potential actions for improvement and increase of the health area of the patient. However, there is no experience on how to use My Positive Health 1.0.

District nurses are accustomed to working in a digital environment, namely working with electronic health records. However, working with My Positive Health is a new approach. Previous experiences from a pilot within BrabantZorg showed that understanding the ideas of Positive Health is more complex. Essential recommendations from the pilot were; provide additional theoretical information about the concept, and obtain experience with the spider diagram, to understand the ideas. It is known that concrete translation of Positive Health currently is being developed in many domains, and there is little concrete developed within home care. With the arrival of the digital instrument, an opportunity arises to find out how district nurses feel supported by this instrument in their conversations with patients.

1.4 Research question

Main research question

To what extent can the digital instrument My Positive Health 1.0 be supportive to district nurses as a conversation tool in order to identify the six dimensions of health from the patient in home care?

Sub-questions

- How do district nurses experience the technical usability of the digital instrument My Positive Health 1.0?
- How do district nurses experience working with My Positive Health 1.0 in relation to identifying the six dimensions of health from the patient?
- What are the pros and cons from the district nurses point of view?

1.5 Hypothesis

My Positive Health 1.0 can be supportive to district nurses in home care to improve the quality of care because the mind-set of Positive Health implies that health is much more than only the presence of disease (Huber, 2011). It should help professionals to gain a broader view towards patients based on possibilities and values of people. Explore together what a person needs to maintain the optimal balance in life, and that could mean for the district nurse that she must provide other support towards patients than she is used to doing in daily practice.

2. Research design

2.1 Methods

A study was designed using a qualitative approach with an additional quantitative usability questionnaire and was carried out between March 2017 and May 2017. This research has characteristics of an explorative study, as there is little known about the concretization of the ideas of Positive Health. Qualitative research is usually interpretative and the purpose is to understand the different interpretations and beliefs participants have (Baarda, B. et al, 2013). The reason for choosing a qualitative approach is because one wants to discover how district nurses experience the instrument in real life. Therefore collecting detailed qualitative data by conducting semi-structured interviews, is one of the most common methods and found to be suitable in this explorative stage.

The usability questionnaire is a quantitative method. Quantitative research provides numerical insight and often answers questions that can be expressed in terms of quantity. Also, the assessment of certain products or organizations is usually examined quantitatively by, for example, a satisfaction survey. Quantitative research always uses a (structured) survey. For this research, the system usability scale (SUS) is used to measure quantitative data. SUS has been shown to be more reliable and detect differences at smaller sample sizes than home-grown questionnaires and other commercially available ones (Brooke, 2013).

2.1.1 Setting

BrabantZorg provides care to older adults, mostly in the age of 65+ in the regions of Noord- Brabant, in the Netherlands. Products and services are in the domain of personal care Intra- and extramural, housing (nursing home), day-care and restaurant facilities. The organization has about 5,500 employees, 2043 patients in nursing homes, 106 patients in geriatric revalidation care and 2454 patients in homecare. BrabantZorg has 25 district nurses employed in home care, divided into different home care teams in different regions.

The concept of Positive Health is of great importance for BrabantZorg, the compass by which the organization wants to shape her work. This change in healthcare and adapting the ideas of Positive Health is a big change for the organization. The organization struggles with concretize the ideas of Positive Health and collaborates with the Institute of Positive Health and Vilans in order to explore the first steps. Professional's from BrabantZorg are introduced into the concept of Positive Health as part of the strategic vision (BrabantZorg, 2015) in 2015 by means of different methods; 1) explanation on paper, 2) YouTube movie, and 3) information sessions in different locations.

2.1.2 Population

Participants in this research are 12 district nurses, from four different regions (Oss, Uden, Meierijstad, and Bommelerwaard). The average age of the district nurse is 31 years old and average experience as district nurse is eight years. At first, five responsible managers from different homecare teams were informed about the goal of this research and were asked if they approved participation from district nurses into this research. Nurses were personally asked by the responsible manager to participate in this research and selected by means of motivation. After that, nurses were invited by the researcher by email to participate. In this invitation, the goal of this research was outlined and district nurses were asked to participate (see appendix 1).

Inclusion criteria;

- Working in home care as district nurse by BrabantZorg.

All nurses were requested to sign informed consent forms because parts of the research were recorded on video (see appendix 2). Nurses were fully informed of the nature of the research and implications of their participation. Nurses were made aware that withdrawing from the research is allowed at any stage, in which the data will also be withdrawn if requested. BrabantZorg does not know a medical ethical committee. There are regional committees where advice will be sought. No patient data is included, therefore approval from the medical ethical committee is not necessary.

2.2 Data collection

This research was divided into two phases. Figure two shows the design of this research.

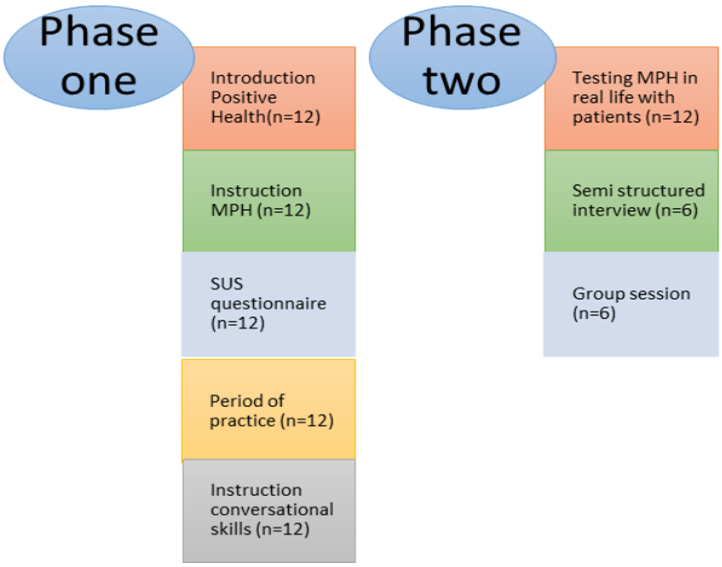

Figure 2; Research design

2.2.1 Phase one

This phase started with group sessions;

2.2.1.1 Group session one

Introduction to Positive Health and My Positive health 1.0.

District nurses (n=12) received an introduction to the concept of Positive Health, with the aim to provide sufficient theoretical background about this concept. This was achieved by means of a preselected YouTube movie about Positive Health and oral explanation. Due to practical planning, two similar sessions were required. Group sessions were held on 13 and 15 March 2017. The introduction was provided by a policy assistant of BrabantZorg, and the researcher was only observing and was taking field notes. All group sessions were video recorded and nurses were asked to sign informed consents. The group sessions were held in a quiet room, within a nursing home in Veghel, where one could not be disturbed.

Immediately after the theoretical introduction to Positive Health, nurses were provided with instructions about My Positive Health 1.0. Instructions were explained by the policy assistant. Nurses were asked to use the digital instrument My Positive Health for themselves. They could perform this task at home or during working hours, within a timeframe of one week. The aim of performing this task was gaining first experiences with My Positive Health. An instruction card about My Positive Health 1.0, with practical tips, was handed out to nurses for support (see appendix 3).

Collecting quantitative data on the technical usability of My Positive Health 1.0.

As a final part of phase one, a SUS questionnaire was provided to district nurses (n=12) (see appendix 4). Providing the SUS questionnaire immediately took place after the introduction of the instrument as mentioned above. The SUS questionnaire was used to collect information about the usability of the

website from the Institute of Positive Health. System Usability Scale (SUS) was developed as part of the usability engineering program in integrated office systems development at Digital Equipment Co Ltd., Reading, United Kingdom. SUS is a simple, ten-item scale giving a global view of subjective assessments of usability (Brooke, 2013). The items are alternated in order to avoid response biases, especially as the questionnaire invites rapid responses by being short; by alternating positive and negative statements. The goal is to have respondents read each statement and make an effort to think whether they agreed or disagreed with it. Items 1, 3, 5, 7 and 9 are positive statements and items 2, 4, 6, 8 and 10 are negative statements. A score above an 80.3 means an A (the top 10% of scores). This is the point where users are more likely to be recommending the product to a friend. Scoring at the mean score of 68 gets you a C and anything below a 51 is an F (putting you in the bottom 15%). SUS has proven to be a validated measurement instrument. Reliability refers to how consistently users respond to the items (the repeatability of the responses). SUS has been shown to be more reliable and detect differences at smaller sample sizes than home-grown questionnaires and other commercially available ones (Brooke, 2013).

All items in the questionnaire should be checked by the nurse. If a nurse felt that she could not respond to a particular item, she should mark the centre point of the scale. The questionnaire was handed out on paper and was sent by email to all nurses. Nurses were asked to fill in the questionnaire and send it back to the researcher.

In the last step of phase one, nurses received instructions about the following steps.

This group session was described in a report, according to the data from video materials and field notes from the researcher. Data from SUS questionnaire were collected by the researcher.

2.2.1.2 Group session two

Introduction to conversational skills

Nurses (n=12) received instructions and theoretical background about conversational techniques, with the aim to provide support for the nurses when using MPH. Due to practical planning, two similar sessions were required. Group sessions were held on 23 and 31 March 2017. Instructions were provided by a policy assistant of BrabantZorg, and the researcher was only observing and was taking field notes. Nurses were also given the opportunity to ask questions for clarification and share their first experiences with MPH.

Results from the group sessions were described in a report, according to the data from video materials and field notes from the researcher.

2.2.2 Phase two

2.2.2.1 Collecting qualitative data on usability in real life setting

In this phase district nurses (n=12) performed the task of using MPH in real life with patients in homecare. Nurses were supposed to select three patients. Patients with severe cognitive disease receiving homecare from BrabantZorg were excluded. Each nurse selected three patients in homecare to perform the task within a timeframe of three weeks. Patients were orally informed by the nurse about the purpose of their conversation. No patient data is collected in any way. The group of 12 nurses was randomly divided into two groups. The choice for different methods lies in the fact that collecting data from interviews has a degree of saturation. Figure three shows the distributions of participants.

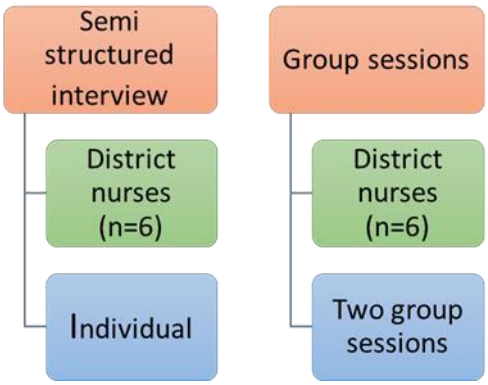

Figure 3; Distribution of participants

District nurses (n=12) were randomly selected by the researcher to participate in the interviews and group session. Nurses were personally invited by the researcher by email or personal contact.

2.2.2.2 Semi-structured interviews

Interviewing is the most widely employed method in qualitative research. Interviewing methods are flexible and this approach tends to be much less structured (Bryman, Ch. 20, P469-470, 2012). Because of the relatively unstructured nature of semi-structured interviews, it provides the researcher insights into how participants view the research topic. Unstructured interviewing is useful for exploring a topic broadly and it provides rich and detailed information about user experience. Interviews were held at locations where nurses work, in a quiet room where one could not be disturbed. Interviews were held between 14 April and 4 May 2017. The interviews were audio recorded. Each interview lasted approximately one hour. On forehand, an interview guide was designed where certain topics were addressed. Validity on the interview guide refers to the issue of whether an indicator (or set of indicators) that are devised to gauge a concept really measure that concept (Bryman, Ch. 7, P 171, 2012). The topic list was created after a group discussion with the researcher, a district nurse, and a policy assistant, and was the following;

1. Usability from the digital instrument My Positive Health 1.0

2. Experience from district professionals

3. Level of awareness on the ideas of Positive Health

4. Pro's and con's from professional's point of view

5. Time used for the completion of the instrument with the patient

After transcribing interviews by the researcher, two colleagues with research experience were included to analyse the data, extracted from the interviews. This is important to include the so-called four-eye principle. This will cover reliability.

2.2.2.3 Group session

The last step in this research was to gather experiences from the remaining six participants. These sessions were held to offer district nurses the opportunity to share experiences and secondly, the nurses' experiences were used to confirm the results of the interviews. Group sessions were held on 12 and 19 May 2017 in Veghel. Sessions were audio-recorded and the researcher was guiding the conversations. Results from the group sessions were described in a report.

3. Data analysis

This research is a qualitative research with in addition a quantitative questionnaire. Two different methods will be used to analyse the research data.

One general strategy for assisting thematic analysis is provided by Framework (Bryman, Ch. 24, P 579, 2012). Thematic analysis is used to analyse the qualitative data from the semi-structured interviews and group sessions. An index of central themes and subthemes will be represented in a matrix and are recurring motifs in the text that are then applied to the data. After collecting the data from the interviews, reading and rereading of the transcripts and field notes will be done. Themes will be organized initially into core themes. This data will be displayed in terms of main categories and subcategories within the matrix in relation to each sub-question.

Quantitative data on usability was collected by using System Usability Scale (SUS). SUS is a Likert scale. To calculate the SUS score, first sum the score contributions from each item. Each item's score contribution will range from 0 to 4. For items 1, 3, 5, 7, and 9 the score contribution is the scale position minus 1. For items 2,4,6,8 and 10, the contribution is 5 minus the scale position. Multiply the sum of the scores by 2.5 to obtain the overall value of SUS. SUS scores have a range of 0 to 100 (see appendix). Descriptive (means and standard deviations) are provided for each item of the SUS. A SUS calculator (Excel) is used to analyse the data.

The SUS uses the following response format as shown in figure four.

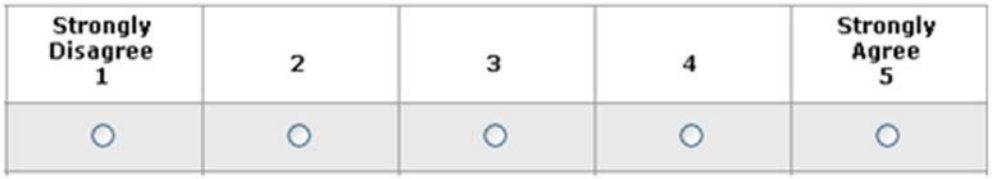

Figure 4; Response format SUS ®Brooke

4. Legal, social. ethical and safety issues

This research does not include methods that do physical or emotional harm to participants.

BrabantZorg does not know a medical ethical committee. There are regional committees where advice will be sought. No patient data is included, therefore approval from the medical ethical committee is not necessary.

As the research does not include medical research on human and or animal subjects, there is no need to address this in the research.

All participants are required to sign informed consent forms. Participants have the opportunity to be fully informed of the nature of the research and the implications of their participation. Participants should be made aware they are allowed to withdraw from the research at any stage, in which the data will also be withdrawn if requested.

Participating in the research is voluntary. When using research methods, sometimes it is desirable to use a photo, and- or video material to construct a visualization of the process. If data such as photo- and or video material will be used in the publication of the research, consent of the participant is required and should be signed for in the informed consent. All data will remain anonymous.

All outcomes from this research will be shared with participants.

This research was funded by BrabantZorg.

5. Results

5.1 Phase one

5.1.1 Introduction to Positive Health and My Positive health 1.0

In phase one district nurses (n=12) received theoretical knowledge about the concept of Positive Health and instructions how to use the digital instrument My Positive Health 1.0.

Knowledge about the concept of Positive Health varied among participants. Most nurses had gained some knowledge true education or organization.

All nurses indicated that awareness of possibilities to support self-management is better developed the past years. District nurses received training how to indicate care for elderly people to account for health insurance, and they received training how to support self-management activities for patients in home care.

Some nurses mentioned that they are still very focused on providing care in the domains of physical wellbeing. On the other hand, they are increasingly using other disciplines to support self-management activities for patients. They also believe, based on personal experience, that nurses working in home care are better developed within this area than nurses in the traditional nursing home.

5.1.2 Results SUS questionnaire

Excel is used to analyse the data from the questionnaire (see appendix 5). Results as shown in table one, indicate that MPH is a user-friendly instrument. The website where MPH is included is found easy to use, not complex and nurses will like to use the system more often in the future.

Table one; results SUS questionnaire

Item	Statement	Average score
1*	I think that I would like to use this system frequently	3,58
2	I found the system unnecessarily complex	1,83
3*	I thought the system was easy to use	4,33
4	I think that I would need the support of a technical person to be able to use this system.	1,33
5*	I found the various functions in this system were well integrated	4,33
6	I thought there was too much inconsistency in this system.	1,58
7*	I would imagine that most people would learn to use this system very quickly.	3,91
8	I found the system very cumbersome to use	1,5
9*	I felt very confident using the system	4,5

10	I needed to learn a lot of things before I could get going with this system.	1,91
	Total SUS score average	**81,3**
	Standard deviation on total score	**13, 5**
Items marked with an *, signify a positive score with a maximum score of 5. Other items signify a negative score with a minus score of 1.		

5.1.3 Introduction on motivational interviewing

Nurses (n=12) were asked to fill in My Positive Health for themselves to get familiar with the instrument. One nurse (n=1) was unable to perform this task due to circumstances. Other nurses (n=11) used the instrument for themselves. This task was performed without significant problems.

Time spent to fill in the instrument was short, on average ten minutes each nurse. Some nurses used the instrument two times for themselves to experience differences in their scores.

Further mentioned by nurses:

- More awareness about themselves.
- Sometimes difficult to interpret the score.
- Difficult to interpret the outcomes.

5.2 Phase two

In this phase, semi-structured interviews were conducted on six nurses (n=6) after the period of three weeks in which they used My Positive Health with patients.

5.2.1 Results semi- structured interviews

Semi-structured interviews (see appendix 6) were held with six participants. Results from the thematic analysis are divided into three categories and described in separate themes which are divided into main categories and subcategories. The main and subcategories are used to answer the sub-questions. Table two shows the different main- and subcategories.

Table two: results data sub-question two

Nr.	Main category	Subcategory	Results
1	Experience with instrument	Selection of patients	Curiosity (n=4), patient must understand questions (n=4), patient with dementia (n=3), search for new goals (n=3)
		Digital skills and using account	Accustomed to working with a laptop (n=6). No problems stated (n=6). Need for
			personal accounts for elderly patients (n=6)

		Content of questions	Patients needed support (n=5), clear, simple questions (n=6), no personal interpretation (n=3), structure is helpful (n=6), addition to usual tool (n=6), unusual questions (n=6), surprising information (n=3).
		Time investment	Between 1 hour (n=3), 1,5 hour (n=2), 2 hours (n=1), 2,5 hour (n=1).
		Support & quality of care	Not suitable for patients with dementia (n=6), doubts reliability (n=1), supportive instrument (n=6), value to quality of care (n=4), understand patients better (n=3), strengthens relationship (n=2).
		Incorporation in care process	Suitable (n=5), not to use at first contact (n=2), repeatable in process (n=3).
		Contribution in view on sickness and health	More awareness about Positive Health (n=4), the instrument is of added value (n=6).
		App-store	Not of value for elderly people (n=6). Not seen or used (n=6).
2	Knowledge	Positive Health	Good for all colleagues (n=6). Needed before working with the instrument (n=5).
		Conversational skills	Required for conversation (n=6), doubts about skills colleagues (n=2).

5.2.1.1 Main category one; Experiences with My Positive Health 1.0

After gaining theoretical knowledge and instructions about the instrument, all 12 district nurses (n=12) were asked to use My Positive Health together with three patients within a three week period. An individual, semi-structured interview was held with six district nurses (n=6) in which they could share their experiences with the researcher. A pre-determined interview guide was used and was leading during the interviews. On different main points, several questions were asked.

The results of the analysis will be described by each category below.

- Selection of patients

The first category focuses on the selection of patients. This is about how nurses have selected patients and why they decided to choose these patients. Four nurses mentioned that curiosity about the patient was leading, and expressed the wish to understand the patient better. One nurse said: *"I selected three patients who were already familiar to me, I was curious about them".* Three nurses selected several patients with dementia, although this was an exclusion criterion. One of the nurses said: *"I wanted to experience if this could work with this patient with dementia"*. Three nurses excluded patients with severe cognitive diseases because nurses thought this was not doable for patients with dementia. One nurse said: *"This would be distorting, as patients probably would not understand the questions".* Three nurses searched for differences between patients and wanted to find out whether there is other care needed. One nurse said: *"I need to know more about this patient to search for a connection to support her better".*

- Digital skills and using account

My Positive Health is a digital instrument, freely available on the internet. All nurses used their laptop to fill in the score on the website. Six nurses indicated that working with a laptop in daily practice is perceived as normal, for both nurses as patients. One nurse said: *"I let the patient read on the screen".* One nurse forgot the password. One nurse said: *"I showed the patient that they could slide along the bar, giving a score".* Creating an account on the website and register was no problem for nurses. One nurse said: *"Creating an account was no problem".*

Creating an account was no problem for the nurses. All six nurses mentioned that most elderly patients have no email, so a personal account could not be created. Nurses used their personal account for all conversations, thus scores of three different people were shown. One nurse said: *"It was funny because the patient had a better score than myself".* Most other nurses felt this was not suitable as all scores were visible for all patients, although no names were visible.

- Content of questions of the instrument

This is mainly about the experience from nurses in asking questions as the instrument indicates, and how nurses feel about the content of the questions. Five nurses needed to support patients, in particular explaining the questions and how questions should be interpreted. One nurse said: *"I had to support the patients in answering the question".* Another nurse said: *"About some questions, patients needed to think. Me too; how do I feel about these questions?".* One nurse indicated that no support was needed. Six nurses stated that the questions were clear and simple. One nurse said: *"These are 42 very simple questions".* As the instrument follows a certain structure, two nurses mentioned that the structure is helpful to ask the questions. One nurse said: *"No personal interpretation can be given".* Another nurse said: *"I experienced a certain safety to ask the questions, as the instrument asked the questions which I followed, with the result that it was not only my personal interest".*

One nurse did not ask any other questions than she was used to asking, as she said: *"Maybe different formulated questions, but the content was the same".* Five nurses asked different questions. One nurse said: *"I never literally asked the question about happiness".* Three nurses mentioned that asking patients about their financial situation is unusual. One of the nurses said: *"I felt almost embarrassed asking this question, this is not my business".* Another nurse said: *"The question about finance? I never asked".*

One nurse had to support the patient in explaining the question about ideals. She said: *"It was necessary that the patient did not think big, small ideals are more meant with this question like maybe you want to see your grandchild".*

Three nurses were surprised by patient's responses. One nurse said: *"I did not think she would give a high score to happiness, I was convinced that this patient was very unhappy considering the conditions she lives in".* Another nurse mentioned: *"I could not believe that this patient could appreciate the quality of life this high, he is lonely and not joining any activities".*

- Time investment

Time investment is about the amount of time nurses need to complete the assessment with patients.

Two nurses needed one hour. Two nurses needed one and a half hour. One nurse said: *"One and a half hour is short".* One nurse needed 15 minutes for one patient with dementia, as she said: *"He did not understand anything, I stopped the conversation".* She mentioned that this patient did not understand the questions and the purpose of the assessment. The other two conversations lasted 30 minutes. One nurse needed between one and a half, and two and a half hours for the assessment.

To the question why nurses spend this amount of time on the assessment, two nurses mentioned that patients delivered lots of information as a result of the questions. One nurse mentioned: *"I would only invest more time when the added value is present".* She stated that one hour average was enough time spent.

One nurse experienced that some questions raised emotions by patients, and she believes that therefore more time is needed with respect to the patient. She said: *"Two hours is needed if you want to do it extensively".* One nurse stated that for good quality of this conversation following the instrument, considerable time is needed. On the other hand, two nurses are worried whether they are allowed to spend this time, as they both said: *"Who will pay for this time spend?".*

- Support of the instrument and quality of care

This category describes to what extent nurses experience support from the instrument and whether nurses consider this an addition to the quality of care.

With regard to the question, if the instrument could be supportive to nurses, opinions were different. One nurse expressed doubts on the reliability of the instrument and thus reliability of the answers. This depends on the extent to which patients answer the questions in all honesty. Three nurses stated that the instrument is not suitable for people with cognitive diseases. Patients with dementia did not understand the questions asked, and the quality of the conversation was proved to be insufficient. Four nurses are convinced that the instrument is supportive. Nurses indicate that the six dimensions touch all aspects of a person, by asking very clear and simple questions. One nurse said: *"There is more attention for spiritual wellbeing, this part is often forgotten".* She thinks it is helpful in mapping mental wellbeing, which is often not touched.

On the question, if using this instrument is of value to the quality of care, four nurses are convinced that using the instrument and related outcomes of conversations, are of value to the quality of care. One nurse said: *"I am able to understand patients better and therefore I understand why the patient is reacting in certain situations".* Another nurse stated that she has many more discussion topics when she is visiting patients, as she said: *"It strengthened the relationship with the patient".* One nurse is convinced that different and more supportive goals for patients can be set, once different information is known. One nurse said: *"This instrument is not quality itself, this is part of the whole care process".*

- Incorporation

My Positive Health is a conversational tool and suggests possible topics for subjective evaluation. The goal was to determine how participants think about if the instrument is found to be suitable to incorporate within the care process.

Six nurses expressed the instrument as suitable to incorporate within the care process. Three nurses indicated that the instrument is not suitable to start within the first contact with patients. Two nurses said: *"Not at the start, at first contact with the patient".* One nurse mentioned: *"I believe that some relationship with patients is needed before using the tool".* Another nurse said: *"At first contact ask the question about happiness? That is tensive".* Six nurses are convinced that My Positive Health is suitable to follow patients in the process and to evaluate goals from patients and to compare situations within a certain time-aspect. One nurse said: *"Yes, to use or change something, use the scores to compare".* One nurse mentioned to repeat the assessment when evaluation moments arise. She said: *"This conversation should be conducted by other nurses (evv-er), not by myself".*

- Contribution view on illness and health

Participants gained experience by the contribution of theoretical knowledge and working with the instrument. This category is about determining to what extend knowledge and practice contributed to participant's view on health and illness according to the principles of Positive Health.

Two nurses explained that they already were familiar with the ideas of Positive Health due to education or contribution from the organization. One nurse said: *"Due to changing the environment in healthcare, we already see the need to look and act differently".* Another nurse said: *"I worked in the hospital, I think that the ideas of Positive health are also needed there. They are more focused on a cure, and forget other aspects".* Three nurses stated literally that they became more aware of the concept of positive health. One nurse said: *"It was supportive to me to broaden my view, how does someone feel".* Other examples of changing thoughts; *"Look towards possibilities".* One nurse said: *"That someone with a physical disability finds that is the cause, often more reasons are present".* Another nurse said: *"Patient is often called sick, that does not mean that a patient feels sick. How patients experience sickness is more important".* One nurse had certain assumptions of patients, which did not prove to be right as she said*: "I thought that these patients were very unhappy, that did not seem to be right".* Attention to mental and spiritual wellbeing seemed to be an important aspect for one nurse as she said: *"More attention on mental health, often not touched".* Two nurses stated that working with the instrument was no contribution. According to these two nurses, the value is awareness.

- App-Store

There is an app-store included in the instrument. The meaning of the app store is to provide guidance in a digital way. The goal was to determine to what extent participants created awareness about this functionality and how appealing an app-store is for patients.

Three nurses did not see the app-store, weren't aware of this functionality. One nurse said*: "I knew about the app-store, but I did not touch it".* Three nurses visited the app-store after the questionnaire was completed, and for personal interest. Five nurses found the app-store not suitable for patients, especially elderly patients, as one nurse said: *"No apps for elderly people, people do not know what the app-store is".*

One nurse considers that "modern" elderly people will use the app-store, and two nurses believe that the app-store is suitable for younger people and personal use. One nurse said: *"I did not use the app-store after the questionnaire, this is more for younger people or modern elderly people".*

To the question, if nurses know if patients use smartphones, IPad or other devices, two nurses stated that patients do not use these devices, and two nurses stated that few patients use a smartphone. One nurse said: *"Patients do not know how to use an app store because they don't understand the meaning of apps".*

One nurse believes that using apps is impersonal and does not help in finding solutions. One nurse has doubts about the usability. She said; *"When you feel sick, you do not feel like searching for apps".* She also said: *"The app store does not provide specific advice based on the final score. The app-store provides only a general advice".*

5.2.1.2 Main category two; Knowledge about Positive Health and conversational skills

The second main category focusses on conditions needed to follow the ideas of Positive Health and to use the instrument properly. Questions about the need for knowledge about Positive Health and conversational skills according to motivational interviewing were submitted to participants.

- Knowledge about Positive Health

This category describes how participants feel about receiving additional knowledge and if this is a prerequisite for using the instrument.

Six nurses believe that knowledge about the ideas of Positive Health is required as general background information. One nurse said*: "When you work within this organization I believe this is required".* Six nurses believe that knowledge about Positive Health is necessary for all colleagues within the organization. One nurse said: *"Colleagues must see the need".* To the question, if this specific knowledge is needed to work with this instrument, one nurse stated that it is not required. Five nurses think knowledge will be helpful to understand the content of the instrument. One nurse said*:" Background information is needed for answering questions of patients".*

The working form on how knowledge is provided should be easier as two nurses said: *"By means of a YouTube movie from M. Huber, or discussions in team meetings, not face-to-face".* One nurse expressed worries whether this is feasible in the hectic of daily practice.

- Conversational skills

A certain level of conversational skills is needed to conduct an optimal conversation with the patient. The question was asked to which level of conversational skills nurses must comply to perform this task. Six nurses stated that a certain level of conversational skills is needed to create in-depth conversations with the patient. One nurse said: *"Motivational interviewing supports self-management".* Another nurse said*: "It is important to conduct quality conversations, to collect information".* Two nurses have doubts if all colleagues are able to develop these skills. One nurse said*: "Even there is a difference in conversational skills among district nurses, as the person is the instrument itself".*

5.2.1.3 Pros and cons of My Positive Health 1.0

Table three shows the main- and subcategories.

Table three: results data sub question three

Nr	Main category	Subcategory	Results
1	Pro's and con's	Benefits	Helpful, visualization of spider diagram, meaningful, easy to use, clear questions, found to be complete, approachable method, other information, look different towards patients, open contact, degree of in-depth conversation, addition to medical information, supports ideas to address topics, personalized, added value for patients in nursing homes.
		Disadvantages	App-store not suitable, time-consuming, not suitable for patients with dementia, not at first contact, patients need support, no paper version, the risk that method will be experienced as "extra" by nurses, time-consuming, certain barriers with some questions.
2	Recommendations		Paper version, include in current EHR, all colleagues could use it, only evvers should use it.

- Benefits

Participants have gained experience working with the instrument during 3 weeks. This category describes benefits stated by participants.

Six nurses expressed that the instrument is helpful en meaningful. Examples named: *"Easy accessible, easy to use, approachable method, easy to set scores, clear questions".* Three nurses appoint that the instrument is found to be complete, it touches all aspects of life. One nurse said*: "Look different towards patients, not only focus one cure or disease. There is more focus on total well-being and the chance to make a difference".* One nurse said: *"It is an approachable method to conduct the conversation".* And another nurse said: *"You are able to repeat this method, it is a good measure instrument".*

One nurse used the instrument differently, namely, she did not use the questionnaire but used a picture of the spider diagram with the six dimensions. On that basis, she asked questions to patients, and she found this method also very helpful. Due to this work form, she was not able to share outcomes from the spider diagram with patients. But she found value in the conversation.

Nurses received more or different information during the conversations with patients. One nurse said: *"You get to know patients better because you receive more background information".* Information about work, marriage, children. One nurse mentioned that she experienced very open contact between her and patients. Another nurse said*: "I got to know the patients much better and this is helpful in*

understanding patients in certain situations". One nurse mentioned that her opinion about the patient has changed, she looks different to the patient.

One nurse also found it useful for herself.

Three nurses stated that they felt more encouraged to ask more questions because of the score, and therefore received more in-depth answers. One nurse said: *"I was able to ask more questions because of the scores".*

- Disadvantages

District nurses were asked to appoint the disadvantages about My Positive Health.

One nurse stated that she could not appoint any disadvantages. Two nurses found the app-store not useful for elderly patients. Two nurses stated that using this method is time-consuming. One nurse said*: "Next to investment in time, it should not be experienced as something extra to proceed".* Two nurses mentioned that the instrument is not useful for patients with dementia, as one nurse said: *"This is not reliable for patients with dementia".* One nurse will not use this method at first contact because she feels a relationship and trust is needed to follow the questionnaire. Two nurses stated that patients needed support in translating the questions or score.

- Recommendations

District nurses were asked to provide recommendations after their experiences.

One nurse could not state any recommendations. One nurse made a suggestion to use the method on paper. Another nurse said: *"Include the questions into the current electronic health record".*

The question was asked if nurses would recommend this method for colleagues. Three nurses confirmed that this method should be used by colleagues. One nurse said: *"I will challenge my colleagues to experience this method".* Three nurses expressed some doubts. Two nurses stated that when the value of this method is present, colleagues will use it. One nurse said*:" We already discuss many topics with patients during intake procedures, this might be too much for patients".*

5.2.1.4 Group results

The last step in this research was to gather experiences from the remaining six participants. These sessions were held to offer district nurses the opportunity to share experiences and secondly, the nurses' experiences were used to confirm the results of the interviews.

Results generally came across with the results from the individual interviews.

6. Discussion

Following the arrival of the new concept of Positive Health, this qualitative study was conducted to gain insights into the effects of the digital instrument My Positive Health 1.0 (MPH.) District nurses, as main stakeholders in this study, were involved. This study has sought an answer to the question to what extent My Positive Health 1.0 is supportive to district nurses as a conversation tool in order to identify the six dimensions of health from the patient in home care. With regard to the sub-questions, it was important to discover whether MPH is technically usable for district nurses, how nurses experienced MPH in order to identify the six dimensions of health from the patient, and how they identify the pros and cons of the instrument. This is one of the first studies in the Netherlands were district nurses tested MPH in real life with patients.

As this study shows, MPH is evaluated by nurses as a practical applicable, and promising instrument with the potential to improve in the future.

As nurses are accustomed to conducting intake or assessment procedures with patients, following the questionnaire which is included in MPH, was experienced as different in relation to usual assessment tools. Questions were perceived as very clear, simple, short and understandable. What seems to be of great value, according to the results, is the structure of the questionnaire, which was to be found supportive to prevent personal interpretation of nurses in conducting conversations. What seems to be noticeable according to the results, most nurses feel uncomfortable about the topic finance. The opinion of nurses was that a personal relationship is required, before discussing financial situations with patients. This is in contrast to the role district nurses are supposed to fulfil, namely as the report "How district nurses work together in the social domain" (Vilans, 2015) stated; a signalling function which is not immediately related to medical care. This presupposes that nurses should be able to signal financial problems, which is known as a stressful factor for a person, but this is not embedded yet.

As a result from working with MPH, it is shown that most nurses learned more about patients experiences of wellbeing, the degree of happiness and background, although nurses were already familiar with most of the patients. These results indicate that following the methodology provides detailed information, and as some nurses stated, it builds a stronger relationship towards patients. This corresponds to the results from the study of Huber et al (2011); patients consider these abilities very relevant and appreciate the newly devised concept because it emphasized that people are more than their illness and it considers their strengths instead of their weaknesses (Huber, 2011). This indicates that nurses will understand patients better and that quality of follow-up contacts with patients will improve.

According to the Institute of Positive Health (IPH), MPH is designed as a conversation tool and could be used for healthcare professionals and patients, suggesting possible topics for subjective evaluation and, if desired, potential actions for improvement and increase of the health area of the patient. MPH does not offer the ability so save patient data. This raises the question and immediately an ethical dilemma; what is the procedure according to processing information gathered from the conversation that was held? Professionals are accustomed to processing patient data into electronic health care records. It is imaginable that conversations contain confidential information. The question is if patients want to share confidential information by means of reports within the electronic health record. This seems to contradict each other and no agreements are made about processing patient data and the follow-up after using MPH. Although nurses should take into account their confidentiality obligation, this is a rightful discussion that needs to be clarified.

Another issue concerning sharing patient data is that the organization offers a digital service, namely a digital patient portal. By means of a digital portal, patients have the opportunity to enter their electronic health records. If the patient agrees, also another person's e.g. family members are able to enter the database, true authorisation, and read medical reports. It is imaginable that from patient's perspective, confidential information will not be shown within the patient portal. It is not clear to what extent elderly patients are able to assess the consequences or possibilities in the nearby future.

Although nurses were instructed to exclude patients with severe cognitive disease, results show that several patients with dementia were included. The methodology according to MPH is not to be found suitable for patients with dementia in this study. Patients did not seem to understand the questions and were in need of extra support. Therefore qualitative conversations to gather information and thus reliability of the content did not prove to be the outcome. This corresponds with a literature study from 2012 which addresses the complex relationships among communication problems for patients with dementia (Watson, B., Aizawa, L., Savundranayagam, M., Orange, B., 2013). According to the findings of Watson et al (2013) dementia is a progressive, degenerative neurological and psychiatric syndrome that stems from changes to neuronal and neurochemical activities that control behaviours and mental abilities including language, communication, and cognitive skills (Watson, 2013). They state that communication becomes increasingly difficult as language impairment progresses during the course of dementia, and training and education are necessary to improve successful interaction.

An issue regarding the usefulness and potential future of MPH is to what extent the methodology should be integrated within the current care process. Results show that MPH has potential to incorporate within the care process because the value of the instrument is experienced, but consensus about this procedure is not yet reached. Results show that opinions are diverse and there is a possible risk that nurses experience the instrument as extra workload. Workload could be related to e.g. administration workload. For example, care providers must deal with statutory registrations and additional requirements from health care offices and IGZ. Organizations also devised and introduced registrations for own behalf. According to a letter from the secretary of the ministry VWS, Drs. M.J. van Rijn, the government is invited to critically assess administrative burdens in health care and all kinds of initiatives arose to reduce administrative burdens (Rijksoverheid, 2017). Current practice is showing that it is not yet proved that administrative burdens are reduced and professionals are obliged to conduct these procedures.

Another way to use the value of MPH is to incorporate the instrument within current intake procedure's, but results in this study indicate that opinions are diverse, for example, intake procedures are unambiguously organized, and not every nurse feels that MPH could be used at the start of the care process. This is related to the opinion of nurses that a degree of relationship is necessary before using
MPH. Results also show that including MPH into Omaha system could bring possibilities. Omaha System is a research-based, comprehensive practice and documentation standardized taxonomy designed to describe client care. The Problem Classification Scheme provides a structure, terms, and system of cues and clues for a standardized assessment of individuals, families, and communities. It helps professionals collect, sort, document, classify, analyse, retrieve, and communicate health-related needs and strengths. In the year 2018, all district nurses of BrabantZorg will be able to work within Omaha system. However, the question arises if MPH should be integrated within Omaha system or remain a separate instrument. Maybe even, MPH should become the replacement for assessment tools such as Omaha System. For the division that supports home care (district nursing), it is obliged by insurance companies in the Netherlands to introduce a classification system (V&VN,

2014). This obligation appears to be in conflict with MPH when added value is shown by further research.

Although working according to the ideas of MPH seems to be of great value, results show that there is a discussion about the investment in time and financial resources. District nursing is becoming increasingly widespread, as evidenced by the annual report from Actiz (2017), conducted by the research office ICSB. Healthcare organizations are faced with tariff and volume reductions for the third year in a row. 68% of healthcare organizations indicate that they cannot make the necessary development at the agreed rate. Almost three-quarters of healthcare providers are expecting problems within this year as a direct consequence of contracts concluded with health insurers. On the contrary results of this study shows that nurses are willing to invest out of the belief that better quality of care is the outcome. Currently, different pilots are held among different healthcare organizations and family doctors in the region of Limburg. First results are positive and according to one family doctor, it is worthwhile to invest more time in patients (Ploeger, 2017). He refers 30% of his patients less to specialists and his work is less medical, patients feel supported. Further research and results should prove the benefits.

Results indicate that more awareness about the ideas of Positive Health arose among district nurses. This is due to the fact that participants received theoretical knowledge and apply MPH in real life settings with patients. This corresponds to the expectations as stated in the hypothesis in paragraph 1.6; “It should help professionals to gain a broader view towards patients based on possibilities and values of people”. Despite the fact that nurses often think of possibilities and focus on patient's strength or self-management activities, results indicate that nurses were not able to pinpoint examples of concrete practical translation to increase the quality of care according to the ideas of Positive Health. This implies that nurses need support to explore what other possibilities exist to convert ideas into actions. Results show that a certain degree of conversational skill is necessary to conduct in-depth conversations. One way to support applying MPH is to offer training to promote conversational skills according to motivational interviewing which is part of the conversational techniques recommended by IPH (Zelfredzaamheid | Motiverende gesprekstechnieken | © Vilans, June 2013). This raises the question if every professional is able to develop these skills, and should every professional be obliged to follow MPH.

The app-store is hardly touched. Results show that nurses are biased about the usefulness of app-stores or apps in general for elderly people. According to Duplaga, M (2016) who studied the predictors of nurse’s acceptance of eHealth features in Poland, nurses play an important role in supporting patients with eHealth tools. There is a need of educating and training of nursing personnel to enable their involvement in the eHealth implementation efforts (Duplaga, 2016). Next, to the degree of acceptance by nurses, indications were present that many elderly patients don’t use smartphones or other devices. This corresponds to results that little attention was given to the app-store and therefore it is not known if the app-store was to be found useful. On the other hand, results show that working digitally, namely using laptops by nurses in home care, is fully accepted by nurses and patients.

As results from the SUS questionnaire shows, the website from the Institute of Positive Health were MPH is included, has been received positively. The website is easy to use, not complex and nurses would like to use the website more often. On the other hand, results from interviews indicate that there seems to be a problem according to use the personal account. To visualize an individual score a personal account is needed. Most elderly patients did not possess a computer or email address and nurses were forced to use their personal accounts. When MPH is more often used in the future, this

needs development to fulfil the need of working digital. One alternative is a paper version, but the disadvantage is that final scores within the spider diagram will not be seen.

7. Risks and limitations

There were several limitations to this study which should be taken into consideration. At first, this is a small scale study that included only 12 participants within an 18 week period. One participant could not perform the task within the last stage of the research due to circumstances.

This study was held within one organization, thus no comparison can be made.

Although one criterion was to exclude patients with cognitive disease, several nurses selected patients with dementia. Therefore this could bias the interpretation of MPH by nurses. The choice has been made to include this data because results show that these data are valuable for further research in the future.

There is still little research done on the concrete translation of Positive Health, and no comparison can be made.

The researcher is not an experienced researcher and interviewer, some suggestive questions during the interviews were asked. This could provide biased information.

The researcher has a management position within the organization, therefore this could be of influence for participants.

8. Conclusion and recommendations

8.1 Conclusion

This study shows that MPH is a promising instrument with multiple advantages to support district nurses order to identify the six dimensions of health from the patient in home care. This study also identified factors for improvement. Further research is needed into the usefulness of the app-store for elderly people, professional's perception about EHealth applications, as also applying the instrument for patients with cognitive impairments.

Discussions should be held in relation to financial approval to promote MPH for professionals, and to what extent it is possible to incorporate MPH into current electronic health systems.

Adjustments are necessary with regard to using a personal account to register when professionals apply MPH with elderly patients who do not have email.

District nurses have become more aware of the ideas of Positive Health by means of working with MPH. In the future nurses need support to concretise awareness into potential actions towards patients.

8.2 Recommendations

BrabantZorg gained first experiences concretize the ideas of Positive Health during a pilot with two teams and based on the experiences of this study. Because the principles of Positive Health are of strategic importance to the organization, the choice has been made to deploy MPH for professionals with the aim to support in daily practice to work according to the principles of Positive Health.

Several recommendations should be taken into account. There are short term and long term recommendations. For long-term recommendations, cultural aspects need attention. Positive health is a pinpoint for the organization. This means that more focus is needed in different areas on this topic. Professionals are trained to see patients as a person who is sick and in need of care. With the arrival of Positive Health, our professionals need to change their vision towards the patient. Of course, disease, where possible, must be treated, but in addition, there must also be attention to the strengthening of resilience, self-management.

It is of importance that all stakeholders will be involved in developing the application of MPH, therefore it is advisable to set up a core team where stakeholders are involved. Hopefully, in the near future, BrabantZorg will, through a joint grant application with other organizations, participate in further research into the usability and application of the instrument.

With regard to short-term recommendations, it is advisable that attention is needed for the use of MPH with district nurses, as they already gained experience through participating during this study. Also, organize pilot teams to practice and learn with regard to the application of MPH.

The organization should investigate and bring advice with regard to a number of issues, namely time investment, a clear structure with regard to intake procedures and support nurses with “acting” out of the box. The ethical aspects of the collection and storage of patient information must also be discussed.

General recommendations are appointed to the developers of My Positive Health 1.0.

MPH is a first version and needs customization. In order to properly use MPH with patients with cognitive impairments, it is necessary to develop an appropriate method.

Also how to apply this method when a patient does not have an email- address in order to follow the structure of the questionnaire, final score, and app-store. It is advisable to collaborate with stakeholders to achieve this goal.

One last advice concerns the use of the app-store for elderly patients, which is not accessible because of the simple fact that many older people above 80+, still do not use mobile devices or computers. It is also unclear whether the apps are validated. This needs further research.

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