

# The effect of the social influence of a diabetes nurse's working environment on the intention to recommend the artificial pancreas as a treatment method for Diabetes Type 1

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## ABSTRACT

There is a vast literature that deals with social influence in marketing and consumer studies. Also, there is a lot literature that is concerned with factors that have an influence on the clinical decision making of nurses. However, there is a no literature about how the different actors in the health care sector can influence each other through their relationships they have. This paper studies examines the impact the social influence a nurse encounters at the working environment on the intention to recommend the artificial pancreas for the treatment of diabetes mellitus type 1. The sample of nurses was drawn from the Dutch Association for Diabetes Care Professionals and conducted between 188 Dutch nurses specialised on diabetes. Five different groups have been identified, which are peers, principles, assistants, patients and the patients' relatives. Subjective norm is used as a framework to describe social influence. To analyse that data that has been derived from a survey, a multiple regression analysis is conducted to test the degree of impact each of these groups have. The results show that three groups have a significant influence, which are the relatives, the peers and the principles. These results can be used for marketing purposes as nurses represent an important stakeholder in the medical device market. By particularly targeting these groups and their social networks, medical device companies can improve their sales through word-of-mouth marketing.

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## Keywords

Artificial Pancreas, Diabetes, Nurses, Social Influence, Subjective Norm, Working Environment, Intention to recommend

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## 1. INTRODUCTION

The global medical device market had an estimated worth of \$300 billion and an annual growth rate of 4.6% in 2013 making it a fast growing and innovative market (Kolominsky-Rabas, Djanatliev, Wahlster, Ganter-Bär, Hofman, German, Sedlmayr, Reinhardt, Schüttler & Kriza, 2014). One proof of this innovativeness gives Inreda Diabetic B.V.<sup>1</sup>, a developer and producer of an artificial pancreas for the treatment of diabetes mellitus type 1. This type of diabetes is an “autoimmune disease where the body’s defence system attacks the insulin-producing beta cells in the pancreas” (International Diabetes Federation, 2013, p.22). It results in a stop of the production of insulin and usually occurs in the age of childhood or young adulthood (International Diabetes Federation, 2013). Inreda has developed a bi-hormonal artificial pancreas as a new treatment method for this particular type of diabetes. As being a diabetes type 1 patient himself, the founder has not been satisfied with the devices that are available on the market to measure blood glucose levels and developed the artificial pancreas to increase satisfaction and handiness in the treatment of diabetes (Inreda Diabetic B.V. 2015a), since the artificial pancreas automatically controls the blood sugar levels and dispenses the two hormones, insulin and glucagon, accordingly. This is especially convenient for young children, as they are not able to measure their blood sugar levels themselves.

In 2014, the fourth prototype has been released and the artificial pancreas should be ready for production by the end of 2016 (Inreda Diabetic B.V., 2015b). As Inreda is going to be new to the market by then, a strategy has to be developed to market their artificial pancreas in order to successfully sell their product on the medical device market. The market has many stakeholder groups – the most important groups to think of first, might be patients and physicians, as they are the ones who make use of and distribute the devices. Yet another important group are nurses. It has shown that manufacturers working closely with care practitioners were able to raise awareness for their products and use, promoted higher standards and advised on meeting the challenges that were set by health care reforms in quality and productivity (Madden, 2012). In the UK it is already common practice for medical device companies to develop close relationships with nurses through means such as conferences or offering possibilities for professional development education or training (Madden, 2012). Thus, it should be interesting for Inreda also to focus on nurses when developing a marketing strategy. Another reason why to target nurses is that over the past decades they have gained on importance for health care.

Traditionally the health care system has been seen as a two-sided system, with the patients on the one side and the providers on the other. The two sides interact on common platforms, like patient-doctor consultations, hospitals and health care centres (Griffiths, Cave, Boardman, Ren Pawlikowska, Ball, Clarke and Cohen, 2012). Over the past two decades, the increasing number of outpatient medication treatments plus the growing number of options to find information have led to a shift from a provider-patient relationship to a client-centred method in the medical care sector (Minvielle, Waelli, Sicotte & Kimberly, 2014). The client-centred approach has changed hospital priorities and policies (Bromley, 2012). Verschuren and Masselink already discovered in 1997 that the social environment is changing in Dutch hospitals. The Dutch government has become less directive and since the health care reform in 2006 this has become even more obvious. The role of the government

changed from direct control organ to an overseeing control (Schäfer, Kroneman, Boerma, van den Berg, Westert, Devillé & van Ginneken, 2010). Thus, market mechanisms are becoming more important. This forces health care providers to merely concentrate on the demands of patients, striving for high quality services and a balance of costs and benefits (Verschuren & Masselik, 1997). Thus, medical devices have an increased importance in medical home care since they bring health and quality of life to patients and carers (Sorenson & Kanavos, 2011).

In order to help patients gaining better control over their diabetes and increase their quality of life, health care professionals should encourage them to make informed decisions in their everyday life (van Dam, van der Horst, van den Borne, Ryckman & Crebolder, 2003). Therefore, regular monitoring of the side-effects the medication might have, is needed. This monitoring is conducted to a large extent by the patients themselves but a major part is undertaken by nurses (Chewning & Sleath, 1996). They can give recommendations and re-encourage patients in treatment methods if needed (Nursing School Charter College, 2015), helping patients to make the right decisions. Nurses are most of the times the first persons who get in touch with the patients and are, therefore, very important for a good relationship between the medical care providers and the patients.

Nowadays, nursing work is characterised by increased complexity, more required team work, extended use of sophisticated medical technology and increased competition (Tummers, Landeweerd & van Merode, 2002). Krogstad, Hofoss and Hjortdahl (2004), furthermore, argue that the building of an academic profession in nursing has a conflicting impact with physicians, since an academic profession emancipates nurses, making them more independent from the medical profession and challenging the physicians. Particularly in Dutch hospitals, nurses who work more independently and have liberated themselves from the physicians, have greater margin to take decisions (Tummers et al., 2002). The results of Tummers et al.’s (2002) survey show that those nurses who take decisions independently are well accepted in the team and socially supported, which means they are socially influenced.

As commonly known, social influence serves as an important key concept marketing since buying decisions, or in this case, the decision of making use of a medical treatment are “subject to influence from several potential sources,” e.g. family, friends, associates or even strangers and not made in a vacuum (Kongsompong, Green & Patterson, 2009, p.142). More and more firms already try to address customers indirectly by targeting their strategies on the customers’ social environment (Hinz, Schulze & Takac, 2014). Hence, Inreda should not neglect these networks, as they have the potential to bring their product forward via word-of-mouth marketing (Cooke & Buckley, 2008). Targeting the social networks of nurses can be useful as they are the intermediary between patients, and physicians which are. An increased awareness about the artificial pancreas among nurses and building a good reputation of this technology through word-of-mouth marketing within this group can lead to a substantial success in the marketing.

Nurses work in an environment in which they get to meet with many different groups of people such as peers, physicians, patients with their relatives. All these different groups belong to a nurse’s network and, thus, possibly are a source of information. From several marketing studies, it is known that customers usually collect information from multiple sources (Blythe, 2009) before making a buying decision. White and

<sup>1</sup> In the remaining referred to as Inreda

Dahl (2006) demonstrate that reference groups can serve as a starting point of “reference for how consumers think and behave” (p. 404). Asch (1952) recognised that the social influence is driven by the customer’s intention to be either in unity with a certain group or to be in conflict with them. Also Wood and Hayes (2012) claim that other people have a substantial impact on customer’s decision making. Even when they seem to make decisions independently, they are still influenced by the opinions of close others. However, there is a lack in the literature, how medical staff is influence by their social environment when it comes to recommending or prescribing a medication or treatment method. Griffiths et al. (2012) discovered that both social and professional networks can contribute to refinement of medical evidence. However, professional networks remain to have greater access to medical data and the skill to analyse them in an appropriate way (Griffiths et al., 2012). Professional networks, thus, deliver a basis on which health care professionals can improve their decision making which treatments to recommend or to prescribe. But their findings do not describe whether professional networks are solely used for informational motives or if also relational motives have an influence. This study therefore investigates if social influence has an impact on the behavioural intention of nurses, to close the gap in the literature. Furthermore, the literature that concerns the decision making processes of nurses focuses on factors such as age, work experience and education (Brannon & Carson 2003; Brannon & Carson 2003; Hicks, Merritt & Elstein, 2003; Thompson & Stapley, 2011; Thompson, Aitken, Doran & Dowding 2013) but none of it describes which effects social relationships might have on this decision making. This paper intends to give insights about how nurses can be influenced by their social environment and networks in their decision making process to recommend a treatment method. As nurses work in teams, in which the team members can have different kind of occupations, different groups need to be taken into account. Furthermore, nurses are in touch with patients and relatives and are concerned with their caring and advising them. Thus, in this paper the social influence of other diabetes nurses, principles, assistants, patients and relatives, is researched.

In this research paper, the effect of the social influence of a diabetes nurse’s working environment on her intention to recommend the artificial pancreas as a treatment method for diabetes mellitus type 1 will be examined

Having a better idea about how nurses form their decisions, might give larger understanding about how medical staff in general comes to their decisions and why they recommend or prescribe a particular treatment instead of another.

For this reason the following research question has been developed:

*To what extent does the social influence, measured as other diabetes nurses within the team, principals, assistants, patients and the patients’ relatives impact the recommendation intention of diabetes nurses on the use of the artificial pancreas as a treatment method for Diabetes Type 1?*

The following sub-questions have been developed in order to explain in how far the social network functions have an influence on the recommendation decision:

*Which group has the greatest influence on the intention to recommend?*

*To what extent can the differences in the effect of influence of these groups be explained by the functions of the different occupations?*

This paper has the following structure: the next paragraph begins with a section where background information about the Dutch health system is given, followed by a theory paragraph with a literature review which evaluates the available body of knowledge about the key concepts of this paper based on the subjective norm theory. Then a research model and hypotheses are developed. Afterwards, a methodology section follows, which is concerned with the subject of study, the data collection procedure and the data measurement and analysis. Then a results section follows, which reports the findings of the conducted correlation and multiple regression analysis. The paper ends with discussion and conclusion sections, where further research suggestions as well as the limitations of this study can be found.

## **2. THEORY**

### **2.1. Literature Review on Social Influence**

“Most theories of human judgment assume that we form judgments on the basis of declarative information that is applicable to the target and happens to come to mind at the time of judgement”; but in reality, there is more to thinking than the thought itself (Schwarz, 2004, p. 332). The theory of planned behaviour (TPB) developed by Ajzen (1991) incorporates some of these factors which determine our judgments and actions. It integrates central concepts of social and behaviour sciences and allows predictions and understanding of behaviour in certain settings. This theory suggests that the primary motivation of volitional behaviour is the intention to engage in that behaviour (Rhodes & Courneya, 2005). According to Ajzen (1991), TPB contains the attitude towards the behaviour, subjective norms and perceived control over the behaviour. Attitudes and subjective norms are predicted to affect behaviour through intentions (Rhodes & Courneya, 2005). Attitudes are seen as the affective and instrumental evaluations of performing behaviour (Rhodes & Courneya, 2005). Subjective norms refer to pressure from the social environment to perform or not to perform certain behaviour (Ajzen & Madden, 1986). In other words, the subjective norm describes the expectation of a person’s social environment about his or her behaviour. Lastly, perceived control is the ease or difficulty to perform behaviour, taking skills, resources and opportunities into account (Rhodes & Courneya, 2005). Bagozzi and Dholakia (2002) have defined social as the social pressure that is exerted on someone to perform a certain action or behaviour and is thus equal to subjective norms. Therefore, the last definition will be used to describe social influence.

The TPB and Bagozzi’s and Dholakia’s definition (2002) are a useful instruments to investigate the formulated research question as it deals with the influence of others on the decision making process. It includes attitudes whether to perform behaviour or not, set in the context of the study, to recommend the AP, and also subjective norms, the perceived pressure from others, the different groups that are investigated. The perceived control over the behaviour can be measured indirectly with the intention to recommend. If nurses show a high intention to recommend the AP independently from the social influence of others then it indicates that it is easy for them to do so, no matter what others think.

The social influence theory identifies three elements: compliance, identification and internalisation (Iglesias-Pradas, Hernández-García & Fernández-Cardador, 2015). The first refers to the normative influence of significant others’ opinion on the individual’s behaviour underlying the subjective norm (Fishbein & Ajzen, 1975) of peers and superior (Taylor &

Todd, 1995). The second, identification, concerns the acceptance of social influence on the individual, because it is congruent with his or her values. And the third, internalisation occurs when the individual accepts an influence of others because he or she wants to establish or sustain a relationship with the influencing person or group. The concept of group norm, which is a shared agreement about goals and expectations within the group, is directly related to internalization (Bagozzi & Dholakia, 2002).

The social influence theory gives insights about possible motives people have to let social influence happen in combination with the TPB. For this study it is has relevance as it might help to explain why certain groups have a significant influence while others do not. If the group of other diabetes nurses or of principals have a significant influence, this means that compliance plays an important role in the decision making. Identification is a very important point in the medical care, since nurses have to act ethically correct to ensure that no harm is done to the patients. Thus identification applies to all tested groups, as nurses should act in a way that fits to her own values and is seen as ethical. Internalisation might become important for the groups of patients and their relatives, as nurses want to build a basis of trust and establish a good relationship with them, but it also applies again to the team working a nurse is confronted with. Within the team nurses and other medical staff have the primary responsibility to reveal information with regard to diagnosis, prognosis and discussion about treatment methods (Barthow, Moss, McKinlay, McCulloch & Wise, 2009). As they share information within the team and the nurse is in charge of the administration and support of patients they get to know the patients and the treatment process very well (Barthow et al., 2009). Thus, they are working close with both sides, which makes ethical behaviour with what nurses can identify themselves as very important.

Many psychological researches have dealt with the examination of understanding the power of what others do, called descriptive norms, and understanding of what others approve, called injunctive norms (McDonald, Fielding & Louis, 2014). People learn descriptive norms through monitoring directly observable behaviour (Kashima, Wilson, Lusher, Pearson & Pearson, 2013).

However, learning about injunctive norms is not so obvious. But through social networks, individuals are exposed to social information (Kashima et al., 2013) which not only allows observing descriptive norms but also injunctive norms. The function of social networks can be divided into three categories. Two of them are social support and social anchorage. Social support is the extent to which basic needs are satisfied through interactions (Thoits, 1982). The social anchorage is seen as the degree an individual belongs to and is anchored within groups (Due et al., 1999).

Tummers et al. (2002) have discovered that nurses who work independently are more socially supported in their teams, which means they are stronger connected in the social network. However, working more independently implies that nurses do not think much about what others think or tell them what to do but take decisions on their own. This might be a reason that nurses are not significantly affected by the social influence of the different groups, as they know that even though the people from their working environment might have other thoughts about what to do they are still supported by their network.

Social anchorage might become particularly important when testing the peers, as this is the group where nurses can directly relate to and they feel the closest to.

Social influence is an integral part of groups and decision making within groups. A momentum effect, also called bandwagon effect, within decision making groups (Kerr & MacCoun, 1987) can be explained through social influence. The bandwagon effect can be described best with an example of a political campaign: as soon as one side gains support, more undecided voters will also begin to support this side and thus will start to “climb the bandwagon” (Kerr & MacCoun, 1987). This is an example where people start to enact in certain behaviour after they have observed what others do (descriptive norms) and what is approved by the others (injunctive norms).

The bandwagon effect is useful if nurses are undecided whether to recommend the AP or not. They might look at what the majority does, and then decide to do the same based on the descriptive and injunctive norms.

Group decision making dynamics and network perspectives are all natural conditions in teams, which is a substantial formation of a nurse’s working environment. Therefore, the impact of social influence within this environment is inevitable.

To sum, there are different theories about social influence and social networks which can be useful in the analysis and interpreting the results of this research. Social influence can be examined in different context and with different perspectives and motives of an individual to accept the social influence that is exerted on the person.

## 2.2. Research Model and Hypotheses

In this research paper, the effect of the social influence of a diabetes nurse’s working environment on her intention to recommend the artificial pancreas as a treatment method for diabetes mellitus type 1 will be examined. To be able to measure the social influence, subjective norm framework is used, as it focuses on the expectation of a person’s social environment towards distinct behaviour. As subjective norms elaborate on the social networks surrounding people instead of the individual itself, it is therefore a suitable tool for this analysis.

A control model has been developed which concentrates only on the subjective norm section of the survey. This section tests if nurses are in general influenced by their overall environment on the intention to recommend the AP. Hence, this control model will prove if the proposed causal model is internally correct and will create a greater validity of this paper. Therefore, the following control hypothesis and model are tested.

**H<sub>control</sub>:** *Subjective norm in general has a positive impact on the nurse’s intention to recommend the AP as a treatment method.*



**Figure 1. Control model**

Winterbottom, Bekker, Conner and Mooney (2008) found in their study that patients who are looking for information, with regard to health care decisions, assess first person narratives as twice as much convincing in the decision making process than third person narratives. However, their findings also have been very dependent on the perceived accountability of the person who gave the third person narrative information, meaning that cona<sub>h</sub> health care provider seems to be more accountable than

someone from the family. This shows that patients clearly follow informational motives as they consider several sources. It might also be the case for nurses. As they try to understand reality, they consider different sources as well, and based on that form their decision whether the new medical device should be recommended or not.

As nurses encounter different groups in their working environment, of which 5 have been identified will be tested in this paper, these can all serve as sources for information. But as discovered in the theory they also can have a social influence on the nurses. Thus, the social influence will be tested. If this has no significant impact on the decision making process of nurses, then this might be an indicator that they follow informational concerns.

Especially peer groups, defined as “a group of people of approximately the same age, status and interests” (Oxford Dictionary, 2015) have been acknowledged to be a key force in affecting customer socialisation and decision making processes (Wang, Yu & Wei, 2012). Keeping this in mind, it could be the case that other diabetes nurses that share the same experiences and status have a great influence on the decision making. Moreover, Friedkin (2001) shows in his study that descriptive norms enable groups to sustain the same level of performance which was defined as the appropriate level of productivity within the groups. This might be a reason that nurses orientate themselves on what their peers do to maintain the same opinion about whether to recommend the AP as the rest of the group as a status quo.

Therefore, H1 is formulated:

**H1:** *The social influence of other diabetes nurses has a positive impact on the nurse’s intention to recommend the AP as a treatment method.*

In a professional environment, the social network perspective (Sykes, Venkatesh & Gosain, 2009) refers to a person’s position in the social network of a company, which can create advantages by assimilation and result in a promotion or can be of disadvantage, such as an exit of the network, if assimilation has not been successful. Thus, people prefer to engage in prototypical group behaviour to earn prestige within the group to gain leadership or specialness (van Knippenberg & Hogg, 2003). Problematic behaviours oftentimes result from group members’ biased perception of descriptive and injunctive norms (Morris, Hong, Chiu & Liu, 2015). Network leaders should activate norm adherence and in this way direct towards a prototypical behaviour. The stated arguments might be an indicator that especially principals can have an influence on the nurse’s decision, as assimilation to the principal’s opinion can be seen as a motivation to achieve a promotion. Furthermore, Figueriredo, Chen and Azevedo (2015) surprisingly found that weak ties within a network expose a strong relationship between the choice of contents and the emotional reaction to content choices. As professional networks are more likely to have weak connections between the network members, the emotional component of informational choices seems to be of special importance. This is proof that also in professional networks social concerns influence the decision making. Thus, nurses might rather follow social concerns when they have consultations with other professional groups, such as physicians or assistants, while their decision making processes.

Hence, H2 can be formulated as:

**H2:** *The social influence of principals has a positive impact on the nurse’s intention to recommend the AP as a treatment method.*

Above all, good collaboration within the team is required in hospitals. Collaboration usually requires that the conflicting parties communicate with each other and constructively explore their differences in order to find a compromise that solves the conflict and which goes beyond the own limited vision of what is possible (Leever, Hulst, Berendsen, Boedenmaker, Roodenburg & Pols, 2010). Nurses and their assistants should be of one opinion to ensure that the patient’s care taking runs smoothly. Thus, good collaboration and clear arrangements are the key for good work. Another reason to investigate assistants is the finding of Figueriredo et al., which is mentioned above. Therefore, H3 can be formulated:

**H3:** *The social influence of assistants has a positive impact on the nurse’s intention to recommend the AP as a treatment method.*

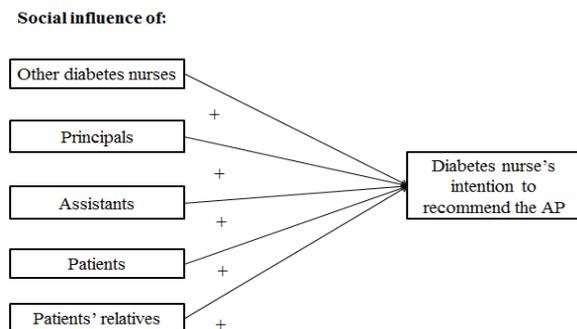
Shared decision making between healthcare professionals and patients has become increasingly important. The quality of nursing work, nowadays, is especially influenced by the degree patients are able to participate in their own healthcare decisions (Charalambous, Papadopoulous & Beadsmoore, 2008). The major responsibility for nurses is to actively invite the patient as partners in the decision making process (Charalambous et al., 2008). Thus patients should have a great influence on the health care decision, which is why H4 can be formulated as:

**H4:** *The social influence of the patients has a positive impact on the nurse’s intention to recommend the AP as a treatment method.*

Nurses not only get to know the patients very well, but also the relatives (Barthow et al., 2009). Therefore, they should be involved in the decision making as well, since the family may choose to play a more active role in the care, too (Charalambous et al., 2008). Furthermore it is argued that a nurse’s closeness with a family give greater support for coping mechanisms and better support for the patient (Charalambous et al. 2008). Thus, the relatives should not be neglected in the decision making and H5 can be formulated as:

**H5:** *The social influence of the patients’ relatives has a positive impact on the nurse’s intention to recommend the AP as a treatment method.*

The causal model that has been developed can be seen in Figure 2. This causal model implicates that the greater the social influence, defined as subjective norm, on the diabetes nurses the higher their intention to recommend the artificial pancreas or vice versa, the smaller the social influence, the smaller the intention to recommend. However, as can be derived from the hypotheses only positive relationships are expected.



**Figure 2. Causal model**

### 3. METHODOLOGY

#### 3.1. Context and Subject of Study

In the Netherlands, nurse attendants usually undergo three years of training. They can be educated in three different levels, an intermediate level (MBO), higher level (HBO) and academic level (Bachelor of Nursing, BN). Nurses with an intermediate level become general nurses, whereas those with a higher level education are permitted to specialisations and coordination functions. The academic degree allows working in policy and research areas (Schäfer et al., 2010).

Verschuren and Masselink (1997) found in their research that a changing environment has a great impact on nurses and thus collaboration between physicians and nurses is hindered. Nurses seem to have considerable differences between their role behaviour, i.e. what they are actually doing, and their role concepts what is expected from them. Both groups certainly share a lot of knowledge, observations and objectives, but also have different perspectives and tasks related to the patient (Krogstad et al., 2004). For physicians, the satisfaction with inter-professional collaboration stronger depends on the feeling that physicians and nurses work towards the same goal than for nurses. This is not surprising, since nurses achieved to liberate themselves from medical personnel (Krogstad et al., 2004). This is also in accord with findings of Tummers et al. (2002). The results of their survey in Dutch hospital revealed a positive correlation between decision authority and autonomy. They also found that decision authority is positively correlated with social support, work motivation and job satisfaction. But it also showed a negative correlation with role ambiguity.

Krogstad et al.'s (2004) results, thus, replicate Tummer et al.'s findings. The role behaviour of nurses and their role concept are not on the same page which put nurses under pressure to increase performance and satisfy their patients and demands.

This study is the basis for the development of a marketing strategy for Inreda and their artificial pancreas for the treatment of diabetes mellitus type 1. It is thus set in the context of the health care sector. It focuses on a particular stakeholder, i.e. Dutch nurses that will be concerned with the use and recommendation of the AP as soon as the product is released. The social influence of other stakeholder groups that nurses encounter at their work is researched as it might have an impact on the decision making whether to recommend the AP or not. The sample captures nurses that are registered at the EADV (Dutch Association for Diabetes Care Professionals).

#### 3.2. Data collection and Measurement

The survey was originally formulated in English and then translated into Dutch by two native speakers. The survey was pre-tested by two nurses which evaluates the measurement of the targeted variables before a redesign takes place (van Aken, Berends & van der Bij, 2012). The contacts of the nurses were derived via the EADV and the sample includes all nurses that are associated with the EADV and the invitation to the survey was sent out via the EADV. In October, 2014 a total of 188 surveys were sent out, which captures all the nurses that are listed in the EADV. After two weeks as reminder was sent out to increase the response rate. This survey is still open; however, it can be assumed that there will be no more entries after a month of the reminder (Babbie, 2010). 188 surveys have been sent out and, 94 were returned of which 77 nurses answered it completely. Thus, the response rate is 50%.

The survey starts with an invitation to take part in the research and a short introduction of what the artificial pancreas is and

how it works. The survey collects data about the knowledge the nurses already have gained about the AP and how they feel about using new technology in general. Throughout the survey, the nurses had the answer options “yes”, “no” or “unsure”, for example when they were asked about their knowledge of the AP, or had the option to answer on a 7-step Likert scale ranging from “strongly disagree” to “rather disagree” in the first three steps, then a “neutral” as the fourth step, and the last three steps range from “rather agree” to “strongly agree”. At the end of the survey, general information about the nurses, such as gender, age and educational level were asked. The closed questions provide a great uniformity and make it easy to operationalise the results, as they do not need to be coded much further (Babbie, 2010).

This paper only concentrates on the parts about the subjective norm and social influence of the survey. The former part contains two statement and the participants were asked to agree or disagree with the following statements on a Likert scale of seven steps ranging from “strongly disagree” to “strongly agree”.

- (1) *People that influence my behaviour think I should recommend the artificial pancreas.*
- (2) *People that are important to me think I should recommend the artificial pancreas.*

The latter, contains ten statements and again they were asked to agree or disagree with the following statements:

- (1) *The people in my working environment (divided into subgroups as it can be seen in the research model), would expect me to recommend the artificial pancreas.*
- (2) *In general, I want to do what others from my working environment (also divided into the subgroups from the research model) think I should do.*

Here, as well the answer possibility was designed with a Likert scale of seven steps ranging from “strongly disagree” to “strongly agree”.

A concept overview can be found in Table 1. It shows the definitions and the adapted items that will be analysed.

#### 3.3. Factor Analysis

Social sciences often want to measure latent variables, which are variable that cannot be measured directly (Field, 2009). Therefore, a factor analysis is used, first, to understand the structure of the variables, second, to create a questionnaire or survey which to measure the underlying variables and, third, to reduce the collected data to a measurable size without neglecting any gained insights. The first two steps, i.e. understanding the structure of the variables and conducting a survey have already been done. In this section step three, the reduction of the collected data is undertaken.

First of all, to ensure the validity of the analysis, it needs to be tested if the sample size is sufficiently large and if the variables are independent. To test the first condition, the Kaiser- Meyer- Olkin (KMO) (see Appendix 1) test is conducted, for the latter condition, the Bartlett's test is used. The KMO measure should lie above 0.5. For this sample the KMO has a value of 0.8, which means that the sample size is sufficiently large. The Bartlett's test shows if the variables are significantly different from zero, and thus the correlation matrix is different from the identity matrix. The Bartlett's test needs to be significant, to ensure that the variables are independent.

**Table 1. Concept overview**

Construct	Definition	Authors	Adapted item
<b>Subjective Norm</b>	pressure from the social environment to perform or not to perform certain behaviour	Ajzen & Madden (1986)	<b>SN_00_SN_01:</b> People who influence my behavior think I should recommend the AP. <b>SN_00_SN_02:</b> People that are important to me think that I should recommend the AP.
<b>Social influence</b>	<b>Subjective norms</b>  <b>Social Influence Theory:</b> compliance, identification and internalisation  <b>Descriptive and injunctive norms</b>  <b>Social network functions:</b> Social support and social anchorage  <b>Band-wagon effect</b>	See above  Iglesias-Pradas et al. (2015)  McDonald et al. (2014)  Due et al. (1999)  Kerr & MacCoun (1987)	<b>SI_00_SI_01:</b> Other nurses of my team would think I should recommend the AP. <b>SI_00_SI_02:</b> In general I want to do what the other nurses of my team think I should do. <b>SI_00_SI_03:</b> My principal would think I should recommend the AP <b>SI_00_SI_04:</b> In general I want to do what my principal thinks I should do. <b>SI_00_SI_05:</b> My assistant nurses would think I should recommend the AP. <b>SI_00_SI_06:</b> In general I want to do what my assistant nurses think I should do. <b>SI_00_SI_07:</b> My patients would think I should recommend the AP. <b>SI_00_SI_08:</b> In general I want to do what my patients want me to do. <b>SI_00_SI_09:</b> My patients' relatives would think I should recommend the AP. <b>SI_00_SI_10:</b> In general I want to do what the patients' relatives want me to do.
<b>Intention to recommend</b>	<b>Attitude:</b> the affective and instrumental evaluations of performing behaviour  <b>Perceived control:</b> ease or difficulty to perform behaviour, taking skills, resources and opportunities into account	Rhodes & Courneya, (2005)	<b>ITU_00_ITU_01:</b> Assuming, my organisation or employer had access to the AP, I am planning to recommend it to the treating physician as a treatment method. <b>ITU_00_ITU_02:</b> Assuming, my organisation or employer had access to the AP, I suppose to recommend it to the treating physician as a treatment method
<b>Educational attainment</b>	Highest level of education completed by a person	OECD (2013)	<b>Dummy variable</b> <b>EDU:</b> Highest degree of education: HBO; MBO; VMBO_HAVO_ VWO; WO

This is the case; with a value of 0 the variables are significantly different from 0 (Field, 2009) and therefore the two matrices do not correlate.

The component analysis has been identified based on a Screeplot (see Appendix 2). This has shown one component, social influence which is subject of the regression analysis. However, as the theory has shown, different groups may vary in their impact of influence. Therefore, the five different groups will be investigated separately.

### 3.4. Reliability

To ensure the reliability of this study, Cronbach's alpha is used. This test is the most common test to scale the reliability of a study (Field, 2009). Cronbach's alpha first calculates the variance within the item and then divides it by the co-variance between a distinct item and any other item in the scale. The value of Cronbach's alpha should be greater than 0.7 at minimum, but values around 0.8 are considered as good (Field, 2009). The Cronbach's alpha for the group of colleagues is 0.578, and is not significant. For the principals, the alpha lies at 0.723 and is therefore weak. The same

accounts for the assistants, where the Cronbach's alpha is 0.776. For the last two groups, the patients and the relatives, both alphas lie below the minimum. For the first it is 0.472 and for the latter 0.694. The low value of the Cronbach's alpha for the patients has the consequence that the results will not be reliable and therefore this group will be excluded from further analyses. The subjective norm has an alpha of 0.882, which is high as well as the intention to recommend, with an alpha of 0.975.

**Table 2. Results of Cronbach's alpha reliability test**

Construct	Number of items	Cronbach's alpha
<i>Other diabetes nurses</i>	2	0.578
<i>Principals</i>	2	0.723
<i>Assistants</i>	2	0.776
<i>Patients</i>	2	0.472
<i>Relatives</i>	2	0.694
<i>Subjective Norm</i>	2	0.882
<i>Intention to recommend</i>	2	0.975

### 3.5. Analysis

This study aims to figure out whether there is a significant relation between the social influence of the nurses' working environment and their intention to recommend the artificial pancreas as a treatment method. For the analysis of the collected data the statistics programme Microsoft SPSS will be used. To determine whether there is a correlation between the variables and in which direction the possible correlation is going, and to see if the influence is significant a Pearson's correlation and multiple regression analysis for all groups together will be done.

#### 3.5.1. Control variables

Two control variables have been defined which will be used in the correlation analysis and the multiple regression analysis. The first control variable is the Subjective Norm. This variable will be first tested in a simple regression to validate the control model and then added to the multiple regression analysis to test whether the general influenceability of nurses has an impact on the influence of the working environment. The second control variable that will be included in the multiple regression analysis is the educational attainment defined as the "highest level of education completed by a person" (OECD, 2013). The background information on the Dutch health system has shown that nurses with a higher educational attainment work more independently. Thus, the educational attainment can influence the nurses' attitude towards their environments' expectations and might not care so much about what other think they should do or not do. Therefore, the educational attainment might have an influence on the tested model.

## 4. RESULTS

### 4.1. Descriptive Statistics

The analysis includes 77 answered questionnaires filled in by diabetes nurses, 67 of them are women and 10 men, all of them live in the Netherlands. Their ages lie between 36 and 63, the mean age, however is 51.37 years. Most of them (66 of 77) have an HBO degree, which allows them to specialise and to work in coordinative positions. The majority is working as a diabetes nurse for more than 5 years (71 of 77), 37 of them even working for more than 15 years in this job. 55 nurses work in a general hospital, only one works in a specialised hospital. 44 nurses think that they would recommend the AP to the physician if their employer or employing organisation had access to it. Furthermore, 48 nurses concretely plan to recommend the AP to the physician if they had access to it. The intention to recommend the AP is on average very high with a mean of 5.66, but this statistic does not tell anything about the reasoning behind it. This will be tested in the regression analysis.

Table 3 shows the results of the descriptive statistics of the nurses' responses in the social influence section.

### 4.2. Correlation Analysis

To be able to tell more about the relationship between different independent and the dependent variables a Pearson's correlation coefficient is calculated. A Shapiro Wilk test has been conducted, and all variables are normally distributed, therefore, the Pearson's correlation can be used. In table 4 the correlation results are presented.

- ✓ Subjective norm was significantly related to the intention to recommend  $r=0.252$ ,  $p$  (one tailed)  $<0.05$

- ✓ The social influence of other diabetes nurses and the intention to use are significantly correlated with  $r=0.372$ ,  $p$  (one-tailed)  $<0.001$ .
- ✗ There was no significant correlation found between the social influence of principals and the intention to recommend,  $r=0.177$ ,  $p$  (one-tailed)  $>0.05$
- ✓ There is a significant correlation between the social influence of assistants and the intention to recommend, with  $r=0.232$ ,  $p$  (one-tailed)  $<0.05$ .
- ✓ The social influence of relatives and the intention to recommend are significantly correlated, with  $r=0.427$  and  $p$  (one-tailed)  $<0.01$ .
- ✗ There is no significant correlation between the educational attainment and the intention to recommend, with  $r=-0.051$  for HBO level,  $r=0.02$  for MBO level,  $r=0.071$  for VMBO, HAVO, VWO and  $r=-0.032$  and  $p$ -values (one-tailed)  $>0.05$ .

### 4.3. Regression Analysis

#### 4.3.1. Simple Regression: Subjective Norm

The  $R^2$  for this simple regression model is 0.063, which means that only 6.3% of the variance on the intention to recommend can be explained by the subjective norm. The regression coefficient  $B=0.190$  and a  $p$ -value of 0.0135, thus is significant. Therefore, the hypothesis

$H_{\text{control}}$ : *The subjective norm has a significant positive influence on the intention to recommend the AP as a treatment method*, is confirmed.

#### 4.3.2. Multiple Regression

For the multiple regression analysis  $R^2$  has the value of 0.259 for the control variables subjective norm and educational attainment, meaning that 25.9% of variance in the dependent variable, can be explained by the control variables. The second  $R^2$  which includes the independent variables, as well as the control variables has a value of 0.529, which means that 52.9% of the variance is explained through these variables.

The first part of Table 5 shows the results of the regression analysis of the control variables only. It can be seen that subjective norm, tested on its own is significant, with a Beta of 0.259 and a significance of 0.0017. However, when it is tested together with the variables for social influence, subjective norm loses on importance as it is not significant anymore (Beta= 0.002,  $p=0.4945$ ). The educational attainment has no influence on the regression at all.

The regression coefficient Beta for the social influence of other diabetes nurses is 0.452, with a significance of 0.0085. Thus,  $H_1$ : *The social influence of other diabetes nurses has a positive impact on the intention to recommend the AP as a treatment method*, is confirmed.

For the social influence of the principals, Beta has the value of 0.240 and a significance of 0.0705. Also here the hypothesis  $H_2$ : *The social influence of principals has a positive impact on the intention to recommend the AP as a treatment method*, is rejected at an alpha level of 0.05. However, it can be confirmed on an alpha level of 0.1.

In the case of the assistants beta has a value of 0.127 and a significance of 0.2. Hence, the hypothesis

**Table 3. Descriptive Statistics**

	<i>Number of adapted items</i>	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Standard deviation</i>
<i>Subjective Norm</i>	2	78	1	6	3.925	1.346
<i>SoIn_Other_diabetes_nurses</i>	2	77	1	6	3.81	1.217
<i>SoIn_Principals</i>	2	77	1	6	3.31	1.374
<i>SoIn_Assistants</i>	2	77	1	6	3.32	1.333
<i>SoIn_Patients</i>	2	77	2	7	5.015	1.103
<i>SoIn_Relatives</i>	2	77	1	7	4.44	1.365
<i>Intention_to_recommend</i>	2	77	2	7	5.66	1.021

H<sub>3</sub>: *The social influence of assistants has a positive impact on the intention to recommend the AP as a treatment method*, is rejected.

Lastly, the coefficient of the patients' relatives has a Beta value of 0.421 and a significance of 0.001. Therefore, the hypothesis

H<sub>5</sub>: *The social influence of the patients' relatives has a positive impact on the intention to recommend the AP as a treatment method*, is confirmed.

## 5. DISCUSSION

### 5.1. Summary of findings

The aim of this paper is to investigate the relationship between social influence and a nurse's intention to recommend the AP as a treatment method. In order to achieve this, five different groups have been elected which have a social influence on a nurse in their working environment. Due to a lack of reliability, the group of patients had to be excluded from the analysis. The results show that the social influence of all groups is positively correlated to the intention to recommend. However, the multiple regression analysis shows that not all groups have a significant influence.

The control variable of the subjective norm has confirmed that nurses are indeed influenced of their social environment in the decision making process. Looking the different tested groups, three groups have been identified that have a significant influence on the nurses. A summary of the results can be seen in Table 6.

The strongest influence on the intention to recommend has the group of the patient's relatives. This result shows that nurses not only have a close contact to their patients but also to the relatives as described by Charalambous et al. (2008). Their questions and concerns might be a reason for that strong influence.

Savani, Wadhaw, Uchida and Naidu (2015) found that normative influence is of particular importance in interdependent groups and when behaviours can be publically monitored. This is the case in hospitals, since physicians and nurses are working together for the same goal, thus these groups are interdependent. Furthermore, their interaction can be monitored by patients and relatives, therefore, they are public. The publicity of the nurse's actions for the relatives also might result in a prototypical behaviour in front of them. In order to ensure a good relationship with the relatives, their opinions influence the decision making of the nurses as it is public. But also the client-centred system of healthcare provision has led to an approach of healthcare professionals and users. Thus, nurses and relatives are closer on a par with each other, which put pressure on the nurses to fulfil the increasing demands of their clients (Krogstad et al., 2004).

The second greatest influence has the group of other diabetes nurses. As already discussed in many marketing researches,

also here it is confirmed that peers have a substantial influence on the decision making (Wang et al, 2012; Blythe, 2009). Nurses share the same experiences and interests on their professional basis. Furthermore, the team constellation of the working environment enforces nurses to exchange information and to ensure a good collaboration between the team members (Leever et al., 2010).

Principals have been that last group that has a significant influence on the nurses. However, this group is only significant on at an alpha of 0.1. Thus, their influence is substantially weaker compared to the other two groups. Thus, the expected pressure to perform prototypical behaviour in front of a principle to assure promotion within the team (Sykes et al., 2009; van Knippenberg & Hogg, 2003) seems to be weaker than expected. Another possibility could be that the principles might not sufficiently activate the norm adherence as described by Morris et al. (2015). Also, as nurses have achieved to liberate themselves, the gained independence in their ability to take decisions has decreased the influence of principles (Tummers et al., 2002). Nevertheless, principles still seem to remain an important group nurses consider in their decision making processes.

The group of assistants has been tested as being insignificant on the decision making process. This may be due to the greater insecurity assistants have compared to experienced nurses. Brannon and Carson (2003b) discovered that novices and naïve non-nursing assistants are less certain in the decision making when there is unstructured or incomplete information available. Thus, experienced nurses might feel superior and do not trust on the assistant's opinion as this might be unreliable. Furthermore, overconfidence of nurses may be a reason for the insignificance of the assistants. Nurses might feel that no assistance is needed as they rely on their own ability and thus believe to diminish micro uncertainty, the degree of confidence of an individual about his or her decision (Baumann, Deber & Thompson, 1991).

Another interesting finding is the high mean on the intention to recommend in general. This means that nurses are certain about recommending the AP and are not being indecisive. This can have several reasons despite the found relationships on the social influence, such as product characteristics, but it shows that there is little doubt in the product itself.

### 5.2. Further research recommendations

This paper monitored the behavioural intention of nurses and whether it increases when certain groups influence them in their decision making. Behavioural intention is seen as a precursor of actual behaviour and embodies three determinants, which are attitude, subjective norm and perceived behavioural control (Ajzen, 2002). Generally, the stronger the behavioural intention, the more likely it turns into actual behaviour (Ajzen, 1991). The three determinants are

**Table 4. Correlation matrix**

	1	2	3	4	5	6	7	8	9	10
1. Subjective_Norm	1									
2. SoIn_Other_diabetes_nurses	,606**	1								
3. SoIn_Principals	,467**	,732**	1							
4. SoIn_Assistants	,426**	,616**	,617**	1						
5. SoIn_Relatives	,336**	,392**	,382**	,546**	1					
6. Intention_to_recommend	,252*	,372**	0,177	,232*	,427**	1				
7. HBO	-0,065	-0,063	-0,056	-0,018	0,063	-0,051	1			
8. MBO	0,187	-0,036	0,054	0,098	0,118	0,02	-,476**	1		
9. VMBO_HAVO_VWO	0,099	,211*	0,063	-0,001	-0,174	0,071	-,692**	-0,08	1	
10. WO	-,238*	-0,163	-0,046	-0,074	0,009	-0,032	-,409**	-0,047	-0,069	1

\*The correlation is significant on a 0.05 level (one- sided); \*\*The correlation is significant on a 0.01 level (one-sided).

**Table 5. Regression results**

Variable	Beta	S.E.	p	Beta	S.E.	p
Constant	-	0.75	0.000	-	0.876	0.000
Subjective Norm	0.259	0,09	0.017	0.002	0,103	0.4945
MBO	-0.023	1,07	0.4215	0.019	0,99	0.4305
VMBO	0.046	0,77	0.345	0.067	0,735	0.273
WO	0.031	1,23	0.395	0.022	1,124	0.4175
SI_Other_diabetes_nurses				0.452	0,156	0.0085**
SI_Principals				0.240	0,12	0.0705*
SI_Assistants				0.127	0,115	0.2
SI_Relatives				0.421	0,096	0.001***
R <sup>2</sup>	0.259					

\*The regression is significant on a 0.1 level; \*\*The regression is significant on a 0.05 level; \*\*\*The regression is significant on a 0.001 level.

summarised in the TPB (Ajzen, 1991). Attitude toward behaviour arise from a set of behavioural beliefs that mirror anticipated outcomes of the targeted behaviour (Kim, Ham, Yang & Choi, 2013). Subjective norms, on the other hand, are the observable opinions of others that have influence on the decision making of an individual (Kim et al., 2013). Perceived behavioural control is the apprehended ease or difficulty to perform the behaviour (Ajzen, 1991).

Whereas the first and the third determinant are concerned with the individual itself, the second determinant is linked to networks of individuals. The pressure the environment exerts on the individual to be conform in behaviour with what is expected from others. This study has investigated two aspects of the TPB (Ajzen, 1991), namely attitude and subjective norm. The third determinant, however, is neglected. Therefore, a further research possibility would be to investigate to what extent perceived behavioural control also influences the behavioural intention of nurses to recommend the AP. Another interesting discovery was done by Tardy and Hale (1998) as they describe in their paper that patients often first consultate people with health care experience, such as nurses or medical assistants, who are within their social networks, since nearly everyone has a direct contact to someone working in the health care industry or at least knows someone with such a contact. By this, private social networks and professional networks are not strictly separated but are diffused, especially for nurses. These “blurred

lines” might lead to an unconscious influence in the decision making of the nurses, as they build relationships with their patients and relatives or even have known them before from their private environment. As a further research recommendation it might be interesting in looking deeper into two different groups, the once a nurse knows from their private networks and the once that are strangers to him/her. There might be a difference in the significance of influence. This is especially interesting for the groups of relative that are asking the nurses for consultations, but also for patients.

### 5.3. Practical implication

This study has critical practical implications for Inreda but also other companies looking into releasing new medical devices to the Dutch market. It gives a better understanding of an important stakeholder - the nurses; and how they can be influenced by their social environment at work to recommend a certain medication or treatment method such as the AP of Inreda. As the results have shown, nurses are significantly influenced by three groups, but as the correlation has shown, between all groups there is a positive correlation. By targeting the social networks of nurses within their working environment, marketers can make profitable use of those positive correlations. For Inreda, in particular, means that they should give special attention to relatives, peer nurses and principles of nurses, as they are the significant groups. In other words, Inreda

**Table 6. Summary of results**

<i>Hypothesis</i>	<i>Evaluation</i>	<i>Direction and Significance</i>
<b>Hcontrol:</b> The subjective norm has a positive influence on the intention to recommend the AP as a treatment method.	✓	positive, significant
<b>H<sub>1</sub>:</b> The social influence of other diabetes nurses has a positive impact on the intention to recommend the AP as a treatment method	✓	positive, significant
<b>H<sub>2</sub>:</b> The social influence of principals has a positive impact on the intention to recommend the AP as a treatment method	✓	positive, significant (at $\alpha=0.1$ )
<b>H<sub>3</sub>:</b> The social influence of assistants has a positive impact on the intention to recommend the AP as a treatment method	×	positive, insignificant
<b>H<sub>4</sub>:</b> The social influence of the patients has a positive impact on the nurse's intention to recommend the AP as a treatment method.	Not tested, due to lack of reliability	n/a
<b>H<sub>5</sub>:</b> The social influence of the patients' relatives has a positive impact on the intention to recommend the AP as a treatment method	✓	positive, significant

should try to place their AP in a light that not only people that are directly affected by their product and those that will have to make use of it, such as patients and physicians, as they have to prescribe it, are targeted. By also focussing on the medical staff in general and including relatives in their marketing strategy, Inreda can substantially increase the awareness of their AP by word-of-mouth marketing (Cooke & Buckley, 2008). Furthermore, sales can be increased, as the recommendation function of nurses has gained in importance (Tummers et al., 2002). The results of the paper show that nurses are significantly influenced by other nurses and the patients' relatives and principles which means not solely the teams functions have an influence but also the structure of the medical system is important to consider when developing a marketing strategy. As Inreda also wants to market their AP in Germany, Austria and Belgium a replication of this study in these country is useful, to determine whether in these countries other groups might have a significant influence on the nurses or whether they remain the same. A second survey could be undertaken, which solely focuses on the social network functions, to research which factors exactly influence the team dynamics. Furthermore, other variables that might influence the network dynamics, such as age or gender can be tested. Moreover, increasing the sample size can lead to a more representative and reliable result in which patients do not have to be excluded from the study.

#### **5.4. Theoretical implication**

This research is the first one that has dealt with the social influence that different groups have on nurses in clinical decision making. It is therefore an addition to decision making literature as it closes a substantial gap. Earlier researches have mainly discussed which influence education, experience, heuristics, the ability for critical thinking and age have on the decision making (Brannon & Carson 2003a; Brannon & Carson 2003b; Hicks et al., 2003; Thompson & Stapley, 2011; Thompson et al., 2013). Also overconfidence has been investigated (Baumann et al., 1991). The results of this research show, that nurses are influenced in the decision making by others and thus opens up an interesting field for further research which goes further in depth of different relationships between nurses and their working environment.

#### **5.5. Limitations and evaluation of accuracy**

This study has several limitations. The survey was only conducted in the Netherlands, although Inreda also strives to market their AP in other countries, such as Germany, Belgium and Austria. Furthermore, the original survey has been

formulated in English and then has been translated into Dutch. With this translation process information might have got lost or distorted. The weak reliability for the group of the other diabetes nurses may influence the end results. Furthermore, the group of patients had to be excluded from the analysis, as the reliability was too low. An increase in the sample size might guarantee that the reliability for the group of patients can be increased and thus can be included into the analysis. This might also increase the reliability for the group of the other diabetes nurses, and thus make this result generalizable. Furthermore, the medical device market is strongly regulated for instance by the European Federation of Pharmaceutical Industries and Association (EFPIA) to ensure high level of protection for health and safety and a good function of the market (European Commission, 2015). Thus it needs to be kept in mind that many conventional marketing strategies might not be allowed in this particular market and therefore do not apply as a solution.

### **6. CONCLUSION**

In conclusion, it can be said that nurses only are significantly influenced by other nurse and the patients' relatives. The social network functions give a small hint why the influence of the other diabetes nurses is the only significant influence that matters. The nursing work is based on team work, which means that they are mostly related to each other and can identify themselves the most with this group as they are their peers. They share the same knowledge and goals. The client-centred approach in the medical system gives an idea why the patients' relatives have the greatest influence on the nurses.. However, this study only gives a small hint about the social network functions and none about structures, therefore another study that goes more into depth about the social network functions and additionally focuses on the social network structure needs to be undertaken

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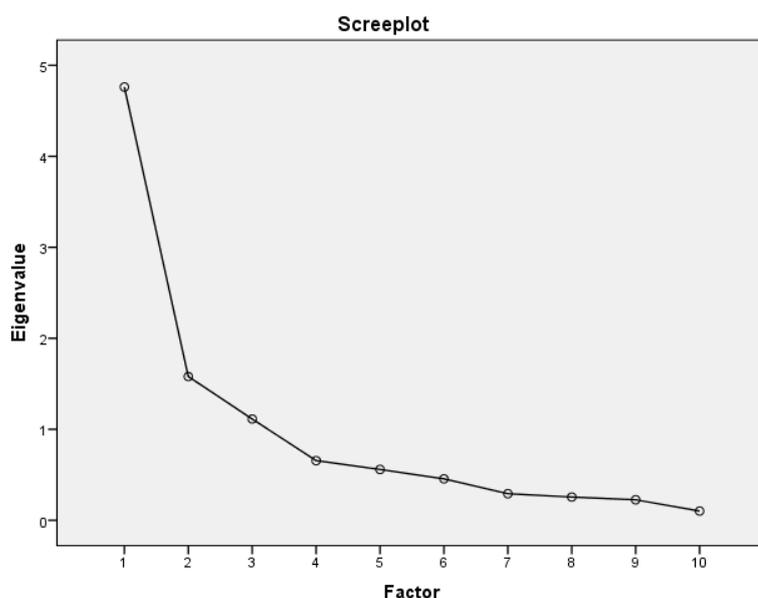
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## APPENDIX

### Appendix 1. KMO- & Bartlett-Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		,800
Bartlett's Test of Sphericity	Approx. Chi-Quadrat	433,699
	df	45
	Sig.	,000

### Appendix 2. Screeplot and Component matrix



#### Component matrix

	Component 1
SI_00_SI_01: Other nurses of my team would think I should recommend the AP.	.751
SI_00_SI_02: In general I want to do what the other nurses of my team think I should do.	.582
SI_00_SI_03: My principal would think I should recommend the AP	.650
SI_00_SI_04: In general I want to do what my principal thinks I should do.	.737
SI_00_SI_05: My assistant nurses would think I should recommend the AP.	.766
SI_00_SI_06: In general I want to do what my assistant nurses think I should do.	.746
SI_00_SI_07: My patients would think I should recommend the AP.	.700
SI_00_SI_08: In general I want to do what my patients want me to do.	.549
SI_00_SI_09: My patients' relatives would think I should recommend the AP.	.699
SI_00_SI_10: In general I want to do what the patients' relatives want me to do.	.685