

Exploring processes of social influence that affects support-resistance behaviours of employees participating in an Electronic Patient Record development

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Trefw resistance behaviours, user participation, social influence, IT development, Electronic Health Record

PREFACE

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ABSTRACT

Participation of employees during IT development was found to improve the success of IT implementation. Because the social environment is considered as an important factor in the emergence of adoption behaviours of employees in general, it can be expected that social influence also play a role in the behaviours of participating users. Therefore, this qualitative study aims at improved understanding of how social antecedents influence support-resistance behaviours of participating users through mechanisms of social influence. The case study was conducted in the complex, and therefore, interesting setting of a large teaching hospital. We conducted interviews with thirteen of the fifteen participating users from different departments and with different professions (physician, nurse, other) that participated in an EPR development. Data from the interviews in combination with documentation were analysed and it was found as expected that social influence play a role in the support-resistance behaviours of participating users. Social identity, social norms, colleagues' opinions, and social network could be identified as social antecedents of social influence. Compliance, identification, internalization, social contagion and the status quo bias were recognized as mechanisms through which the social antecedents seem to influence the support-resistance behaviours of participating users. Thereby this study provides the first insight into the role of social influence on behavioural reactions of participating users during EPR development.

1 INTRODUCTION

In healthcare organizations, the introduction of Information Technology (IT), among them Electronic Patient Records (EPR), is found to have potential for improving the quality of care and the efficiency of the healthcare system (McGinn et al., 2011). In this study, the term Electronic Patient Record will be used, that can be defined as “a central technology in supporting examination, treatment and care of the patient” (Jensen & Aanestad, 2007, p. 29). Despite high expectations of EPR implementation, many attempts seem to fail to a certain extent (Jensen & Aanestad, 2007; Murray, 2006; Cecez-Kecmanovic, Kautz & Abraham, 2014), inter alia because of dysfunctional adoption behaviours or lack of adoption behaviours (Jensen & Aanestad, 2007). Consequently, IT adoption behaviours of employees are extensively studied. Two main dimensions appeared to be relevant, namely a resistance – supportive dimension and an acceptance – non-acceptance dimension (e.g. van Offenbeek, Boonstra & Seo, 2013; Rizzuto, Schwarz, & Schwarz, 2014). Most studies on IT adoption behaviours hold either a resistance perspective or an acceptance perspective (e.g. Rizzuto et al., 2014). A relative new stream of research questions the common categorisation in which resistance behaviour and acceptance behaviour are seen as opposites on the same dimension of adoption behaviours (Van Offenbeek et al., 2013). Resistance and acceptance behaviour do not have to exclude each other, whereas resistance behaviour stems from perceived negative consequences in general, while acceptance behaviour stems from the intended usage of a system (Venkatesh, Morris, Davis, & Davis, 2003). In the behaviour-oriented framework proposed by Van Offenbeek et al. (2013), a resistance dimension and acceptance dimension is created, that, when combined, results in four behaviour groups to which employees’ adoption behaviours can be classified. An interesting group of users of IT are users that actively participate during the development of the IT, whereas participating users’ adoption behaviours already start during their participation. Participation of users in the EPR development is useful, as it was found to enable alignment of the EPR with user preferences, thereby improving adoption

among employees (Greenhalgh, Hinder, Stramer, Bratan & Russell, 2010), and to improve the success of EPR implementation (He & King, 2008; Litwin, 2011; Nielsen & Randall, 2012). The literature study of Markus and Mao (2004) confirms an improved success of IT implementation when employees are actively involved in the IT development. The most important finding of this study was that users, who participated in IT development were more likely to develop positive beliefs about the IT, such as importance and relevance of the project (Barki & Hartwick, 1994). Although the benefits of user participation are demonstrated, research on user participation lacks an explanation of how the effect of employees’ participation on the success of IT development works. Therefore, Markus and Mao (2004) call for a breaking down of aspects of user participation in order to improve understanding in how participation of users during IT development increases IT success. He and King (2008) began this breakdown in a meta-analysis on user participation during an Information System (IS) development. The meta-analysis showed that employee participation during the IS development improves attitudinal and behavioural outcomes of IS, such as satisfaction and system use. However, user participation improved productivity outcomes of IT development only little to moderate (He & King, 2008). It shows that employee participating is not always successful, and thus more research on conditions under which employee participation is successful is of value. Also the findings emphasize the relevance for research that focuses on the behavioural aspect of user participation in IT development.

Little is known about the role of social influence on the behaviour of participating users during the development of IT, while social influence proved to be a critical factor on adoption behaviours of employees in general (e.g. Greenhalgh, Potts, Wong, Bark and Swinglehurst, 2009); Venkatesh et al., 2003). In both resistance and acceptance literature, influencing factors on adoption behaviours and means to manage adoption behaviours are explored and tested (e.g. Venkatesh et al., 2003; Markus, 1983; Seo, Boonstra, & van Offenbeek, 2011). In a systematic review of Greenhalgh et

al. (2009), which focuses on the role of adoption behaviours in EPR implementation, influence from the social context was stressed. Other studies also indicate the social environment as an important factor in the emergence of adoption behaviours of employees (Venkatesh et al., 2003; Markus, 1983; Kelman, 2006). Mechanisms of social influence, such as compliance, internalization and identification, are found to impact employees' adoption behaviours (Kelman, 2006). Besides, several antecedents of social influence like social norms and colleagues' opinions seem to play a role in the adoption behaviours of employees in an EPR implementation (Venkatesh et al., 2003; Kim & Kankanhalli, 2009; Wang, Meister & Gray, 2013).

This study tries to find out which mechanisms of social influence play a critical role on adoption behaviours of participating users during EPR development. In that way, the study tries to further deepen understanding in participation of users during IT development, and to further break down aspects of user participation as was called for by Markus and Mao (2004). The focus of this study will be restricted to the resistance-support dimension of adaption behaviours, because antecedents of acceptance and non-acceptance behaviour are not yet in force, and no acceptance and/or non-acceptance behaviours can be showed when no system is yet in place.

Besides the theoretical value of the study, by focusing on the mechanisms that are initiated by social antecedents, handles are provided for practitioners to exert influence on support-resistance behaviours of participating users. With improved understanding in the way social antecedents initiate mechanisms of social influence, practitioners are able to facilitate the occurrence of preferable mechanisms and thereby streamlining support-resistance behaviours and effectiveness of activities of participating users. Antecedents of social influence are difficult to manage by change managers, as social antecedents emerge in a very complex and lengthy way. However, the mechanisms through which social antecedents influences support-resistance behaviours is possibly more easily managed, since facilitation of the occurrence of mechanisms seems possible when understanding of mechanisms and its antecedents is improved. This study aims to gain understanding in the mechanisms through which social antecedents affect support-resistance

behaviours of the employees that are actively involved in development of an Electronic Patient Record. Because of the scarce theory on the topic, the study is explorative in character and, therefore, a qualitative approach was chosen as the most appropriate method (Yin, 2014; Eisenhardt, 1989; Van Aken, Berends, & Van der Bij, 2012). The research question of this case study will be the following:

How does social influence play a role in the support-resistance behaviours of participating users during EPR development?

Sub question: Which support-resistance behaviours do participating users show during the EPR development?

Sub question: Through which mechanisms are these support-resistance behaviours of participating users affected by social antecedents?

This master thesis is structured as follows. First a theoretical background will be presented in which significant theories and evidence concerning antecedents of acceptance and resistance behaviour will be discussed. The position of Van Offenbeek et al. (2013) that posits the coexistence of acceptance and resistance will be followed throughout this thesis. Subsequently, social antecedents of resistance and acceptance behaviour will be explored and mechanisms of social influence are presented. The following chapter describes the case in which the qualitative study was conducted, the design of the case study and in what way the qualitative data from interviews was obtained and, combined with documentation to enable triangulation (Yin, 2014), analysed. In the fourth chapter the findings of the analyses are presented. First, adoption behaviours of participating employees will be examined and classified according to the framework of Van Offenbeek et al. (2013). Second, social influences from departments, profession or from team members or from the MT of the EPR project on the support-resistance behaviours of participating users will be examined. Also a cross sectional comparison will be presented in which the social influence from the different sources that were just described will be compared. The master thesis concludes with a discussion of the most important findings, the theoretical and practical contributions of the study, and paths for future research.

2 LITERATURE REVIEW

2.1 ADOPTION BEHAVIOURS

Adoption behaviours can be defined as user behaviours towards adopting systems (Seo et al., 2011) or, more specific for this study, as user behaviour towards adopting an Electronic Patient Record (EPR). Generally, resistance behaviours, supportive behaviours and acceptance behaviours are classified as adoption behaviours towards IT. Research on adoption behaviours tends to focus on either acceptance behaviour or resistance behaviours, presuming the two concepts as being each other's opposites. A relative new stream of research takes a dual perspective that integrates studies on resistance adoption behaviours and acceptance adoption behaviours (Van Offenbeek et al., 2013; Rizzutto et al., 2014). In this section, first the antecedents of acceptance and resistance behaviour will be discussed separately, followed with an exploration of the dual perspective on adoption behaviours.

2.1.1 ACCEPTANCE

Most research on IT acceptance behaviour stems from the Theory Acceptance Model (TAM). In the TAM and in many other studies on acceptance behaviour, usage behaviour is mentioned in parallel to acceptance behaviour (Venkatesh et al., 2003). The TAM, that is especially adjusted to IS contexts, proposes two determinants that predict system use, namely (1) perceived usefulness and (2) perceived ease of use of the system (Davis, 1989). Especially perceived usefulness was found to be a strong and consistent predictor of usage intentions (Davis, 1989). Usage intentions are considered to precede the actual usage behaviours (Venkatesh et al., 2003). An extended TAM, the TAM2 was introduced, that contains determinants of perceived usefulness in social influence processes and in cognitive instrumental processes (Venkatesh and Davis, 2000). Following on the TAM and TAM2 a variety of acceptance theories has emerged that are eventually united in the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al.,

2003). Venkatesh et al. (2003) analysed the determinants of acceptance behaviour proposed by the different theories and formulated and tested a model that integrates the most important determinants of intention to use, namely performance expectancy, effort expectancy and social influence. Intention to use and facilitating conditions have been found to be prerequisites of usage behaviour. Usage behaviour is often mentioned parallel to acceptance behaviour in literature (Venkatesh et al., 2003). Several variables, namely gender, age and voluntariness of use, were found to affect the relationship between determinants of user acceptance and behavioural intention that, in its turn, predicts usage behaviour (Venkatesh et al., 2003).

2.1.2. RESISTANCE

A second way of looking at adoption behaviours that is extensively applied is from a resistance perspective. Already in 1983, Markus proposed three different perspectives on determinants of resistance, namely (1) a people-determined view, (2) a system-oriented view and (3) the interaction theory that relates people characteristics to system characteristics. From the viewpoint of the first perspective, people resist the system due to internal factors of the individual. The system-oriented view posits individuals resist because of characteristics of the system. The interaction theory believes individuals resist as a result of an interaction between factors related to individuals, groups and system characteristics. Markus (1983) concludes that the interaction theory is the most useful for an implementation strategy, because it takes all aspects of the implementation into account. To arrive at a strategy that does not result in a high level of resistance, the context, the system characteristics and its interaction must be analysed extensively. Martinko, Henry and Zmud (1996) take both the context and system characteristics into account when looking from an attributional perspective. The attribution theory posits that "individuals' beliefs about their outcomes are important determinants of subsequent behaviours" (Martinko et al.,

1996, p. 314), among which thus adoption behaviours. In the Attribution Model of Resistance towards Information Technology (AMRIT) both the context and system characteristics are included. The individual attribution of a new system, determined by the individuals' attribution style and prior experiences, but also by co-worker behaviour and expectancies, is stressed. Attributions made by an individual influences expectancy of system usage and occur before, during and after IT implementation. The model shows that influence of co-workers is an essential factor on an individuals' attribution of IT usage. Also in the Equity Implementation Model of Joshi (1991) contextual factors are included. The model posits that users of a system evaluate the system according to their relative inputs and outcomes and benefits compared with no use and with other users or employees. When, relatively to others, no positive gains from system use results, resistance of the individual towards the IT can be expected.

Lapointe and Rivard (2005) combined earlier theories into a Multilevel Model of Resistance (Markus, 1983; Martinko et al. 1996; Joshi, 1991) that argues that expected threatening consequences, emerging from the interaction between initial conditions (power and routines) and a given object, are the main causes of resistance behaviour. The perceived threats can be at individual, group and organizational level. According to the Multilevel Model of Resistance, resistance from threats at individual or organizational level is less severe, compared to resistance as result from group level threats. Rizutto et al. (2014) adds an extra dimensions and reveals that distal resistance to change, that is a general dispositional belief about the change, influences adoption behaviours the strongest, compared to proximal resistance to change, which is a specific perception about change aspects.

2.1.3 DUAL PERSPECTIVE ON ADOPTION BEHAVIOURS

A relative new stream of research that focuses on adoption behaviours rejects this categorisation of resistance behaviour and acceptance behaviour as opposites of a dimension. A dyadic approach to adoption behaviours emerges that connects acceptance and resistance (Van Offenbeek et al., 2013; Rizutto et al., 2014). According to Seo et al., (2011) ambivalent reactions of users towards a system are ne-

glected due to the conceptual separation of resistance behaviours and acceptance behaviours. A behaviour-oriented framework is proposed that links the acceptance and resistance research (van Offenbeek et al., 2013). The framework consists of two dimensions: (1) an acceptance dimension that ranges from accepting to non-accepting behaviours, and (2) a dimension that ranges from supporting to resisting behaviours. The combination of these two dimensions results in four behaviour groups that includes ambivalent reactions. Individuals can show either resisting or supporting behaviour while simultaneously being accepting or non-accepting (user – non-user). Employees can be classified in these behavioural groups according to the severity of their acceptance and resistance behaviours. The model, therefore, can be used as a tool to assess employee behaviour during IT implementation, but also for participating users during the development of IT. However, in the development of IT, acceptance and non-acceptance of a system is not yet applicable, therefore this study focuses only on the dimension of resistance-supportive adoption behaviours.

2.2. SOCIAL INFLUENCE

As became apparent in the previous section, in both acceptance literature and resistance literature, social aspects are recognized to influence adoption behaviours (Venkatesh et al., 2003; Markus, 1983; Lapointe & Rivard, 2005). Most studies focus on the individual level. However, social influence consists of many interacting factors and is a dynamic interpersonal process in which group factors play a role. Because social antecedents are thus difficult to control, mechanisms of social influence seem to be more of relevance for change managers to understand. Understanding mechanisms of social influence provides managers with the opportunity to facilitate and, wherever preferred, fuel mechanisms in order to achieve desired outcomes. When acting in the world, individuals are continuously and often implicitly influenced by their (social) environment (Baron, Branscombe & Byrne, 2009). Others even influence individuals when they are not present through mental representations of the others' goals, values, etc. in the individuals' mind (Baron et al., 2009). Social influence refers to "the process through which individuals or groups change the thoughts, feelings and behaviour of others" (Stangor,

2004, p. 84). In an experimental setting, three processes of social influence, namely compliance, identification and internalization, have been found to influence attitudes of individuals towards their own behaviour, which in turn can lead to behavioural changes (Kelman, 1958). The study on these three social processes was extended and confirmed by applying it to several different situations like therapeutic change and national identity. Also the three-process model of influence was reconceptualised to the system level or the organizational level, thereby taking the organization as viewpoint (Kelman, 2006).

The first process of the three-process model of social influence (Kelman, 2006) is identification, and can be said to occur “when an individual accepts influence from another person or group in order to establish or maintain a satisfying self-defining relationship to the other” (Kelman, 2006, p. 53). An example that illustrates the process of identification can be found in box 1.

Mary moved with her parents from the Netherlands to France. At her new school in France, students raise their hands before the teachers gives them word. Mary is used to just raise her voice when she wants to ask a question. Because Mary wants to fit in the group, she decides to raise her hand as well before asking a question. In that way, Mary identifies with the group and therefore accepts the norm to raise her hand when asking a question.

Box 1 Example identification.

Different concepts of identification can be distinguished in the literature of which social identity, social categorization and embeddedness in social networks are most of relevance to this study. Social identity is an individuals' self-concept that is derived from its relationship with others and from membership to groups (Forsyth, 2014). The social identity can stem from one's organization, one's profession or for instance one's team membership (Oreg, Michel & By, 2013). As individual are often simultaneously members of several groups, not all group memberships may be salient at the same time. The social categorization theory ex-

plains the salience of social identities (Oreg et al., 2013) and states that identity origins from either characteristics of the individual themselves, the personal identity, or from the individuals' membership of a group. Personal characteristics and situational conditions determine the salience of a specific social identity (Oreg et al., 2013). Also an individuals' embeddedness in its social network has been found to influence the individual and individual's system usage (Sykes, Venkatesh, & Gosain, 2009). An individual's social network can be described as being the “pattern of interaction and exchanges within social units in which an actor is embedded” (Sykes et al., 2009, p373). The extent, to which an individual is connected to others in the social network, shows the embeddedness of the person in the social network. The incorporation of social networks in the Model of Acceptance with Peer Support (MAPS) explained an additional 20% of the variance in predicted system use, thereby being, besides behavioural intention and facilitating conditions that predict system use. When the constructs of (valued) centrality in the network and (valued) density of network is high, system use could be predicted. A dense and strong network provides extensive support, thereby enhancing system use. Centrality in the network improves the person's access to knowledge and often provides benefits and opportunities, thereby improving system use. Also individuals that are central in a network are found to be in general more active in organizational innovations (Ibarra, 1993). On an organizational level, identification occurs as result of concerns about meeting reciprocal role expectations or imitating the role of others (Kelman, 2006). In the end, the extent of cohesiveness of the group or social identification of the person determines whether the individual conforms to the other person or group (Forsyth, 2014).

The second process of the three-process model of social influence (Kelman, 2006) is internalization. Internalization is said to occur “when an individual accepts influence from another in order to maintain the congruence of actions and beliefs with his or her own value system” (Kelman, 2006, p. 4). In other words, the individual accepts the influence because it corresponds to the individual's own values or norms and, therefore, it can be integrated. In box 2 an example can be found that illustrates the mechanism of internalization.

Mary's sister, Suzy, believes raising her hand is more respectful towards the teacher compared to asking the question politely as she was used to do. Raising her hand is in congruence with her own beliefs of how to act towards the teacher and therefore Suzy internalizes the rule.

Box 2 Example of internalization.

From a higher organizational level, internalization refers to the orientation of an individual to group values or shared values and result from underlying concerns about cognitive consistency of the others' influence compared with its own values and norms, or affective appropriates of one's behaviour (Kelman, 2006).

Compliance is the third process of social influence, as described by Kelman (1958; 2006) and can be said to occur "when an individual accepts influences from another person or group in order to achieve a favourable reaction" (Kelman, 1958, p. 53). It implies that the individual does not fully agree with the other person's individual or group norms, values and opinions. Yet because the individual prefers a favourable reaction (s)he conforms to the other person or group. In box 3 the mechanism of compliance is illustrated with an example.

Mary and Suzy also have a bother, Jack. Jack stumbles on the same situation, however, he finds it overdone and tiresome to raise his hand before asking questions. Yet, Jack doesn't want the punishment that is given when not raise his hand. Therefore, he complies with the rule of raising his hand when asking a question.

Box 3 Example of compliance.

A distinction can be made between informational and normative conformity (Stangor, 2004), the first one being described as the belief that the others' knowledge is accurate. Compliance, therefore, occurs because of the desire of the individual for valid knowledge (Cialdini & Goldstein, 2004;

Stangor, 2004). Normative conformity can be described as conformity used as a mean to become accepted or to keep from being isolated. The importance of the decision for the individual determines the level of conformity (Stangor, 2004). According to the Social Impact Theory physical closeness, number of people and the strength of the majority play also a role in the occurrence of conformity (Stangor, 2004). From organisational level, compliance occurs when an individual accepts the rules and norms of the system in order to assure access to rewards or approval (Kelman, 2006).

Also opinions of colleagues are found to influence individuals' beliefs about IT change (Kim & Kankanhalli, 2009; Wang, Meister & Gray, 2013). Wang et al. (2013) extended the research of Kelman (2006) by focussing on the influence of co-workers prior use on adoption behaviours. Social influence mostly emerged through peers, especially bottom-up social influence was found to be prevalent. It can be expected that social influence from subordinates and peers will also be of critical influence on support-resistance behaviours of participating users. As participating users will encounter both colleagues at their original work place and colleagues they cooperate with during their participating, it will be interesting to find out from which peer groups participating employees encounter social influence.

Besides the three mechanism of social influence as described by Kelman (2006), two other social concepts that work as mechanisms of social influence can be found in literature, namely social contagion and the status quo bias. Social contagion is often described in relation with conformity and compliance (Marsden, 1998). To follow Marsden (1998), social contagion can be defined, according to the definition of Lindzey and Aronson (as cited in Marsden, 1998, p. 1), as "the spread of affect or behaviour from one crowd participant to another; one person serves as the stimulus for the imitative actions of another". Social contagion emphasizes the unconscious and irrational aspect of social influence. In that way, social contagion differs from compliance and conformity, as those represent a more rational and conscious event (Marsden, 1998; Cialdini & Goldstein, 2004).

The status quo bias can be described as an people's preference for maintaining their current status or situation mechanism (Kim & Kankanhalli, 2009, p. 569) and can also be considered as being a mechanism. The status quo bias as described by Samuelson & Zeckhauser (1988) provides three explanations for its occurrence. The first explanation argues the status quo bias is a result of rational decision-making, in which relative costs and benefits are balanced. When the costs turn out to be greater than the benefit, a status quo bias will result. In the context of this study, it would mean for instance that participation in the EPR development outweighs the costs of not participating in the EPR development. The second explanation states that the status quo bias is a result from a cognitive misperception. Perceived losses and perceived gains are balanced. When the losses are perceived the greatest, a status quo bias will result. The last explanation argues that a status quo bias results of psychological commitment. When a person has many sunk costs in the project for instance, a status quo bias can result. Social norms are also found to affect the status quo bias (Kim & Kankanhalli, 2009). Social norms comprise norms about the change that exists in the work environment. Social norms that arise from the work environment are found to weaken or strengthen the effect of the status quo bias, dependent on the psychological commitment (Kim & Kankanhalli, 2009).

2.3. LINKING ADOPTION BEHAVIOURS AND SOCIAL INFLUENCE

From the previous section it can be concluded that social influence seems to be an important influencing factor on adoption behaviours (Kelman, 2006; Venkatesh et al., 2003; Wang et al., 2013). Antecedents of social influence are studied extensively (Cialdini & Goldstein, 2004; Kim & Kankanhalli, 2009; Stangor, 2004; Sykes et al., 2009; Oreg, et al., 2013); social networks, social norms, social identities and colleague's opinions are considered as antecedents of social influence. Mechanisms of social influence are also elaborated on in literature; compliance, identification, internalization, social contagion and the status quo bias are found to affect employees. However, the process through which compliance, identification, internalization, social contagion and the status quo bias occur as result of social antecedents stays unclear. Because of the notion that employee involvement improves adoption behaviours and IT performance (Greenhalgh et al., 2010) is gaining support, it is interesting to gain a more comprehensive insight in these processes among participating users during EPR development. In figure 1, the theoretical model is visualised.

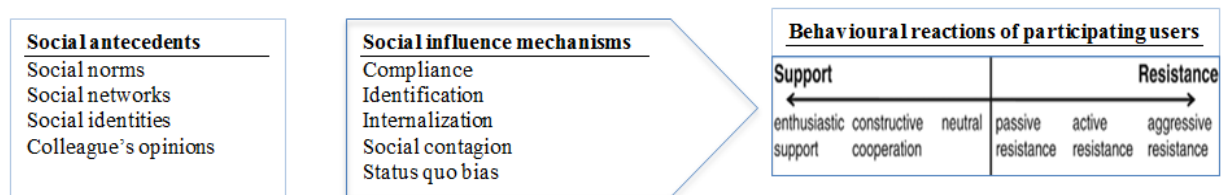


Figure 1 Theoretical model

3 METHOD

The aim of this study is to gain understanding in the mechanisms through which social antecedents influence support-resistance behaviours of individuals that are actively involved in the development project of an Electronic Patient Record. Qualitative research, that is called for in literature on Electronic Patient Records (Greenhalgh et al., 2009), will be the most appropriate design for this study, because the focus on participating users has not been adopted in the IS literature before. When no theory on the topic exists, the topic first has to be explored, for which an explorative character for this study will be the most appropriate design to choose (Yin, 2014; Eisenhardt, 1989; Van Aken et al., 2012). The hospital setting of the case study is especially interesting because of the highly complex social context with many potential influences (Greenhalgh, et al., 2009; Sommerville, et al., 2012).

3.1 CASE DESCRIPTION

The study was conducted in an educational hospital in the Netherlands in which an Electronic Patient Record (EPR) would be developed and implemented. The project was ended before the actual implementation, thereby the case study adds up to the extensive list of failed IS implementation projects (Pan, Hackney, Pan, 2008). The implementation of the EPR aimed at improving the quality, safety and efficiency of the patient care. A program organization was established that was responsible for the EPR development. In smaller project teams components of the EPR were designed in collaboration with the system vendor. These teams consisted of designers, test specialists, content experts and a consultant from the system vendor. The content experts were physicians, nurses, administrative employees and researchers whom were active in different departments of the hospital and they were assigned either part time or full time to the EPR project. Due to the complexity of the project, seven phases were identified in which the system would be implemented. During the second phase, in which the EPR system was developed, several problems emerged. Half a year after the beginning of this

phase, the go live date of the EPR was officially postponed. During the following months plans were presented to still round off the second phase successfully, but after three months of uncertainties the management decided to cancel the EPR implementation project completely. At the time of the study, the project had been ended and an evaluation was conducted in which the phases that were completed before the termination were critically evaluated. This study was a way to contribute to this evaluation besides the scientific contribution of the study.

3.2 DATA COLLECTION

Data was collected through both interviews and documentation to enable triangulation (Yin, 2014). First a time line was developed from documentation of weekly updates and newsletters aided by information from an interview with an employee from the communication department of the EPR program who was involved with the project right from the start. This time line helped the researchers to get grip on the development and the complexity of the project and was used during the interviews to structure the story of the interviewee and to probe. The time line was also used during the data analysis to explain trends and events to which social dynamics can be explained. Because of anonymity issues the time line is not included in this paper. Before interviewing the employees whom were actively involved during the project, a pilot interview was conducted with a project manager that had insight in the work of the content specialists. The pilot interview helped the researchers to get used to interviewing and it provided the opportunity to test the effect of the questions. After the pilot interview some adjustments were made in the wording of questions. Thereafter, all the fifteen employees whom were actively involved in the project were invited for an interview. Two employees did not participate with the study, however, no response bias is expected. From one employee no response was received, but because of a positive conversation the researchers have had during a meeting well beforehand the interviews with this person no response bias is expected. The second person whom did not participate was known to

be in pregnancy time off. In total 13 semi-structured interviews that lasted for about 60 minutes were conducted with employees from different departments and occupations (nurses, physicians and other) that were actively involved as content specialist during the project. In table 1 the demographics of all the data sources are described and the corresponding codes that are used in the results section are displayed. The interviews were conducted in Dutch, which is the tongue of the interviewees. Quotes used in the result section were translated from Dutch to English only after the completion of the analysis to cause as less translation flaws as possible, yet, information could have been lost in translation. The interview protocol, which can be found in appendix I, consisted of three sections. The first section comprised a general introduction in which the interviewees were asked about their position within the hospital and how (s)he had become involved in the EPR program. In the second and third section the interviewee was asked about events and social influences during the first weeks as content specialist and with the work in project teams. Interviewees were asked about the influence of others on their support-resistance behaviours around the time of the event and in what way this had an effect on them. Examples of behaviours were asked for in order to get an improved understanding of the context. In the third section, aspects of the Critical Incident Technique (CIT) were used, asking the employees about incidents that represented a turning point in the project for them (Cassell & Symon, 2004). In this way, despite the retrospective character of the study, events were discussed that, as the incidents was of importance to the employee, could be recalled quiet well. Thereby it helped to explain organizational behaviour and improved theoretical grounding (Cassell & Symon, 2004). Events were discussed that were of importance for the interviewee, since in that way it could be expected that the incident could be recalled quiet well (Cassell, & Symon, 2004).

3.3 DATA ANALYSIS

The data analysis comprised three steps as is advised by Eisenhardt (1989). The individual interviews were taped, transcribed and analysed. Before the transcribing process started, deductive codes were constructed on basis of

| Characteristics | Values | Codes |
|-------------------------------------|--------|----------|
| Participating users | 15 | |
| Interviewed participating users | 13 | |
| Gender | 8 | |
| - Male | | |
| - Female | 5 | |
| Job | 5 | D1-D5 |
| - Physician | | |
| - Nurse | 5 | N1-N4 |
| - Other | 4 | O1-O4 |
| Not interviewed participating users | 2 | |
| Gender | 1 | |
| - Male | | |
| - Female | 1 | |
| Job | 2 | |
| - Nurse | | |
| Other interviews | | |
| Pilot interview | 1 | P1 |
| Job | | |
| - Project manager | | |
| Time line interview | 1 | T1 |
| Job | | |
| - Communication | | |
| Documentation | | |
| Week updates | 35 | W1-W35 |
| News letters | 39 | NL1-NL39 |

Table 1 Information and codes of data sources.

relevant theory. During the transcribing process inductive codes were added and pattern coding was applied. In appendix II the codebook can be found in which the inductive and deductive codes are included. With pattern coding trends, patterns and relations are sought for, enabling understanding and integration of the data (Miles & Huberman, 1994; Saldana, 2013). The first two transcripts were coded together by the two researchers. The remaining transcripts were coded individually, after which codes were discussed and a final version was decided on in consultation with each other. These discussions only resulted in changes in wording of codes, not so much in the actual adjustments of the chosen codes. In this way inter-

subjective agreement was improved (Van Aken et al., 2012; Yin, 2014). In addition, for every transcript a summary was created from quotes to capture the story lines of the interviewees (Bazeley, 2013).

| Step | Coding process |
|------|--|
| 1 | The tapes of interviews were divided among the researchers and transcribed individually |
| 2 | The researchers had composed a coding scheme |
| 3 | Two interviews were transcribed by the researchers together |
| 4 | Both researchers individually coded the remaining transcripts |
| 5 | The individually coded transcripts were discussed by the researchers and converted into a final coding version |

Table 2 Coding process.

The further analysis of the coded transcripts consisted of two stages. First, a within case analysis was conducted in which the individual transcripts were analysed. All interviews were treated as individual cases. Afterwards patterns and differences between different sources of social influence was sought for, namely from the department, from the EPR project, from the Management Team or from the profession. Subsequently, through comparison of existing theories with findings and insights from the study, explanations will be explored (Van Aken et al., 2012). During the process of data analysis memos will be used to enable the researcher to move the data more easily to the conceptual level and to integrate the data (Miles & Huberman, 1994; Bazeley, 2013).

4 RESULTS

This chapter elaborates on the findings derived from interviews with participating users in an EPR development project. The section is divided into two subsections. In the first subsection the support-resistance behaviours of the participating users will be discussed and changes over time will be displayed. The second subsection emphasizes the social antecedents and how they activate the mechanisms of compliance, identification, internalization, social contagion and/or the status quo bias.

4.1 ADOPTION BEHAVIOURS

In this section, the first sub question of the research question will be answered: Which support-resistance behaviours do participating users show during the EPR development? During the evolution of the EPR development it became clear for many of the participating users that the project did not went well. As a result, changes in support-resistance behaviours of the participating users could be recognized. Therefore, first the support-resistance behaviours of participating users during the beginning of their participation in the EPR project are discussed. Thereafter, the evolution in support-resistance behaviours is elaborated on.

4.1.1 ADOPTION BEHAVIOUR DURING THE START OF PARTICIPATION

All thirteen participating users showed supportive behaviours at the start of their participation in the EPR development. However, a small differentiation within the supportive stance of the group could be recognized. Eleven participating users could be regarded as being enthusiastically supportive. They recognized the importance of the EPR for their department (nine of the participating users) and/or for their profession (four of the participating users) and/or for the hospital (five of the participating users). They recognized the possibilities an EPR would bring them and therefore they started with full enthusiasm with the project. "I found it very interesting and I believe it is very important that it [EPR] will be implemented" (O2) "I think it is

important that it is initiated, it will give answer to many issues" (D1)

Two of the participating employees were supportive to a lesser extent and they were, therefore, categorised as showing constructive cooperation behaviours. On the one hand, they recognized the importance of an EPR for the hospital, while on the other hand they knew the EPR would be a step back for their department. "For us it would become worse, we are much further in paperless work... but we are dying for a new EPR" (N2). They participated in the EPR development because they knew they had no choice as department whether to participate or not. Therefore, participating in the EPR development gave them the possibility to make it at least the best fitting for the department as was possible. "We knew we would be forced in a kind of strait-jacket. So let's make it as less bad as possible" (D3). In figure 2, the support-resistance behaviours of the participating users during the start of their participation in the EPR project are visualised.

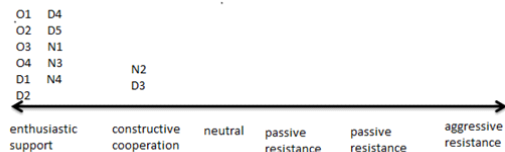


Figure 2 Support-resistance behaviours of participating users at the start of their participation in the EPR development.

4.1.2 EVOLUTION OF ADOPTION BEHAVIOURS

The active and enthusiastic atmosphere that was prevalent at the start of their participation in the EPR project changed over time when problems with the EPR development emerged. Distrust towards the IT vendor was developed and a more negative and hesitant atmosphere could be recognized as people became doubtful about the successful completion of the development and implementation of the EPR. The effects of these developments on the support-

resistance behaviours of the participating users differed. In figure 3, the evolution of changes in support-resistance behaviours is visualised.

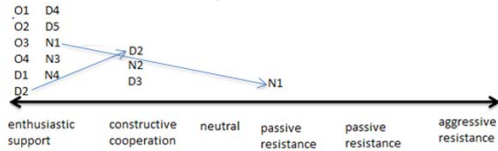


Figure 3 Evolution of behavioural reactions of participating users.

Nine participating employees kept on working motivated despite distrust towards the IT vendor and negative events. They believed the EPR to be of great importance for their department or the hospital and, therefore, they kept on working with high motivation: “At one point, we had some concerns about the quality, but I managed to stick to my motivation... there has to come an EPR quickly” (N4).

Three of them recognized the usefulness of what they had accomplished so far, despite the termination: “All information that I’ve received, I see as gains” (O1). Although the dedication of the participating users towards the project did not change, distrust towards successful completion of the project arose: “My effort did not change, but my trust...” (D3). It shows that, despite the concerns about a positive completion of the project, for the majority of the participating users the development of an EPR was of such importance that they could maintain their motivation and enthusiasm in the project.

The two participating users that showed constructive cooperative behaviours, maintained working for the EPR project with a constructive cooperative stance. They still had a somewhat negative attitude towards the EPR, but because working with the EPR in the future was obligatory, they wanted to keep on participating in the EPR development: “The product was nothing, I stand by that. But it was for sure that we had to work with the product, so leaving was no option” (N2)

One of the participating employees changed from showing enthusiastic supportive behaviours towards showing constructive cooperative behaviours. (S)he said to have recognized early after his start at the project, that the chosen product was too rigid and not suitable for the requirements of the hospital. As a result (s)he lost his trust in the success of the EPR development along with his motivation in the EPR project. Despite his decreased motivation and trust, (s)he maintained working for the EPR project, because (s)he believed an EPR project was of great importance for the hospital: “... We have to make something of it, we have to go on, because if we let it slip now, it will be nothing at all” (D2).

One of the participating employees changed from showing enthusiastic supportive behaviours towards showing passive resistance behaviours. (S)he said to have recognized already very early after his start at the EPR project, that the EPR development and/or implementation would fail. (S)he said that (s)he was able to separate his doubts about the evolvement of this particular EPR project from the view of an EPR in the long run. This, however, changed when his original department decided not to go along with the EPR implementation anyhow: “I thought that this is not it, because [department] said not to go along anyhow...it is not fun to keep on working, so I left the project” (N1). By leaving the project before the termination was announced (s)he shows behaviours that corresponding to passive resistance.

4.1.3 CONCLUSION

In short, eleven of the participating users maintained showing supportive behaviours during the evolvement of the EPR development, that were similar to the supportive behaviours they showed at their start in the EPR project. For two participating users a change in support-resistance behaviours could be recognized. One participating user maintained showing supportive behaviours, but over time the behaviours became more constructive cooperative instead of enthusiastically supportive. The other participating user moved from showing supportive behaviours towards showing resistance behaviours. Overall, the findings show the great importance of the implementation of an EPR for the participating users. The fact that only one participating user

moved to showing resistance behaviours, highlights the involvement and dedication of participating users to the EPR development and shows the importance of the implementation of an EPR for the participating users.

4.2 SOCIAL ANTECEDENT AND MECHANISMS OF SOCIAL INFLUENCE

In this section the social antecedents that activate mechanisms of social influence are discussed. Thereby, this section tries to answer the second sub question of the research question: Through which mechanisms are support-resistance behaviours of participating users affected by social antecedents? The section reveals through which mechanisms social antecedents influences or does not influence support-resistance behaviours of participating users. The section is divided into five subsections. In the first four subsections the social antecedents and the mechanism through which they influence participating users are described from different general sources of social influence that emerged during the analysis, namely the department of the participating users, the EPR project, the MT of the EPR project and the profession of the participating users. The section closes with a cross-section analysis in which overall trends and differences between the four general sources of social influence are described.

4.2.1 PARTICIPATING USERS' OWN DEPARTMENT

Social antecedents that originated in the own department of participating users activated the mechanisms of compliance, identification, internalization and the status quo bias. In this section the social antecedents that activated these mechanisms of social influence are described and it is showed in what way they influenced support-resistance behaviours of participating users. The subsection concludes with a conclusion in which the findings are clarified in a table.

The own department of participating users was a source of information that was needed in order to design the EPR properly and thus information conformity, a subcategory of compliance, could be recognized. The interviewees mention specifically to have asked for information about work practices solely at their own departments and they said to

have used this information for proper design of the EPR. It shows that input from the department resulted in informational conformity by the participating employees. "It happens a bit automatically, when you think about the EPR, you have to think about how things should go differently" (O3). The fact that participating users solely asked for work practices reveals a focus by participating users on content and not on opinions of others. One of the interviewees even tried to guard off opinions actively: "Because, when you ask about opinions, people think they have a say, I just didn't comment" (O2).

For two participating users, normative conformity occurred in combination with informational conformity. The first one, a physician, experienced pressure from his department to participate in the EPR development. The physician was somewhat hesitant about the assignment, but after personal experience with problems that could be solved with the implementation of an EPR, the physician decided to participate in the EPR development. It illustrates that the normative conformity with as goal to become accepted by others was not reason enough for the physician to conform. The physician needed valid knowledge that supported the need of an EPR, in order to conform to the pressure. For the second person, a nurse, a similar kind of normative and informational conformity could be recognized. The nurse experienced a norm at his department of employees saying that the EPR would not be implemented successfully. Although his original department had a negative and pessimistic stance, the nurse believed for a long time that the EPR would be implemented successfully. Only when (s)he noticed himself ¹ that things did not go well, (s)he was more sensitive to the opinions and norms that existed at his original department and (s)he started doubting the successful completion of the project as well: "From the beginning onwards, my department said the EPR would not come. At the start I still said that would not be the case, but they have been right all along" (N1). This shows that only

¹ His should be read as his/her throughout this paper. Himself should be read as himself/herself throughout this paper. Him should be read as him/her throughout this paper. To enable ease of reading it was chosen to only write down his, him or himself. Because (s)he does not difficult the reader she/he is indicated as (s)he throughout this paper..

after sufficient information that confirmed the norm of the department, conformity of the nurse resulted. It demonstrates that a pressure to conform to the norm is not a sufficient reason for compliance, only in combination with valid knowledge compliance resulted. In other words, it implies that normative conformity only occurs in combination with informational conformity.

Although all participating users appointed the value of speaking with employees from departments to verify their work practices and routines at departments, the input of the departments were not highly present for everyone, presumably as a result of the social network of participating users. At some departments the EPR was not 'alive' and participating employees experienced difficulties in getting departments to cooperate and to make time to provide them with input: "It was almost impossible, because the management said that they did not have time for it. People are very busy" (N3). It comprised the three participating users whom needed information from departments with which they have had no contact before. For those whom had many contacts at the department, acquiring information from employees at the departments was no problem as they could get into contact easily: "They are my nearest colleagues, so that was no problem at all" (N2). It seems that it improved the attitudes and motivation of employees to provide input to participating users, when the departments had a representative in the EPR project. The contradictions in input and attitude from the departments are striking. It shows the relevance of social networks for participating users, since it seems that the social network of participating users determines the ease with which they can obtain input from departments.

In addition, a salient social identity of the department could be recognized by participating users, as participating users felt representatives of their own department when they were embedded in the social network of the department. For one participating user the salient social identity resulted in positive attitudes and behaviours, as (s)he experienced an expectation from his department to be motivated about the EPR. His identification with his department made him to stay positive in order to maintain the relationship: "I believe you have to go for an EPR, and I had to be motivated, otherwise it would not appear right for those people" (N1).

It shows that this person maintained showing supportive behaviours as a result of identification with his department, which seems to imply that a salient social identity results in maintenance of support-resistance behaviours through the mechanism of identification.

For three other participating users, the salience of a social identity of the department seemed to have resulted in somewhat pessimistic or negative attitudes through the mechanism of internalization. This was the case for participating users from departments that had, in their own opinion, a unique and different way of working compared to other departments. In such cases, the participating users had joined the EPR project because they wanted to make sure the EPR would be pleasant to work with for their department as the department was obligated to work with the EPR, no matter what: "For us it would mean an enormous step backwards, we knew that, but you have to manage with one has got" (N2). As a result, the participating users showed behavioural reactions, in line with their departments, that correspond to constructive cooperative behaviours. For the other nine participating users that performed enthusiastic supportive behaviours, the departments hold a more positive attitude towards the EPR and thus those participating users have presumably internalized that stance of the departments.

During the project, two departments had given signs not to go along with the future EPR implementation when it would have been implemented in the state it was developed at that moment. For the participating users that originated from those two departments this had two very different effects, namely for one of the participating users a status quo bias could be recognized with a behavioural reaction as a result, while for the other no difference in support-resistance behaviours emerged. For one of the participating users a status quo bias could be recognized, as (s)he decided to leave the EPR project before the announcement of the official termination of the project because his department made clear they would definitely not go along with the future EPR implementation. At the start, the negative opinions of his department were overruled by his own positive ideas about the EPR. Over time, however, when (s)he recognized the signs that the project did not go well and especially after the final decision of the department to not go along, (s)he decided to follow in the deci-

sion of his department: “[...department...] would leave for sure, for me it is then also finished. It had great effect on the fact that I left the project” (N1). It illustrates a status quo bias whereas (s)he implies that participating in the EPR project is not worth it, when his own department will not use the EPR. In other words, rational decision making, a sub category of the status quo bias, can be recognized, because all the benefits of participation that existed for the participating user disappeared, leaving many costs of participation behind. Although it is interpreted as status quo bias in this case, it seems to have aspects of informational conformity in it as well. The participating user was more optimistic compared to his original department at the start. Only when (s)he recognized the signs of problems himself, (s)he started doubting the project. So, before the status quo bias occurred, the person had to acknowledge the problems first himself and thus valid knowledge about the situation seems to be a prerequisite to make the status quo bias happen in this case.

The other participating user that originated from a department that had decided not to go along with the future EPR department was, interestingly, not affected by the decision of his department. This person decided to keep on working for the EPR by dropping his focus on aspects of the EPR that was connected with his own department and by focussing on other aspects of the EPR that did not involve his own department. “That was no problem, I just went on” (O4). (S)he even mentions not to bother to change focus, because (s)he thinks working on the project is interesting anyway. This seems to comprise cognitive misperception, which is a second subcategory of the status quo bias. The losses that arise when the department decides not to go along with the future EPR implementation do not outweigh the gains that are in this case the personal interest. Contrary to the previous example, this shows a lack of a status quo bias.

To summarise, social antecedents that originated in the departments of the participating users activated the mechanisms of compliance, identification, internalization and the status quo bias. Only the social norm in combination with information that supports the norm and with the decision of the department changes in support-resistance behaviours resulted through the status quo bias. A salient

social identity activated the mechanism of identification that resulted in the maintenance of already showed support-resistance behaviours. The other mechanisms did not seem to influence support-resistance behaviours, only cognitions about the EPR project seemed to be influenced. In table 4 the findings of this subsection are displayed more clearly. The table depicts which particular mechanism is activated by which social antecedent and by how many participating users. Also its subsequent effect on the support-resistance behaviours of the participating users is depicted. Four things are worth to be highlighted and will therefore be described in short.

First, the results of this subsection show the high need for information from the department of participating users. However, the social network of participating users determined the ease with which information could be obtained. The focus on content and the active dismissal of opinions of colleagues highlights the focus of participating users on successful development of the EPR and it seems to imply that participating users did not want to be distracted by opinions from colleagues at the departments. Secondly, valid knowledge and sufficient information was found to be a recurring antecedent for mechanisms of social influence, since it was an antecedent of informational conformity, normative conformity, as well as the status quo bias. For informational conformity, information was the only antecedent. For the status quo bias and for the normative conformity, a norm and information that supported the norm were essential in order to activate the particular mechanisms. This indicates that norms are not followed blindly by participating users, and it highlights the wish of participating users for justified norms. Third, it can be concluded that the salient social identity from the department have been activated both the mechanism of identifications well as the mechanism of internalization. The differences in mechanisms that are activated seem to lie in the origin of the social identity. For identification to occur, a social identity that originates from the individual’s membership of the department could be recognized, while for internalization to occur the salient identity seems to source from agreement to the characteristics of the department. Fourth, the explanation of the status quo bias seemed to determine if a status quo bias towards the department resulted. For one participating user, a status quo bias resulted after rational deci-

sion-making, while for the other participating user, no status quo bias could be recognized as result of cognitive misperception. Besides the social norm, non-social antecedents, namely the decision from the department and the personal interest, seemed to be relevant for the mechanism of the status quo bias to emerge.

| Number of participating users | (Social) antecedent(s) | Mechanism | Behavioural reactions |
|-------------------------------|---|--|--|
| 13 | - Information about content - Social network | Compliance - Informational conformity | No change in support-resistance behaviour, actively protect for possible influence |
| 2 | - Norm and information about problems - Norm and information about problems EPR development (from EPR project) | Compliance - Normative conformity | No change in support-resistance behaviour, only changes in cognitions |
| 1 | - Social identity | Identification | Maintenance of support-resistance behaviour |
| 13 | - Social identity | Internalization | Unclear, seems maintenance of support-resistance behaviour |
| 1 | - Norm - Information about problems EPR development - Decision department | Status quo bias – rational decision making | Move from supportive to resistance behaviour |
| 1 | - Norm - Information about problems EPR development - Decision department - Personal interest | No status quo bias – cognitive misperception | No change in support-resistance behaviour |

Table 4 Summary of social influence from the departments on support-resistance behaviours of participating users

4.2.2 EPR PROJECT

Social antecedents that originated in the EPR project activated the mechanisms of compliance, internalization and social contagion. How and which social antecedent from the EPR project influence or does not influence support-resistance behaviours through those mechanisms is de-

scribed in this subsection. The subsection closes with a conclusion in which the findings are clarified in a table.

Colleagues at the EPR project seem to have been important providers of information about matters of content or about the development of the EPR, since three forms of compliance could be recognized: (1) four of the interviewees specifically mentioned that they changed their opinions and/or

behaviour because of what colleagues at the EPR project said about the EPR, (2) for one of the participating users it is not completely clear whether (s)he changed his own opinion and (3) two participating users mention not to be influenced by other colleagues at the EPR project and thus a lack of compliance could be recognized. The first form of compliance encompasses informational conformity, since five of the participating employees specifically mention to have changed their ideas and view about the EPR as a result of interaction with other employees at the EPR project. For three of them it mostly comprised aspects of content. Changes emerged gradually as they obtained more and more information about things they did not had any knowledge of before: "The longer you are involved in the EPR, the more you start looking differently at things. As physician, you are blinkered. In such a working group, you hear many other sides of the story, you start looking differently at things"(D5). For the fourth of the conforming participating users, a more drastic informational conformity can be recognized, as (s)he changed his optimistic opinion about the project when colleagues said that things (s)he thought went well in fact did not go that well instead: "I had to give a presentation and afterwards people said to me that things actually went this and that way and that goes actually totally wrong. It shocked me, it really shocked me"(D5). For the fifth of the conforming participating users a change in behavioural reactions could be recognized as (s)he said to have become very sceptical about the project very early as a result of both knowledge about problems in the EPR development as well as opinions of his colleagues at the EPR project. Yet, because (s)he acknowledged the high importance of an EPR for the hospital (s)he maintained participating in the EPR project, although in a more easy pace. Therefore this participating user can be said to have changes from showing enthusiastic supportive behaviours towards showing constructive cooperative behaviours. For the second form of compliance it is not clear whether informational or normative conformity has occurred. One of the nurses recognizes to have doubted his own interpretation of events, due to the fact that all his colleagues at EPR project kept on working motivated and with full confidence. As a result (s)he followed the rest in their motivated behaviour despite his own doubts: "I did not get any convincing answers, but perhaps I interpret it the wrong way. When everyone still believes in it, I go along with it" (N2).

The reason to conform to this norm becomes not clear, but it seems plausible that the nurse believes the others have more or the right information and are, therefore, motivated. In that case the nurse showed informational conformity as (s)he believed that the others had the right information and thus (s)he conforms because of the wish of valid knowledge. The other possibility is that the nurse complies to the norm of motivated behaviour, because (s)he wants to be accepted by his colleagues at the EPR project and is not sure enough about his own interpretation to counteract. It can be concluded that compliance has occurred, but whether it can be specified as being informational conformity or normative conformity is not clear. The third form of compliance encompasses a lack of informational conformity. Two participating users said not to have had enough information to know what is going on exactly and, therefore, chose not to have any opinion at all: "I did not have enough insight into it to have a valid opinion. And I do not have any problems with just don't having any opinion about it. All that would cost energy" (N4).

A very enthusiastic and motivated atmosphere could be recognized at the EPR project that corresponds to the attitude with which the participating users entered the EPR project. All thirteen participating users mentioned to have started the project with enthusiasm, which can be expected from employees who choose to participate in such a project. The motivated atmosphere they worked in gave the participating users extra energy and as they said themselves, it reinforced their own motivation. It shows that internalization occurred, as the enthusiasm of others, which was in line with the employees' own stance, reinforced his own enthusiasm and motivation: "Everyone tried very hard, you wanted it to succeed desperately" (O1). Over time, however, when problems in the EPR project became clearer, different sounds arose. For seven participating users it was the expression of the shared observation that things did not go well. Colleagues' opinions were interpreted as a confirmation of what the participating users recognized themselves. As for instance a nurse mentioned: "We took note of the fact that we are actually mostly busy with our own process and theoretical issues" and: "Over time I more and more thought that it is the way it is, and it will be okay. Others had the same" (N4). But they knew they could not do anything about it themselves and there-

fore they tried to keep on going motivated together: “Both sounds existed. We tried together to pull ourselves together” (N2). In that way they internalized negative as well as positive and motivational sounds of colleagues. On one hand they helped each other to keep on working motivated and thus they reinforced each other to maintain showing supportive behaviours. On the other hand they confirmed each other’s doubts and in that way reinforced each other’s cognitions about the EPR development.

Among the participating users a salient social identity of the EPR project seems to have arisen over time, possibly facilitated by the mechanism of internalization. Two of the participating users mention that over time a kind of team spirit arose: “I think I am influenced by that as well, you know each other in a different way after a while” (O1). It seems logical to assume that participating users identify with each other more easily when they hold somewhat similar attitudes and show somewhat similar behaviours. It seemed to have had an effect on the sensitivity of people for opinions of others. Two participating users noted that during the start of their participating they were not influenced by others, but later on when signs of problems become more clear, it had a negative effect. Perhaps the fact that over time they knew each other better, made the participating users more prone to influence of others. It seems to imply that the salience of a social identity influences the extent to which people are sensitive for influence of others on their support-resistance behaviours. Another possibility is that participating users did not recognize each other’s positive stimulation as influence, either because at the start the social identity of the EPR project was not salient, or because another mechanisms was activated that happened more unconsciously.

It seems that participating users did not recognize direct positive influence of colleagues at the EPR project as a result of the fact that its influence emerged through the mechanism of social contagion. All thirteen participating users recognized the positive and enthusiastic atmosphere when they started participating in the EPR development. Seven of the participating employees mention the positive flow and how they took part in this positive flow. It seems to be imitative of character, whereas participating employees that start at the project became very enthusiastic and

motivated as well: “In the beginning you were in a positive flow. That enthusiasm has had a great impact I think” (N2). Over time problems arose with the IT vendor and in the progression of the EPR development. Although these problems were clear and in sight, participating users did not see it or did not give attention to it in the beginning of their participation. Twelve of the participating users mentioned to have stayed positive for a long time and they said not to be negatively influenced by others until the problems became grand: “Of course, it reinforces things when you notices the same things that are also noticed by others. At the start it did not have any affect, but on after a while when it becomes clear it does not go well, it start having negative influence” (N1). So, although problems arose, participating users did not give attention to it and followed others in their positive behaviour until the problems became too big to ignore. It shows the irrational aspect of social contagion. Gradually, however, more problems became visible and as a result a more negative atmosphere arose. Despite the fact that everyone wanted the EPR to be developed and implemented, the negative atmosphere seemed to become prevalent and it affected participating users. One participating users specifically mentioned the irrational and unconscious aspect of it and stated that it is something that is not specifically said or expressed but everyone feels it: “I saw it coming. There is something in the air... It was very hard to preserve the confidence in the project” (D3). But, as mentioned earlier, later on, when signs became more clear and moved from being a vague feeling to clear problems, opinions and behaviour that can be considered as negative, became internalization.

In short, social antecedents that originated in the EPR project activated the mechanisms of compliance, internalization and social contagion. Table 5 depicts which social antecedents, influenced support-resistance behaviours in what way and through which mechanisms. Also the numbers are presented that denote the ration of occurrence. First, it could be recognized that compliance resulted in both changes of behavioural reactions and maintenance of already showed behavioural reactions, as well as changes in cognitions about the EPR project. Information about problems of the EPR development in combination with opinions of others resulted in change in support-resistance behaviours through compliance or in changes in cognitions

through compliance. Maintenance of already showed behavioural reactions resulted from a combination of opinions of colleagues and social norms through the mechanism of compliance. Second, a social norm or atmosphere could be recognized to maintain the already showed support-resistance behaviour through social contagion. Over time, a salient social identity of the EPR project

emerged alongside the social norm, which resulted in maintenance of the already showed support-resistance behaviour through internalization, despite the negative sounds. This implies that over that the mechanism of social contagion was substituted by the mechanism of internalization

| Number of participating users | (Social) antecedent(s) | Mechanism | Support-resistance behaviour |
|-------------------------------|--|--|--|
| 4 | - Information about problems - Opinions | Compliance – Informational conformity | No change in support-resistance behaviour, only changes in cognitions |
| 1 | - Information about problems - Opinions | Compliance – Informational conformity | Move from enthusiastic supportive to constructive cooperative behaviour |
| 1 | - Opinions - Norm | Compliance - Informational conformity OR Compliance – Normative conformity | Maintenance of support-resistance behaviours |
| 13 | - Norm / Atmosphere - Social identity | Internalization | Maintenance support-resistance behaviours |
| 9 | - Information about problems - Opinions colleagues - Social identity | Internalization | No change in support-resistance behaviour, only maintenance or reinforcement of cognitions |
| 13 | - Norm/atmosphere | Social contagion | Maintenance of support-resistance behaviours |

Table 5 Summary of social influence from the EPR project on support-resistance behaviours of participating users

when a salient social identity arose. The negative sounds, like information about problems and opinions of colleagues, together with a salient social identity, did, however influence cognitions of participating users through internalization.

4.2.3 EPR MANAGEMENT TEAM

Compliance of participating users to the stimulation of the EPR management to keep on working motivated could be recognized to have influenced participating users. In table 5 the social antecedents that influence participating user through the mechanism of compliance is presented.

Both informational conformity and normative conformity of participating users towards the EPR management seemed to have occurred. Informational conformity could be recognized to have influenced cognitions of participating users due to the provision of information about the status of the project by the Management Team (MT). Al-

so sounds of doubts about the project and of things that did not go well resulted in informational conformity by the participating users. The participating employees believed that the management had the right information and therefore they started doubting the successful completion of the project as well: “You knew the expectations were tem-

pered, so then you start to worry” (O3). Despite the doubtful sounds of the EPR management, they management urged the participating users to keep on working with motivation at the same time. A norm arose to keep on working motivated and everyone wanted to make sure that in case of termination of the project it would not have been because of the work completed by the employees of the EPR project. As was mentioned earlier, eleven of the participating employees managed to keep on working motivated and therefore they probably have conformed to the norm to a certain extent. However, one participating user mentioned to have

kept on working but not at the high speed with which (s)he had started the project: “The management urged to keep on going, but I slowed down a bit” (N1). For this participating user the social norms, information about problems of the project and opinions of the MT resulted in a change in behavioural reactions, presumably through compliance. Why only for this particular participating user a change in support-resistance behaviours resulted does not become clear, unfortunately. Possibly, other factors have played a role.

| Number of participating users | (Social) antecedent(s) | Mechanism | Support-resistance behaviour |
|-------------------------------|---|---------------------------------------|---|
| 13 | - Information about problems EPR development - Opinions | Compliance - Informational conformity | No change in support-resistance behaviour, only changes in cognitions |
| 12 | - Social norm - Information about problems EPR development - Opinions | Compliance - Normative conformity | Maintenance of support-resistance behaviours |
| 1 | - Social norm - Information about problems EPR development - Opinions | Compliance - Normative conformity | Changes in support-resistance behaviours |

Table 6 Summary of social influence from the MT on support-resistance behaviours of participating users

4.2.4 PROFESSION

Only the social antecedent of the salience social identity could be recognized from the profession to influence support-resistance behaviours through mechanisms of social influence. Nine of the participating users acknowledged a salient social identity from their profession. Two physicians show a salient professional identity, as they mention that the work practices associated with the EPR and its usefulness are highly preferable for their profession. “It couldn’t become worse for a physician. For the work of a physician, it could not become any worse” (D4). Besides, all four nurses talked from a nurse perspective. They talked about practices or about aspects of the EPR that are of importance for their profession. One nurse especially mentions an informal nurse group that was created somehow at the EPR project in which the nurses united. Doing so, highlights the

salience of a nurse identity “When I think of my nurse group... In the nurse group I always experienced the feeling, after discussing

something, that we could go on” (N4). For three of the participating users, which were either from the medical administration or from the research department, also a salient social identity of their profession could be recognized. They all stress the importance of aspects of the EPR for their profession. Although the salience of social identities could be recognized by nine of the thirteen interviewees, it does not become clear in what way and through which mechanism, this social identity has influenced the support-resistance behaviours.

4.2.5 CROSS SECTIONAL COMPARISON

When comparing the social antecedents from different sources and the mechanism through which support-resistance behaviours are influenced, several similarities and differences can be recognized. First, it seems that social antecedents that activated mechanism of social influence originated mostly from either the department of the participating users or from the EPR project. Besides, these social antecedents seem to have mainly resulted in the maintenance of already showed support-resistance behaviours. Only for two participating users an actual change in their behaviours reactions could be recognized as a result of social influence among other things. This leads to the second notion, namely that in the two instances that a behavioural change could be recognized, also other aspects besides social antecedents seemed to influence the participating users. Additionally, a combination of both social antecedents as well as other antecedents seemed to have set mechanisms of social influence in motion. It seems that information, for instance, is an important factor for many of the mechanism of social influence to occur. Third, it could be recognized that social contagion only resulted from social antecedents that originated in the EPR project, while the status quo bias resulted only from social antecedent that originated at the department. Fourth, in all cases of internalization, social identity was one of the social antecedents to have effect on this mechanism to occur. Lastly, for all cases of compliance as result of antecedents from the EPR project or from the MT, a combination of information and opinions could be recognized to have determined the occurrence of compliance.

5 DISCUSSION

By studying the participation of users in an Electronic Patient Record development in an educational hospital, this study tried to gain understating in the mechanisms through which social antecedents influence support-resistance behaviours of participating users. Only for two participating users actual changes in support-resistance behaviours could be recognized. In combination with non-social factors, social norms changed support-resistance behaviours of participating users through the status quo bias. Besides social norms, colleague's opinions and information about problems in the project did change support-resistance behaviours through compliance. For the other participating users, support-resistance behaviours stayed the same; however social antecedents did seem to have influence on the maintenance of these support-resistance behaviours through mechanisms of social influence. In this section five aspects of the findings will be highlighted and critically discussed. Thereafter, theoretical implications are presented and contributions of the study for practitioner are indicated. The section closes with limitations of the study and with directions for future research.

5.1 THEORETICAL DISCUSSION

First, it was found that social antecedents alone did not seem to affect support-resistance behaviours through mechanisms of social influence, yet, as is in consistence with the Interaction Theory of Markus (1983), in combination with other factors, social antecedents did, indeed, influence support-resistance behaviours of participating users. Two of the participating users moved in their support-resistance behaviours. For one of these two participating users, it was a combination of social norms, information and actions of the department that resulted in the status quo bias with as result a move from supportive behaviours towards resistance behaviours. For the other participating user that changes his behavioural reaction it seems that individual factors, information and opinions of colleagues at the department seemed affected the behavioural reaction through compliance. This shows that valid knowledge, indi-

vidual characteristic and group characteristics together influence support-resistance behaviours. The Interaction Theory of Markus (1983) presumes resistance behaviours are a result of an interaction of individual, group and system related characteristics. Thereby, this study seems to confirm the notion that both antecedents of social influences, as well as other aspects together influence support-resistance behaviours of participating users.

Second, the findings of the study seems to imply that social antecedents influence cognitions of participating users and preserve support-resistance behaviours that are already showed before, but in order to change support-resistance behaviours also other factors play a role. For instance the salient social identity from the department of a participating user resulted in the maintenance of motivated behaviours through the mechanism of identification. An example of the effect of social antecedents on cognitions of participating users through mechanism of social influence is showed by the influence from the MT of the EPR project. Over time, the MT expressed doubts and problems that occurred in the EPR development. As a result participating users started to call a successful EPR development into question, yet the informational conformity that emerged, did not changed support-resistance behaviours of participating users. Thereby the example highlights the cognitive changes that emerged by the participating users, despite the invariable support-resistance behaviours of the participating users. It does, however, seem logical that participating users changed their support-resistance behaviour somewhat when having doubts about the project, although they were still motivated. Possibly, if the dimension of support resistance (Van Offenbeek et al., 2013) will be further differentiated, minor changes in support-resistance behaviours can be revealed.

Third, the study highlights the different origins of the social identity as are described by Oreg et al. (2013) and the results imply that the origin of the social identity determines the mechanism that is activated. One social identity origins from the membership to the department and activated the

mechanism of identification. For other participating user, the salience of the social identity seemed to originate from the personal identity or individuals characteristics that are similar with that of the group, resulting in the mechanism of internalization to occur. Thereby this study highlights the different characteristics of the social identity (Oreg et al., 2013). Besides, it also shows that the social identity is a social antecedent of both internalization as well as identification and not, as ways implied in literature, of identification only.

Fourth, an interesting finding was the different reactions of participating users towards the rigorous decision of their department not to go along with the future EPR implementation. The differences in the behavioural reactions seem to source in the explanation of the occurrence of the status quo bias. In literature, status quo bias is found to occur as a consequence of rational decision-making, as well as cognitive misperception and psychological commitment (Kim & Kankanhalli, 2009). This study seems to confirm the existence of different explanation for the status quo bias. For one of the participating users a status quo bias occurred as a result of rational decision-making after the rigorous decision of the department not to go along with the future EPR implementation. For another participating user a similar situation could be recognized, however no status quo bias resulted after cognitive misperception, since this participating user decided to keep on participating because of personal interest. The different reactions of these two participating users show that, besides social antecedents, other factors influence the activation of mechanism and its subsequent behavioural reactions. Besides, these findings confirm the study of Kim and Kankanhalli (2009) in which social norms were found to affect the status quo bias. For the person who changes his support-resistance behaviours through the status quo bias, a strong norm at the department could be recognized, while at the department of the person who did not changes his support-resistance behaviours the social norm seemed to be less prevalent.

Fifth, the social network of participating users was found to be of great importance for the work activities of participating user, however, it did not seem to influence behavioural reactions of participating users (Sykes, et al., 2009). The social network within the department of participating users

seemed to facilitate the ease with which information could be found to develop the EPR, and the social network within the EPR project seemed to improve the knowledge of participating users about the status of the EPR project. However the findings of Ibarra (1993) in which network centrality related to participation in innovations does not seem to hold for the participating users in this study, whereas both participating users with a central position in their network as well as participating users without a strong network was found.

At last, the study confirms the notion of Wang et al., (2013) that peers play an important role on support-resistance behaviours. It appeared that the original department of participating employees was of great importance in the way the participated employee started his/her employment at the EPR project. Besides, during the participation in the EPR project, colleagues at the EPR project seemed of great relevance for influence on adoption behaviours. Influence of the original department during participation in the project seemed to be dependent on the salience a social identity.

5.2 THEORETICAL IMPLICATIONS

This study provides insights in the mechanisms through which social antecedents influence support-resistance behaviours of participating users. Thereby, this study gives answer to the call for a further break down of research on participating users during IT development (Markus & Mao, 2004). Insight is provided in the social aspects that affect activities of participating users. Since the activities of participating users determine the success of IT development to an certain extent (Markus & Mao, 2004), this study provides an increased understanding in the way participation of users improves attitudinal and behavioural success of EPR development.

The study showed that social influence indeed plays a role in the support-resistance behaviours of participating users. In figure 4, the findings of this study are incorporated in the theoretical model that was presented at the start of this thesis. The social antecedents are grouped on basis of the mechanisms through which they seemed to affect behavioural reactions of participating users. By bringing forward

mechanism of social influence with the related social antecedents, a first attempt is made to understand the social influence on support-resistance behaviours of participating users on which future studies can build further. With more case studies it can become clearer and grounded which social antecedents affect behavioural reactions through mechanism of social influence. Besides, the proposed relations should be tested.

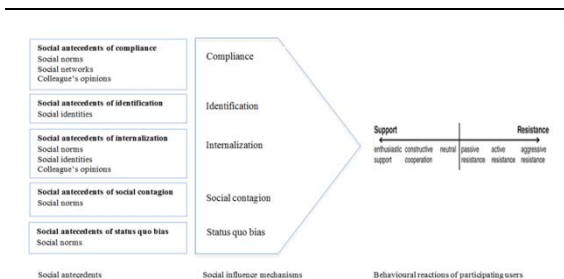


Figure 4 Revised model

5.3 PRACTICAL IMPLICATIONS

The study provides several handles that are useful for practitioners. First, this case study reveals the great importance of an EPR for participating users and presumably also among employees throughout the hospital. Despite problems that arose in the EPR development, participating users stayed motivated to develop a good fitting system because of the high need for an EPR. Hospitals should be aware of this need, involvement and determination of participating users and should take advantage of the possibilities, which go together with it. The lasting motivation of participating users provides many opportunities for managers, as user participation can be valuable during both the development as well as the implementation of an EPR (Greenhalgh et al., 2010).

Secondly, social networks turned out to be of great importance in the ease with which substantial information could be obtained for participating users. It appears to be useful to take into account the social network employees within the department and in the hospital, when selecting users

for participation in an EPR development project, as a strong social network would facilitate the practices of participating users. Besides, the fact that all participating users sought valid information highlights the importance of sufficient information provision about the benefits and gains of the EPR for the hospital and for the participating users when entering the project.

Lastly, when employees hold a strong salient identity from the department, increased chances of drop out of the participating user arise. As this study showed other factors, like personal interest, decreased the chances of drop out as a result of social influence from the decision. To improve consistency of participating users that are involved, it can be helpful to take into account the reason for participation of the employee when selecting them.

5.4 LIMITATIONS AND FUTURE RESEARCH

Five limitations of this study are worth reflecting upon. First, the study was conducted in a single hospital; thereby it is a single case study. The disadvantage of a single case study, is that it is more difficult to provide a strong and grounded basis for theory building and comparison between cases is not possible (Yin, 2014). To validate the use of a single case, the study was conducted in a hospital setting which comprises a complex environment and a highly complex social setting (Greenhalgh, et al., 2009). That way the opportunity was created to explore an extreme case (Eisenhardt, 1989). Because of the little amount of existing research on the topic, such a case was especially helpful, as it provided sufficient information to build on. In future research, different cases should be compared to enable cross-case analysis from which more grounded assumptions can be made about the mechanisms of social influence and how they affect support-resistance behaviours. The extreme case used for this study provides the first attempt to identify mechanisms and social antecedents, but with the analysis of different cases assumptions can be made that provide a better foundation for generalization.

A second limitation of the study is its retrospective character. Because the EPR project that was studied was terminated unexpectedly, information could only be gathered via documentation and 'thinking back' by participating users. A

risk of the retrospective character is that the interviewees and people in general tend to remember only selective aspects when thinking back (Cassell & Symon, 2004). Besides, over time people can change thoughts about events as a result of rethinking and reflecting upon them. Using the Critical Incident Technique (Cassell & Symon, 2004), interviewees were asked about incidents that were of importance to them. In that way, the effects of retrospection were tried to be diminished, as it was expected that interviewees would remember more detailed information when the event was of importance to them (Cassell & Symon, 2004). Also, by interviewing participating users from various professions (nurses, physicians and others) and backgrounds, different perspectives were ensured and bias was tried to be diminished as was advised by Eisenhardt (1989). The interviewees themselves also mentioned retrospective biases, whereas they said during the interviews specifically to recognize certain things now, when they looked back on it. Yet, it is plausible that a bias still occurred. As Eisenhardt (1989) mentions, when focal events are recent, a smaller bias can be expected. In this study, interviewees said not to be influenced by others in the beginning of their participation. This corresponds to the period that was most far away for them. However, later on, more negative influences were recognized, that corresponds to the period that was most close to the moment of interviewing. It is a possibility that this difference is due to the fact that the later period is recalled upon better, compared to the earlier period in which no influence was recognized. In future research, a longitudinal study is therefore interesting. With a longitudinal study different moments in time can be compared in a more valid way and more methods of data collection can be used. Besides, with more time interviews can last longer

and a more comprehensive understanding of the thoughts and opinions of the interviewee can be obtained. Furthermore, with more time available observations can be made to gain a better understanding of the mechanisms of social influence that are put forward in this study.

A third limitation of the study is the possible social desirable response of interviewees. In a meta-analytic review and empirical test of potential desirable responses, it was found that employees tend to respond in desirable ways (Moorman, Podsakof: 1992). By emphasizing the anonymous processing of the interviewees it was tried to lessen the level of social desirable responses. However, it could not be banned completely. For instance, in one case, an interviewee took a detached attitude during the interview. Yet, after the interview, when the recorder was switched off, the interviewee explained this attitude and said that it was too personal to have on tape. Also, only one participating user said to started working at a lower speed over time. It is possible, that other participating users only mentioned to became more doubtful about the project, but did not specifically said to change their speed of working because of social desirability.

A final limitation of the study is the inexperience of the researchers with interviewing. By conducting a trial interview, the researcher tried to gain improved competence in interview skills. Yet, it can be expected that insightful information might be missing as a result of the inexperience of researcher with interviewing.

6 CONCLUSION

This study tried to improve understanding of the influence of social antecedents on support-resistance behaviours of participating users through mechanisms of social influence. First of all, the study showed that social influence indeed affects support-resistance behaviours of participating users. For two participating users actual changes in support-resistance behaviours could be recognized. For the one, social norms activated the status quo bias and for the other social norms and colleague's opinions resulted in compliance. For most participating users, however, social influence seemed to result in recurrence of already showed support-resistance behaviours of participating users through four mechanisms of social influence; (1) a salient social identity maintained already showed support-resistance behaviours through identification, (2) for internalization the social norm, social identity and colleagues' opinions played a role, (3) for social contagion the social norms and (4) for compliance the social norms, colleagues' opinions and the social network played a role in the recurrence of already showed behavioural reactions of participating users. More research is needed to further understand the link between social antecedents and the mechanisms of social influence. This study only provided the first proposed relations between the social antecedents and mechanisms of social influence. Future research should find out whether more social antecedents and/or mechanisms play a role on support-resistance behaviours of participating users and also the relations that are implied in this study should be tested. Altogether, this study provides the first insights in the role of social influence on support-resistance behaviours of participating users.

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APPENDIX I INTERVIEW PROTOCOL

Opening van het interview

Wij willen u allereerst bedanken dat u tijd vrij hebt kunnen maken om met dit onderzoek mee te werken. Zoals u weet zijn wij master studenten van Rijksuniversiteit Groningen (kort persoonlijk voorstellen). Ons afstudeeronderzoek maakt onderdeel uit van de evaluatie fase van het Nieuw EPR project. Hierbij zijn wij vooral geïnteresseerd in uw ervaringen tijdens en geleverde inspanningen gedurende het programma. De resultaten van dit onderzoek zullen volledig anoniem worden verwerkt. We zouden u willen vragen of dit gesprek opgenomen mag worden? De opname zal alleen gebruikt worden voor data analyse en na afloop van die analyse worden vernietigd.

We zullen u eerst enkele algemene vragen stellen over uw achtergrond en hoe u betrokken bent geraakt bij het Nieuw EPR project. Vervolgens zullen we terugblikken op dit project. Het gesprek zal ongeveer een uur in beslag nemen.

Algemene vraag

1 Kunt u ons wat vertellen over uw achtergrond? Sinds wanneer werkt u in de functie van inhoudsdeskundige? Welke afdeling komt u oorspronkelijk vandaan? (oorspronkelijke afdeling, functie oorspronkelijke afdeling)

Wervingsproces

2 Hoe bent u bij het EPR programma betrokken geraakt?

3 Wat was uw indruk van de manier waarop inhoudsdeskundigen aangetrokken werden?

4 Welk beeld is er geschetst van het project tijdens het wervingsproces?

Verschilde dit van het beeld dat u daarvoor had van het EPR?

(door wie gevraagd.../zelf aangemeld; waarom 'ja' gezegd (motieven); eigen beleving proces; wijze van selecteren inhoudsdeskundigen; wijze afstemming met afdelingen hierover)

Basisonderwerp 1 (start)

5 Hoe kijkt u terug op uw start als inhoudsdeskundige bij het EPR programma?

6 Welke aandachtspunten of aandachtspunt stond(en) in uw beleving centraal tijdens deze gebeurtenis? Dus wat was volgens u van belang om verder te komen met het project op dat moment? Wat ging er in die periode goed en wat kon beter?

7 In hoeverre heeft u het gevoel dat deze aandachtspunten werden gedeeld door de andere betrokkenen binnen het EPR programma (of speelde het alleen voor de groep inhoudsdeskundigen)? Speelde dat ook voor de afdeling? Waaraan merkte u dit? Wat betekende dit voor u? (zelf, oorspronkelijk afdeling, binnen EPR programma)

8 Als u in een zin zou moeten zeggen hoe u ten tijde van de start tegen het EPR aan keek. Hoe zou u dat doen (systeem/product)? Kunt u hetzelfde doen voor uw kijk op dat moment op het implementatieproces (proces)? (mate van betrokkenheid)

9 Met wie sprak u over het EPR? Op welke manier werd u door anderen hier beïnvloed bij uw werkzaamheden? Had dit ook invloed op uw houding tegenover het EPR? In hoeverre gebeurde het dat zulke contacten u aan het denken zetten? Kunt u hier een voorbeeld van geven? (welke mensen; waarover; wat betekende dat voor u; hoe werd u hierdoor beïnvloed; hoe ging u daarmee om?)

10 Sprak u met afdeling/thuis/binnen EPR (de niet genoemde) over het EPR?

Basisonderwerp 2 (werkgroepen)

11 Hoe kijkt u terug op uw werkzaamheden binnen de werkgroepen?

12. Welke aandachtspunten of aandachtspunt stond(en) in uw beleving centraal tijdens uw werkzaamheden? Dus wat was volgens u van belang om verder te komen met het project op dat moment? Wat ging er in die periode goed en wat kon beter?

13 In hoeverre heeft u het gevoel dat deze aandachtspunten werden gedeeld door de andere betrokkenen binnen het

EPR project (of speelde het alleen voor de groep inhoudsdeskundigen)? Speelde dat ook voor de afdeling? Waaraan merkte u dit? Wat betekende dit voor u? (zelf, oorspronkelijk afdeling, binnen EPR programma)

14 Waren de aandachtspunten die bij het vorige onderdeel over de start genoemd zijn in deze periode nog steeds van belang? Waren sommige punten belangrijker dan eerst? Hierbij kijken of eerder genoemde aandachtspunten nog steeds aanwezig waren of al waren opgelost en of sommige van deze aandachtspunten nu belangrijker waren dan eerst.

15 Als u het in een zin zou moeten zeggen hoe u ten tijde van uw werkzaamheden binnen de werkgroepen tegen het EPR aan keek. Hoe zou u dat doen (systeem/product)? Kunt u hetzelfde doen voor uw kijk op dat moment op het implementatieproces (proces)? (mate van betrokkenheid)

16 Met wie sprak u over het EPR? Op welke manier werd u door anderen hier beïnvloed bij uw werkzaamheden? Had dit ook invloed op uw houding tegenover het EPR? In hoeverre gebeurde het dat zulke contacten u aan het denken zetten? Kunt u hier een voorbeeld van geven? (welke mensen; waarover; wat betekende dat voor u; hoe werd u hierdoor beïnvloed; hoe ging u daarmee om?)

17 Sprak u met afdeling/thuis/binnen EPR (de niet genoemde) over het EPR?

Basisonderwerp 3 (keerpunt)

18 Uiteindelijk is het EPR programma afgebroken. Als u nu terug kijkt, kunt benoemen wanneer uw werkzaamheden moeizamer begonnen te lopen? Wanneer merkte u dat dingen niet liepen zoals het zou moeten lopen? Wanneer was er voor u een keerpunt merkbaar? Verrast door het stoppen van het programma?

19 Welke aandachtspunten of aandachtspunt stond(en) in uw beleving centraal tijdens dit omslagpunt? Dus wat was volgens u van belang om verder te komen met het project op dat moment? Wat ging er in die periode goed en wat kon beter?

20 In hoeverre heeft u het gevoel dat deze aandachtspunten werden gedeeld door de andere betrokken binnen het

EPR programma (of speelde het alleen voor de groep inhoudsdeskundigen)? Speelde dat ook voor de afdeling? Waaraan merkte u dit? Wat betekende dit voor u? (zelf, oorspronkelijk afdeling, binnen EPR programma)

21 Waren de aandachtspunten die bij de vorige onderdelen over de start en de werkgroepen genoemd zijn in deze periode nog steeds van belang? Waren sommige punten belangrijker dan eerst? Hierbij kijken of eerder genoemde aandachtspunten nog steeds aanwezig waren of al waren opgelost en of sommige van deze aandachtspunten nu belangrijker waren dan eerst.

22 Als u het in een zin zou moeten zeggen hoe u ten tijde van dat moment of gebeurtenis tegen het EPR aan keek. Hoe zou u dat doen (systeem/product)? Kunt u hetzelfde doen voor uw kijk op dat moment op het implementatieproces (proces)? (mate van betrokkenheid)

23 Met wie sprak u over het EPR? Op welke manier werd u door anderen hier beïnvloed bij uw werkzaamheden? Had dit ook invloed op uw houding tegenover het EPR? In hoeverre gebeurde het dat zulke contacten u aan het denken zetten? Kunt u hier een voorbeeld van geven? (welke mensen; waarover; wat betekende dat voor u; hoe werd u hierdoor beïnvloed; hoe ging u daarmee om?)

24 Sprak u met afdeling/thuis/binnen EPR (de niet genoemde) over het EPR?

Afsluiting

We hebben nu onderdelen besproken die met name voor ons onderzoek relevant zijn. Echter kunnen we ons goed voorstellen dat u graag nog andere dingen zou willen bespreken met betrekking tot de evaluatie.

25 Zijn er nog andere zaken die u nog naar voren wilt brengen? Waarom?

26 Wat moet er nu volgens u gebeuren? Wat is uw boodschap die u graag aan de stuurgroep door zou geven? Zou u weer mee doen als u gevraagd werd?

Dan zijn we met deze vraag aan het einde gekomen van het interview. We willen u hartelijk danken voor uw tijd en informatie. In juni zullen we onze scriptie afronden en tevens

zullen we een management samenvatting met onze resultaten afleveren. Deze samenvatting zult u tevens ontvangen. Van de opname zullen we een transcript maken. Wilt u dat we deze toesturen zodat u het transcript kunt controleren?

APPENDIX II CODING SCHEME

GENERALITIES ABOUT THE PARTICIPATING USER

| Code name – code (code type) | Occupation (deductive) | Physician - FD (deductive) | Nurse – FN (deductive) | Other – FO (deductive) |
|-------------------------------------|--|---|--|--|
| Description | The profession of the participating employee at the moment (s)he was involved in the EPR project | The original function of the person is physician | The original function of the person is nurse | The original function of the person is medical administration, paramedic or researcher |
| Example quote | | <i>"I am surgeon"</i> (D5) | <i>"I am a nurse professional"</i> (N4) | <i>"I am research coordinator"</i> (O3) |
| Code name – code (code type) | Involvement with EPR (inductive) | Moment of approach – BM (inductive) | Starting moment – SM (inductive) | |
| Description | Describes the way the participating users became involved in the project. | Describes the moment the person is approached to become involved with the EPR project | Describes the moment the person is appointed and started working for the EPR project | |
| Example quote | | <i>"In January last year, a mail from the direction went round with the request for people who wanted to participate"</i> (O4) | <i>"I started her last year, about this time of the year"</i> (O3) | |
| Code name – code (code type) | Contract (inductive) | Full time contract – FT (inductive) | Part time contract – PT (inductive) | |
| Description | Describes the type of contract the participating users concluded with the EPR project | The participating users participates full time in the EPR project | The participating user participates part time in the EPR project | |
| Example quote | | <i>"Quite quickly I was appointed full time to the EPR project"</i> (O2) | <i>"I was asked to participate the half of the time in the EPR project"</i> (O1) | |
| Code name – code (code type) | Work location – L (inductive) | Own department - LO (inductive) | MT/EPR floor – LM (inductive) | EPR floor - LE (inductive) |
| Description | Describes the work location of the participating users when working for the EPR project | The person works for the EPR project from its own department | The person works for the EPR project at the floor on which the management is located | The person works for the EPR project on the same floor as the other participating users. |
| Example quote | | <i>"I had my workplace, and I don't want to be half of my time here and half of my time there. So I was not on this corridor"</i> | <i>"A practical thing, I had my workplace at the 6th, while all the other content experts were on the 5th"</i> (O4). | <i>"The program offices was on the 6th, we were on the fifth"</i> (N2) |

(O1)

| Code name – code (code type) | Motivation (inductive) | Interesting (inductive) | – MI | Need – MN (inductive) | Pressure department – MP (inductive) |
|-------------------------------------|---|---|-------------|---|--|
| Description | Displays the motivation of the participating users to participate in the EPR project. | The person finds it interesting to do and seeks a learning experience | | The persons finds an EPR important for the hospital or his department | The department pushes the person to participate in the EPR project |
| Example quote | | <i>“At that moment I had some spare time an I found it a very interesting project”</i> (D1) | | <i>“I want the hospital to have a good EPR. I want to work on it, to make something great of it”</i> (N1) | <i>“My manager has exerted pressure because he believed, as large department, we had to be close to the source in order to exert influence”</i> (D3) |

STANCE OF THE PARTICIPATING USER TOWARDS THE EPR

| Code name – code (code type) | EPR in general (inductive) | Image EPR – BE (inductive) | Attitude EPR – HE (inductive) |
|-------------------------------------|--|---|--|
| | | Positive (+) Negative (-) | Positive (+) Negative (-) |
| Description | The stance of the participating user towards the implementation of an EPR in general | Image of the implementation of an EPR in general | Attitude the person holds towards the implementation of an EPR in general |
| Example quote | | <i>“Quite blank, because... In practices you learn it is very hard to make an image of something you do not really know”</i> (D3) | <i>“I believe they should have taken a different approach. But that is independent of the fact that there should come an EPR”</i> (N1) |

| Code name – code (code type) | EPR in development (inductive) | Image EPR - BS (inductive) | Attitude EPR – HS (inductive) |
|-------------------------------------|---|---|--|
| | | Positive (+) Negative (-) | Positive (+) Negative (-) |
| Description | De stance of the participating user towards the development and implementation of this particular EPR | The image the person has of the EPR that was in development | The attitude the person holds towards the EPR that was in development |
| Example quote | | <i>“Quite blank, because... In practices you learn it is very hard to make an image of something you do not really know”</i> (D3) | <i>“I do not think they could have made the step towards improvement”</i> (N2) |

| Code name – code (code type) | View EPR before employment EPR (inductive) | Open (inductive) | Specific (inductive) | Vague (inductive) |
|-------------------------------------|--|---|---|--|
| Description | The picture the person had of the EPR before employment in the EPR | The person started with a very open view and attitude | The person started with a very specific view of the EPR | The person started with an unclear and vague view and/or |

with the project.

attitude of the EPR

Example quote

"I started completely blank" (N3)

"It was very vague, that what was presented. Only, do you want to participate in the development of an EPR?..." (D2)

| Code name – code (code type) | Trust in and value of the EPR project | Trust (inductive) | Usefulness – AU (deductive) |
|-------------------------------------|---|---|---|
| Description | Describes two other aspects of the stance of the participating user towards the EPR project, namely trust in the project and usefulness of the EPR. | Describes the trust the participating user has in successful development of the EPR | The person recognizes the usefulness of the EPR for the organization or his job |
| Example quote | | <i>"The confidence in the project diminished. After a while you lose your trust"</i> (D1) | <i>"I want it to make it easier for me. It just wouldn't have done that"</i> (N2) |

SUPPORT-RESISTANCE BEHAVIOURS OF THE PARTICIPATING USERS

| Code name – code (code type) | Supporting (deductive) | Enthusiastic support – SE (deductive) | Constructive cooperation – SC (deductive) | Neutral – N (deductive) |
|-------------------------------------|---|--|--|--|
| Description | "Support by an actor, or a group of actors, to the change associated with information system implementation" (Offenbeek, Boonstra, & Seo, 2013, p. 438) | The person is very enthusiastic and positive about the EPR | The person recognizes the EPR as being positive for the organization and/or his job | The person is neither positive nor negative about the EPR project; the person does not have any opinion about the EPR project. |
| Example quote | | <i>"The way the current system operates, as a collection of parts... A new EPR had to come. We needed it desperately"</i> (D3) | <i>"We knew it would become a sort of strait-jacket, but let's make it as less bad as possible"</i> (D3) | n/a |
| Code name – code (code type) | Resisting (deductive) | Passive resistance – RP(deductive) | Active resistance – RA (deductive) | Aggressive resistance – RG (deductive) |
| Description | "Opposition by an actor, or a group of actors, to the change associated with information system implementation"(Offenbeek, Boonstra, & Seo, 2013, p. 438) | The person does not cooperate in the development of the EPR | The person does not cooperate in the development of the EPR and openly show disregard of the EPR | The person takes actions to block the development of the EPR |

Example quote

"We tried to pull ourselves together and to stay positive" (N2)

"But in the beginning, I still believed we could make something very good of it."(N1)

"At the start it was detached from the content. But you develop distrust towards the way it is managed" (N1)

| Code name – code (code type) Description | Identification (deductive) | Social identity – SI (deductive) | Social network- SN (deductive) |
|---|--|---|---|
| | "Identification can be said to occur when an individual accepts influence from another person or a group in order to establish or maintain a satisfying self-defining relationship to the other" (Kelman, 2006, p. 4). | Describes the salient self-concept of the participating user that is derived from his relationship with others and/or from membership with groups (Forsyth, 2014) | The people that are involved in the social network of the person (Sykes et al., 2009) |

Example quote

"Psychiatry is different on some points, so we called attention for it" (D1)

"I was a matter of making a phone call, making an appointment, stepping by. It was absolutely now problem" (O3)

| Code name – code (code type) Description | Compliance (deductive) | Informational conformity (deductive) | Normative conformity (deductive) |
|---|--|---|---|
| | "Compliance can be said to occur when an individual accepts influence from another person or a group in order to attain a favourable reaction from the other—either to gain a specific reward or avoid a specific punishment controlled by the other, or to gain approval or avoid disapproval from the other" (Kelman, 2006, p. 3). | The person seeks for valid knowledge and therefore conforms (Kelman, 2006). | The person seeks for a favourable reaction of others and wants to be accepted by others and therefore conforms (Kelman, 2006) |

Example quote

"I did not ask for an opinion, I asked for their work routines. Because, if you ask for opinions, people think they have a say and I just did not comment on that" (O2)

"My manager has exerted pressure because he believed, as large department; we had to be close to the source in order to exert influence. When I faced some problems in the old EPR, I decided to go along" (D3)

| Code name – code (code type) Description | Internalization (deductive) |
|---|--|
| | "Internalization can be said to occur when an individual accepts influence from another in order to maintain the congruence of actions and beliefs with his or her own value system" (Kelman, 2006, p. 4). |

Example quote *"We said to each other, we do not know anything. So we just went on."* (N4)

Code name **Status quo bias (deductive)**
– code

(code type)

Description The person wants to maintain the current situation.

Example quote *"I said this is not it, because psychiatry said we would not go along with it anyway"* (N1)

Code name **Social contagion (deductive)**
– code

(code type)

Description "The spread of affect or behaviour from one crowd participant to another; one person serves as the stimulus for the imitative actions of another" (Lindzey and Aronson, as cited in Marsden, 1998, p. 1)

Example quote *"The process of becoming more depressed, after a while you get affected by it"* (O3)

ASPECTS OF THE OWN DEPARTMENT OF PARTICIPATING USERS

| Code name – code (code type) | Input (inductive) | Minimal input - AI-min (inductive) | Medium input - AI-med (inductive) | High input - AI-h (inductive) |
|-------------------------------------|--|--|---|---|
| Description | Describes the amount of input the participating user received from the department. | The department gives no or minimum input | The department gives some input | The department is highly involved and tries to give much input |
| Example quote | | <i>"There was no time..."</i> (N3) | <i>"I got the feeling that after a while, the momentum was over in the hospital. When you need input from people, they were involved, but I do not think it was alive in the hospital. And it makes sense, they are already busy enough with their own work flows and daily activities. It is just, business as usual"</i> (D4) | <i>"I work for years on that department, so I can just walk in and ask about stuff"</i> (O3) |
| Code name – code (code type) | Attitude of department towards EPR (inductive) | Positive - AH+ (inductive) | Negative - AH- (inductive) | Neutral - AH+/- (inductive) |
| Description | Describes the attitude of the department towards the EPR. | The department hold a positive attitude towards the implementation of an EPR | The department holds a negative attitude towards the implementation of an EPR | The departments holds neither a positive, nor negative attitudes towards the implementation of an EPR, no clear idea or opinion about the EPR can |

be recognized

| | | | |
|---|--|--|--|
| Example quote | <i>"It is very important. For us, for the department it is a disaster. In anticipation of the EPR, we turned to Poliplus"</i> (D3) | <i>"For us it would become worse anyway, so we had already a sense of moderation"</i> (N2) | n/a |
| Code name – code (code type) Description | Circumstances (inductive) Describes relevant circumstances that are present at the department | Specific circumstances (inductive) Describes specific circumstances that are present at the department | Pressure (inductive) The department tries to put things through |
| Example quote | | <i>"It is a very different culture, different dynamics, compared to what is going on here"</i> (O4) | <i>"My manager exerted pressure on me, because (s)he believed we, as large department with a large turnover, had to be close to the source in order to have influence and to know what is going on"</i> (D3) |

OTHER ASPECTS

| | | |
|---|--|---|
| Code name – code (code type) Description | Turning point The moment/time the person started to see the EPR project as having a negative outcome | Metaphor Metaphors that were used by the participating user about the EPR. |
| Example quote | <i>"At a certain moment, I thought this is not become it"</i> (D1) | <i>"Imagine: You want to buy a car. You go the BMW dealer, this dealer tells you to buy the s5 because it really is a nice care. When you ask for a folder, he says there is no folder. When want an example exemplar of the care, there is no example. But it really is a nice car. And then you started talking about the colour of the seats and the kind of engine and wheel, but you have never the car itself. And that is how the whole project was."</i> (D2) |

| | | | | |
|---|--|---|---|--|
| Code name – code (code type) Description | Consequence of EPR failure (inductive) Describes the consequences of the termination of the EPR project for the participating user | Negative consequences - CON-H (inductive) The person has to find a new job, cannot go back to the original department or has difficulties going back to the | Neutral consequences - CON- N (inductive) The person can return working on its original department without difficulties | Positive consequences - CON-M (inductive) The person is better of with quitting of the project |
|---|--|---|---|--|

original department

**Example
quote**

"I joined with the idea that I would participate until I would turn 65, that is next February. It would have been such a nice end of my career"(N3)

"For me, I could just go back to the department to do other stuff. That it makes it much easier"(D1)

| Code name – code (code type) | Would you do it again? (inductive) | Yes (inductive) | No (inductive) |
|-------------------------------------|--|---|---|
| Description | Describes whether the participating user would participate again in a future EPR development | The participating would participate in a future EPR development | The participate user would not participate in a future EPR development |
| Example quote | | <i>"Yes, why not"</i> (D1) | <i>"No, I would be very critical about the things I just mentioned. I would do it again like this, no"</i> (N4) |
