

# Poli Op Naam

## Willingness to change, Leader-Member Exchange (LMX) and Performance Effects of the Poli Op Naam

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## Preface

Before the start of writing my master thesis, I was told that writing a thesis would probably be the most intensive and maybe even most frustrating part of my study period. However, writing this thesis brought me a pleasant time. This thesis is about willingness to change and Leader-Member Exchange (LMX), which are both topics that have my interest. It was pleasant to finish my study on change management by doing research on these interesting topics, while applying theoretical knowledge from the change management master program.

During the process of writing this thesis, several obstacles were encountered. However, most of these obstacles were positive learning opportunities. Several people helped and inspired me with writing my thesis. First, I would like to thank Erik Jippes, my supervisor at the UMCG, who really helped me with the content of my thesis. Thank you for your constructive feedback and your help on the statistical

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After these words of appreciation, I wish everyone who is interested in my thesis a great time in reading it.

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## Summary

This research examines the influence of attitude, subjective norm and perceived behavioral control on one's willingness to change. These concepts are derived from the DINAMO model of Metselaar and Cozijnsen (2005), which is used as a theoretical foundation within this research. The concept of Leader-Member Exchange (LMX) has been added to the research model, and the influence of this concept on willingness to change is explored. Besides this theoretical and abstract part of the research, this research also examines the performance effects of the Poli Op Naam. This research answers a practical question by determining the performance effects and the level of willingness to change with regard to the Poli Op Naam, and a theoretical question by determining factors that influence this willingness to change. To answer the research questions several hypotheses have been formulated. Data has been gathered by means of a questionnaire and several interviews among the employees of the department O&G of the University Medical Centre. Additional information was collected from the hospital information system Xcare. The results of this research point out that attitude towards change predict most of the variance within one's willingness to change, while perceived behavioral control, subjective norm and LMX are also positively related with willingness to change. However, for LMX this relation is not found to be significant. On a sub-factor level the affective reaction, emotional commitment, experience with preceding change projects and timing of the change process predict a lot of variance within willingness to change. A remarkable notion gathered from the comparative analysis is that registration assistants are less "willing to change" compared with the other groups of respondents (residents, staff members and nurses).

The results of the evaluation of the performance effects indicate that all hypotheses are accepted, which means that quality and reliability increased, while costs decreased due to the implementation of the Poli Op Naam.



## 1. Introduction

The Dutch health care sector encountered several changes in the past few years. Examples of these changes are changes in rules and legislation and the gradual introduction of competition and a market orientation. These forces stimulate hospitals to look at their activities in a more critical and advanced way, with the aim of improving their health processes to become more efficient and effective. The implementation of a new educational plan for residents<sup>1</sup> within the department Obstetrics and Gynecology (O&G) of the University Medical Centre Groningen (UMCG) is a measure to improve the effectiveness of the health care, research and education. The implementation of the Poli Op Naam is part of this educational plan.

### 1.1 Poli op Naam

In 2006 the department O&G started with the implementation of the new educational plan 'Revision Education Obstetrics and Gynecology' with the aim of reaching higher educational advantages and extending the innovative projection of the department. One of the objectives is to give residents their own policlinic consultation that enables them to track specific patients longitudinal policlinic, even if they may change their internship. This is labelled Poli Op Naam and is defined as 'a fixed policlinic consult hour during an internship within the department Obstetrics and Gynecology in which residents can plan their own specific patients'. This Poli Op Naam does not have implications for residents alone, but also affects employees within other functions like registration assistants. The Poli Op Naam aims at reaching higher

educational advantages, while also increasing the continuity of providing health care and satisfaction of patients.

This research serves a practical goal by exploring on the performance effects of the Poli Op Naam. In addition, the process of change will be evaluated by focussing on leadership (Leader-Member Exchange) and willingness to change. This process evaluation serves a practical goal by exploring the willingness to change, as well as a scientific aim by elaborating on the relationship between leadership interaction and willingness to change. Evaluating the process of change can help the department O&G with the implementation of similar changes in the future by providing them some recommendations on the change process with regard to the Poli Op Naam.

The following chapter will explore the theoretical framework of the research. Several theories and concepts are introduced that explain the theoretical base and relevance of the research questions.

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<sup>1</sup> In Dutch : AIOS, Arts In Opleiding tot Specialist



## 2. Theory

Over half of the change projects within organizations fail to reach their intended goals<sup>2</sup>.

A substantial part of this failure can be explained by the behavior of the people in organizations<sup>3</sup>. Research on behavior of people in organizations received a small amount of attention<sup>4</sup>. For this reason, behavior of people and especially their willingness to change is an interesting subject for researchers. Research on leadership is conducted for many years and we still do not have a clear picture of what leadership is. Early research investigated characteristics of leaders, while the current research takes a more relationship based perspective on leadership by focusing on the Leader- Member Exchange (LMX). Despite the fact that LMX has been linked to several organizational outcomes, the linkage between LMX and organizational change and its concepts has received little attention<sup>5</sup>. This research tries to fill this gap by exploring the relationship between LMX and willingness to change. The research on the performance effects of the Poli Op Naam serves a more practical nature. The department O&G wants to know what the performance effects of the Poli Op Naam are, so quick configurations to improve their performance can be made.

### 2.1 Leader-Member Exchange (LMX) theory

Since its inception over 25 years ago, the conceptualization of Leader-Member Exchange (LMX) theory has undergone many developments and refinements<sup>6</sup>. What began as an alternative to average leadership style (Vertical Dyad

Linkage)<sup>7</sup> has progressed to a prescription for generating more effective leadership through the development and maintenance of mature leadership relations<sup>8</sup>. The first part of the theory section discusses how LMX fits within leadership theory while also elaborating on the development and evolution of LMX theory.

#### 2.1.1 How Does LMX fit within Leadership Theory?

Despite many years of leadership research and thousands of studies, we still do not have a clear picture of what leadership is and how it can be achieved. In particular, there appear to be many theories that address many different aspects of leadership but little cohesion exists among these theories that help us understand how they all fit together<sup>9</sup>. Traditionally studies on leadership focused primarily on characteristics of the supervisor (traits, behaviors and styles), and how these characteristics made the leader effective or ineffective in different situations<sup>10</sup>. Within these studies the focus is on one domain, without equal and concurrent emphasis on other domains. Such domains are the follower and the dyadic relationship between leader and follower<sup>11</sup> (figure 2, page 4).

Given the domains of leadership described in figure 2, LMX is clearly an operationalization of a relationship-based approach to leadership. The central concept of the theory is that effective leadership processes occur when leaders and followers are able to develop mature leadership relationships (partnerships) and thus gain access to the many benefits these relationships bring<sup>12</sup>. The theory describes how effective leadership relationships develop between dyadic partners in and between organizations. This occurs when the relationships generate bases of

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<sup>2</sup> Homan, 2005

<sup>3</sup> Carr e.a., 1995

<sup>4</sup> Metselaar & Cozijnsen, 2005

<sup>5</sup> Graen & Uhl-Bien, 1991

<sup>6</sup> Graen & Scandura, 1987

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<sup>7</sup> Dansereau e.a., 1975

<sup>8</sup> Graen & Uhl-Bien, 1991

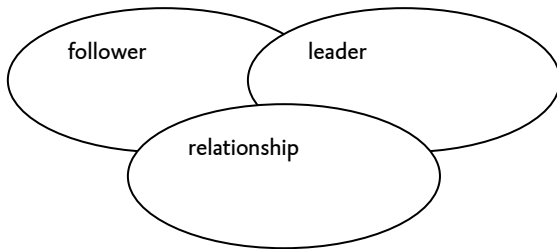
<sup>9</sup> Graen & Uhl-Bien, 1995

<sup>10</sup> David e.a., 2007

<sup>11</sup> Meindl e.a., 1985

<sup>12</sup> Graen & Uhl-Bien, 1991

incremental influence that are necessary for effective leadership<sup>13</sup>.



**Figure 2:** The domains of leadership

### 2.1.2 The theoretical Development of LMX theory

Initial investigation into Leader-Member Exchange issues are founded within studies on work socialization<sup>14</sup> and Vertical Dyad Linkage<sup>15</sup>. These studies show that leaders do not use an average leadership style but rather develop differentiated relationships with their direct reports (followers). On the one hand there was high-quality exchange (in-group), characterized by a high degree of mutual trust, respect, and obligation<sup>16</sup>. On the other hand, professionals reported low-quality exchanges (out-group), characterized by low trust, respect, and obligation. In high-quality exchange relationships followers were really helpful and trustful for their leaders and also performed tasks that were not included within their job descriptions. In low-quality exchange relationships followers only provided minimal efforts and hold a rather cold relationship with their leader<sup>17</sup>.

The central concept of this early Vertical Dyad Linkage (VDL) work is that these differentiated relationships resulting from resource constraints of managers that

require them to develop a group of highly trusted and helpful assistants who are made responsible for the functioning of the unit<sup>18</sup>. Because these relationships required additional investment of the leader's already limited time and social resources, it is believed that a leader would only have a limited amount of high-quality exchange relationships. The majority of relationships would be lower-quality exchanges, involving only obligatory compliance by the members with the formal role requirements. The earlier VDL work was followed up by studies that further investigated the validity of the dyadic relationships and the focus shifted from Vertical Dyad Linkage to Leader-Member Exchange<sup>19</sup>. New developments showed that the development of LMX relationships is influenced by characteristics and behaviors of leaders and members, and occurs through a role-making process<sup>20</sup>. Maybe even more interesting is the discovery that higher quality LMX relationships have very positive outcomes for leaders, followers, work units and the organization in general. Several studies show that high-quality LMX relationships are positively related to performance<sup>21</sup> organizational commitment<sup>22</sup>, innovation<sup>23</sup>, job satisfaction<sup>24</sup> and other organizational outcomes. Based on these findings, it appears that effective leadership processes occur when leaders and followers develop and maintain high-quality social exchange relationships.

More recent work in the area of LMX involves moving beyond in and out groups to a focus on generating a more effective leadership process through effective leadership relationships with each person (follower) without discriminating among different people. From this perspective, leaders should provide all employees access to the process of LMX by making the initial offer to develop

<sup>13</sup> Katz & Kahn, 1978

<sup>14</sup> Graen e.a., 1973

<sup>15</sup> Vecchio, 1982

<sup>16</sup> Graen e.a., 1982

<sup>17</sup> Dansereau e.a., 1975

<sup>18</sup> Graen & Uhl-Bien, 1995

<sup>19</sup> Graen e.a., 1982

<sup>20</sup> Snyder & Bruning, 1985

<sup>21</sup> Vecchio & Gobdel, 1984

<sup>22</sup> Seers & Graen, 1984

<sup>23</sup> Scott, 1993

<sup>24</sup> Turban e.a., 1990

LMX partnerships to each subordinate<sup>25</sup>. Results from different studies show that followers who accept the offer by the leader to develop a high-quality LMX, improved their performance dramatically<sup>26</sup>. Leaders should be trained to enable them to develop high-quality relationships with all their employees.

The leadership making model<sup>27</sup> describes the process for leadership making in terms of a life-cycle for leader relationship maturity. The process begins with a stranger phase in which individuals first come together as strangers occupying interdependent organizational roles. Interactions are formal and exchanges happen on a contractual base. From this phase an offer for an improved working relationship through career-oriented social exchange must be made and accepted (can be done by either party). If this occurs, leader and follower can move to the acquaintance phase. In this phase both parties share more information and resources, not all exchanges are contractual and there is more social exchange. When relationships grow to the next level they can be seen as mature partnerships. Exchanges between parties are highly developed, emotional and behavioral (mutual respect, trust and loyalty grow throughout the process). It is at this stage that the degree of incremental influence and leadership between members is extremely high.

Some LMX relationships will never reach the maturity phase. In LMX theory they can be classified as low-quality exchange relationships characterized by unidirectional downward influence, economic behavior exchange, formal-role defined relations and loosely couples goals<sup>28</sup>. Those relationships who will reach the maturity phase are classified as high-quality LMX relationships. Both parties do not only focus on their own interests, but moreover on larger mutual interests. Partners in these relationships experience reciprocal influence (leadership can rotate

between partners), mutual trust, respect, obligation and internalization of common goals<sup>29</sup>.

## 2.2 Willingness to change

Swift environmental and technological changes highlight the need for organizations to continually engage in adoption processes and organizational changes<sup>30</sup>. It is remarkable how many of these organizational changes fail to reach their intended goals. Organizational changes like mergers, new quality programs and introductions of new software programs fail in 20-50 percent of cases<sup>31</sup>. Organizations are cooperative systems that rely on the willingness of members to behave in ways that support the organization<sup>32</sup>. To realize intended changes, organizations must rely on the cooperation of their employees<sup>33</sup>. Human behavior is the most important factor of failure of a change process<sup>34</sup>. According to Metselaar and Cozijnsen (2005) successful change efforts start by enthusiastic employees. Resistance to change of these employees can severely hamper the change process<sup>35</sup>. Research shows that failure of change programs can often be accounted to resistance of employees towards the organizational change.

### 2.2.1 From resistance to willingness to change

In the majority of research on resistance to change, researchers have borrowed a view from physics to metaphorically define resistance as 'a restraining force moving in the direction of maintaining the status quo'<sup>36</sup>. This definition is initially introduced by Lewin, who introduced the term resistance as a systems concept. Until

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<sup>25</sup> Graen & Scandura, 1986

<sup>26</sup> Scandura & Graen, 1984

<sup>27</sup> Graen & Uhl-Bien, 1995

<sup>28</sup> Liden & Graen, 1980

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<sup>29</sup> Fairhurst & Chandler, 1989

<sup>30</sup> Van Dam e.a., 2008

<sup>31</sup> Maurer, 1996

<sup>32</sup> Barnard, 1938

<sup>33</sup> Van Dam e.a., 2008

<sup>34</sup> Carr e.a., 1995

<sup>35</sup> Miller e.a., 1994

<sup>36</sup> Piderit, 2000



the 1990s, research dealing with organizational change typically took this macro, systems-oriented approach<sup>37</sup>. Only in the last decade researchers have begun to study the psychological processes of change, using a variety of approaches to understand employees reactions to organizational change<sup>38</sup>. A review of past empirical research reveals that resistance to change has been conceptualized in three ways: as a cognitive state, as an emotion, and as a behavioral intention<sup>39</sup>. Some studies have show that employees may develop a negative posture towards organizational change, thus forming negative interpretations of the change<sup>40</sup>. Other studies addressed affective reactions, such as feeling agitated, anxious and even depressed as a result of planned organizational changes<sup>41</sup>. Finally, some studies explored employee's overt behavioral resistance to change, ranging from expressions of concern to their peers or supervisors, to more severe actions such as slowdowns, strikes or sabotage<sup>42</sup>. As Watson (1982) points out, managers often perceive resistance negatively, because they see employees who resist as disobedient. The most prevalent way of analyzing resistance is to see it as a reactive process where agents embedded in power relations actively oppose initiatives by other agents<sup>43</sup>. Manager's views on resistance to change are quite negative and employees are seen as obstacles from this perspective. But this negative view might not be correct.

Lawrence (1954) warns managers to avoid creating resistance in subordinates by assuming that they will always be opposed to change. According to Merron (1993) the use of the term resistance to change will feed the forces that will counter the change. Instead people have to be stimulated to take initiative and express their needs. Merron argues that resistance should not always be seen as

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<sup>37</sup> Judge e.a., 1999

<sup>38</sup> Van Dam e.a., 2008

<sup>39</sup> Piderit, 2000

<sup>40</sup> Armenakis e.a., 1993

<sup>41</sup> Bordia e.a., 2004

<sup>42</sup> Armenakis e.a., 1993

<sup>43</sup> Piderit, 2000

a force which obstructs change, but should rather be seen as a term or inclusion of various ideas about what the organization is ought to resemble. The key to successful change is to stimulate and work with various and divergent ideas from people. Fiorelli and Margolis (1993) believe the lack of resistance could mean that there is conformism and lack of interest in the organizational change. Resistance and conflict are seen as an expression of involvement and could serve the needs of both the organization and the individual, for example by contributing to a critical evaluation of the change program. Piderit (2000) elaborates on the importance of examining the evolution of employee responses to change over time and the need to understand responses to change proposals that emerge from bottom-up, egalitarian change processes. Goldstein (1988) states that the pressure to reduce resistance to change will only enhance the resistance towards the change so more pressure will be needed. According to Goldstein a more positive model of resistance should pay more attention to the constructive and healthy aspects of this resistance, to assure managers reactions on these resisting forces is more based on respect and trust.

The negative model of resistance to change received a lot of attention within research. In the current research we adopt the positive model of willingness to change which is in line with the vision of organizations as organizations with built in mechanisms to cope with human beings: people<sup>44</sup>.

## 2.2.2 Willingness to change

The concept of willingness to change is just recently mentioned in literature. There are several definitions used to define this concept. For example, Wissema (1996) states that willingness to change expresses itself as the 'willingness of people to cooperate in the adaptations which results from demands that the dynamics of the environment places on the organization'. More recent work on willingness to change describes it as 'a positive behavioral intention of an employee towards the implementation of changes in structure, culture or work

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<sup>44</sup> Metselaar & Cozijnsen, 2005

procedures of the department or organization, which results in efforts of employees to support or enhance the change process<sup>45</sup>. This definition is used within this research. The positive model of resistance to change (which considers willingness to change) used within this research acknowledges that organizations cannot change but people change<sup>46</sup>. This means that the concept willingness to change should be measured at the individual level. Metselaar and Cozijnsen (2005) developed the DINAMO model (Diagnostics Inventory for the Assessment of the willingness to change among Management in Organizations) to measure willingness to change at the individual level. This research uses the DINAMO model to measure willingness to change. The DINAMO model is based on the Theory of Planned Behavior<sup>47</sup>.

### 2.2.3 From the theory of planned behavior to the DINAMO-model

The theory of planned behavior is an extension of the theory of reasoned action<sup>48</sup>. A central factor in the theory of planned behavior is the individual's intention to perform a given behavior. Intentions are assumed to capture the motivational factors that influence behavior. As a general rule, the stronger the intention to engage in a behavior, the more likely should be its performance. The theory is used to explain different types of behavior and behavioral intentions<sup>49</sup>. The theory of planned behavior postulates three conceptually independent determinants of intention.

The first is the attitude towards the behavior and refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question<sup>50</sup>. The second predictor is a social factor termed subjective norm which refers to the perceived social pressure to perform

the behavior. The third antecedent of intention is the degree of perceived behavioral control which is defined as the perceived ease or difficulty of performing the behavior and is assumed to reflect past experience as well as anticipated impediments and obstacles. The relative importance of attitude, subjective norm and perceived behavioral control in the prediction of intention is expected to vary across behaviors and situations<sup>51</sup>.

The DINAMO model is based on the theory of planned behavior and is developed to measure willingness to change among middle management<sup>52</sup>. Within the model it is assumed that willingness to change is a positive behavioral intention and resistance to change is a negative behavioral intention.

## 2.3 Determinants of one's willingness to change

### 2.3.1 Attitude towards the change (want to change)

In the context of an organizational change, Metselaar and Cozijnsen (2005) define attitude as the 'outcome that an employee expects from the change process' and is named 'want to change'. The attitude towards performing a particular behavior can be determined by the cognitive and affective reactions. The cognitive reactions reflect ideas or information on the subject or event, for example the impact the event has on others<sup>53</sup>. The affective reactions reflect feelings or emotions towards the object. These cognitive and affective reactions lead to a behavioral intention<sup>54</sup>. Because one's willingness to change can be seen as a behavioral intention we can use these factors to explain the behavior of employees in a change process<sup>55</sup>.

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<sup>45</sup> Metselaar & Cozijnsen, 2005

<sup>46</sup> Van Dam e.a., 2008

<sup>47</sup> Ajzen, 1991

<sup>48</sup> Ajzen, 1991

<sup>49</sup> Metselaar & Cozijnsen, 2005

<sup>50</sup> Ajzen, 1991

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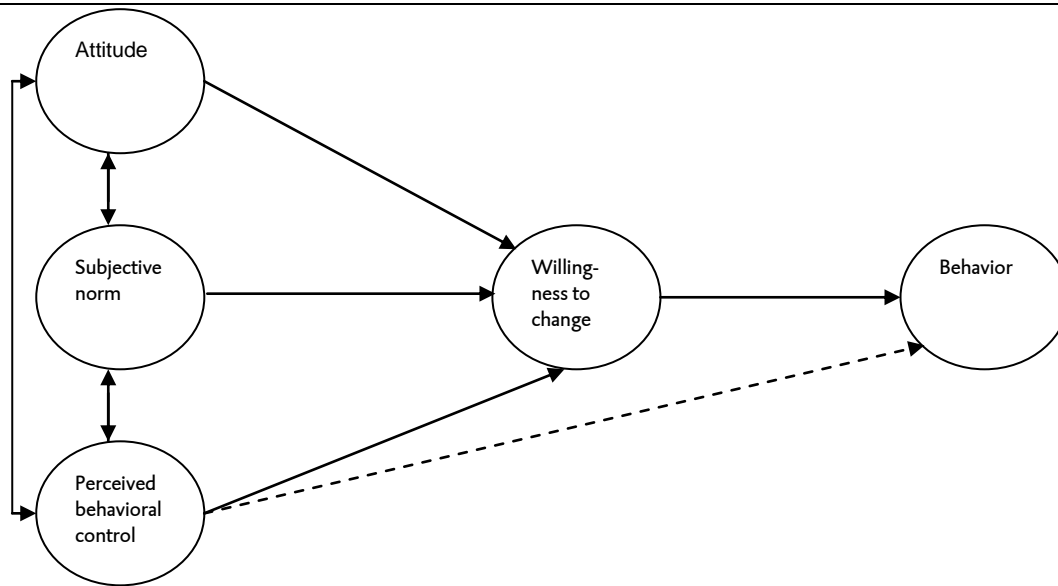
<sup>51</sup> Ajzen, 1991

<sup>52</sup> Metselaar & Cozijnsen, 2005

<sup>53</sup> Metselaar & Cozijnsen, 2005

<sup>54</sup> Ajzen, 1991

<sup>55</sup> Metselaar & Cozijnsen, 2005



**Figure 3:** Theory of planned behavior translated to the DINAMO model of willingness to change

Within the cognitive reaction a distinction can be made between the consequences of the change for the organization as a whole and for the job itself<sup>56</sup>. The affective reaction reflects the emotions that are aroused by the change and the emotional commitment towards the change. As a general rule, the more favorable the attitude towards a behavior, the stronger should be an individual's intention to perform the behavior under consideration<sup>57</sup>. The following hypotheses can be formulated following the above mentioned line of reasoning:

#### **Hypotheses 1:**

The more positive the attitude towards the change, the higher the willingness to change

- a. The more positive the expected outcomes of the change concerning the work, the higher the willingness to change
- b. The more positive the expected outcomes of the change concerning the organization, the higher the willingness to change
- c. The more positive the emotions surrounding the change, the higher the willingness to change
- d. The higher the emotional commitment towards the change, the higher the willingness to change

#### 2.3.2 Subjective norm (must change)

The second predictor of intention is subjective norm, a social factor; it refers to the perceived social pressure to perform the desired behavior<sup>58</sup>. Metselaar and Cozijnsen (2005) define this subjective norm in the context of an organizational change as 'the

<sup>56</sup> Hackman & Oldham, 1980

<sup>57</sup> Ajzen, 1991

<sup>58</sup> Ajzen & Madden, 1986

attitude of colleagues and management towards the change process' and is named 'must change'. A positive attitude of relevant others towards the change is expected to have a positive influence on one's willingness to change<sup>59</sup>. This leads to the following hypothesis:

### **Hypothesis 2:**

The more positive the subjective norm, the higher the willingness to change

#### 2.3.3 Perceived behavioral control

The present view of perceived behavioral control is most compatible with the concept of perceived self-efficacy which is concerned with judgments of how well one can execute courses of action required to deal with prospective situations<sup>60</sup>. Metselaar and Cozijnsen (2005) define perceived behavioral control in the context of organizational control as 'the amount of control over the change process that an employee experiences' and named it 'can change'. There are several determinants of perceived behavioral control, or in terms of Metselaar and Cozijnsen there are several factors that determine whether people can change. Experience with change projects is one antecedent of one's perceived behavioral control<sup>61</sup>. If a person has several positive experiences with preceding change projects it is expected that the person will feel more 'in control' in a change situation, and will experience a higher level of willingness to change. A second factor influencing one's perceived behavioral control is time and resources available. When there is more time and resources available in a change situation, a person will experience more control, what enhances their willingness to change. Complexity of the change is a third factor influencing one's perceived behavioral control. Complex changes demand more skills from people, what causes them to feel less 'in control', and reduces their willingness to change. Timing of the change is also an important factor

that influences perceived behavioral control. If the timing of a change is right (there is no other work that has priority) a person will not experience a work overload and will feel more 'in control'. This enhances their willingness to change. The last determinant of perceived behavioral control is the amount to which the change process is properly managed. A properly managed change process increases employees experienced level of control, while enhancing their willingness to change. In general we can state that the higher the amount of perceived behavioral control the stronger a person's intention to perform a given behavior will be<sup>62</sup>. The succeeding hypotheses follow the above mentioned line of reasoning:

### **Hypotheses 3:**

The higher the perceived behavioral control, the higher the willingness to change

- a. The more positive experience with preceding change projects, the higher the willingness to change
- b. The more time and resources available, the higher the willingness to change
- c. The more complex a change process, the lower the willingness to change
- d. The better the timing of the change process, the higher the willingness to change
- e. The better a change process is managed, the higher the willingness to change

## **2.4 LMX and willingness to change**

Several studies focus on the relationship between LMX and different organizational outcomes<sup>63</sup>. In line with these studies, it is interesting to see how LMX is related to willingness to change. Employees in high-quality LMX relationships exhibit higher levels of organizational citizenship behavior<sup>64</sup>. Given that cooperation with change

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<sup>59</sup> Metselaar & Cozijnsen, 2005

<sup>60</sup> Bandura, 1977

<sup>61</sup> Metselaar & Cozijnsen, 2005

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<sup>62</sup> Ajzen, 1991

<sup>63</sup> Van Dam e.a., 2008

<sup>64</sup> Hoffman e.a., 2003

can be seen as an example of citizenship behavior, van Dam, Oreg and Schyns (2008) showed that employees in high quality LMX relationships will react more positively towards organizational changes compared with employees in low quality LMX relationships. Employees in high quality LMX relationships are less resistant to change and will develop more willingness to change compared with employees in low quality LMX relationships<sup>65</sup>. Besides this direct influence of LMX on willingness to change, Furst and Cable (2008) show an indirect influence of LMX on resistance or willingness to change. They show it is not managerial influence tactics per se that determine employee behavior, but how tactics are interpreted by employees. The strength of LMX can shape these interpretations, by affecting the perceived intent of a manager's behavior. LMX also influences the determinants of one's willingness to change: attitude, subjective norm and perceived behavioral control. Leadership research reveals the strong effects leaders have on follower's attitudes and behaviors<sup>66</sup>. Because high quality LMX relationships enhance the reciprocal influence between leader and follower, I expect a strong influence of leaders on the attitude of followers within high quality LMX relationships. Wakabayashi and Graen (1984) show the influence of LMX on employee's career progress. This career progress or the career opportunities is part of the attitude component of the DINAMO-model because it influences the expected consequences of the changes for employees work itself. This is another reason to assume a relationship between LMX and attitude towards the change. Partners in a high quality LMX relationship experience obligation and internalization of common goals<sup>67</sup>. Followers will also feel loyalty towards their leader. This enhances experienced pressure by followers to perform expected behavior. This means LMX will influence the subjective norm.

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<sup>65</sup> Van Dam e.a., 2008

<sup>66</sup> Dirks & Ferrin, 2002

<sup>67</sup> Graen & Uhl-Bien, 1991

Followers in a high-quality LMX relationship also gain greater access to resources and support<sup>68</sup>, which enhances their perceived behavioral control within a change situation. Leaders also provide their high LMX- followers with more opportunities and information during an organizational change, which increases their perceived behavioral control<sup>69</sup>. The above mentioned relationships between LMX and willingness to change, attitude, subjective norm and perceived behavioral control have been hypothesized as follows:

#### **Hypotheses 4:**

The higher the quality of the LMX relationship, the higher the willingness to change

- a. The higher the quality of the LMX relationship, the more positive the attitude towards the change
- b. The higher the quality of the LMX relationship, the more positive the subjective norm
- c. The higher the quality of the LMX relationship, the more perceived behavioral control will be experienced

## **2.5 Performance effects of the implementation of the Poli Op Naam**

To measure the performance effects of the Poli Op Naam three of the five performance objectives of Slack, Chambers and Johnston (2007) are used: quality, reliability and cost. In this part of the thesis these performance objectives will be defined in a way to make them applicable for measuring the difference in performance of the department O&G for and after the implementation of the Poli Op Naam.

### 2.5.1 The performance objectives

Quality is defined as consistent conformance to expectations<sup>70</sup>. When we look at the Poli Op Naam we see

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<sup>68</sup> Graen & Uhl-Bien, 1991

<sup>69</sup> Van Dam e.a., 2008

<sup>70</sup> Slack e.a., 2007

that due to the fact that residents follow patients longitudinal, they will get a better insight in their own medical treatment. The feedback and learning that occurs helps residents to develop at a more rapid pace. Quality for measuring effects of the Poli Op Naam is therefore defined as ‘the satisfaction of residents with their educational development’.

#### **Hypothesis 5:**

The perceived quality of education for residents increases through the implementation of the Poli Op Naam

Reliability is defined as the delivering or making available of products or services as they were promised to the customer<sup>71</sup>. Through a better insight in the agenda of residents it is less complex to assign specific patients to their own resident. Appointments can be scheduled with more certainty. This causes less consults to be cancelled by residents.

#### **Hypothesis 6:**

The reliability of the treatment route increases due to the implementation of the Poli Op Naam

The last performance indicator is cost. In the former situation a patient was assigned to different residents during their treatment on the department O&G. Every resident wanted to set his or her own diagnose. Because in the situation of the Poli Op Naam there is just one fixed resident for every patient, less diagnose consults have to be conducted.

#### **Hypothesis 7:**

The amount of recurrence consults decreases (and by means of this the costs) due to the implementation of the Poli Op Naam.

## **2.6 Conceptual model and research questions**

The research questions that are central in this research are the following: (1) *What are the effects of the implementation of the Poli Op Naam on the management and education for the department O&G, and (2) to what extent were the employees of the department O&G ‘willing to change’ during the development and implementation of the Poli Op Naam, and how is this influenced by attitude, subjective norm, perceived behavioral control and the quality of Leader- Member Exchange (LMX).*

The main research questions mentioned above can be answered by answering the following sub questions, which are constructed out of the different theoretical concepts which were introduced in the theory section of this thesis. Each sub question can be answered by doing research on one or more of the hypotheses introduced in this chapter:

1. To what extent does one’s attitude, subjective norm and perceived behavioral control influence one’s willingness to change? (Hypotheses 1, 2 and 3)
2. To what extent does the quality of LMX influence one’s willingness to change? (Hypothesis 4)
3. Does the Poli Op Naam increase the perceived quality of education of residents? (Hypothesis 5)
4. Does the Poli Op Naam increase the reliability of the treatment route? (Hypothesis 6)
5. Are costs decreases due to the implementation of Poli Op Naam? (Hypothesis 7)

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<sup>71</sup> Slack e.a., 2007

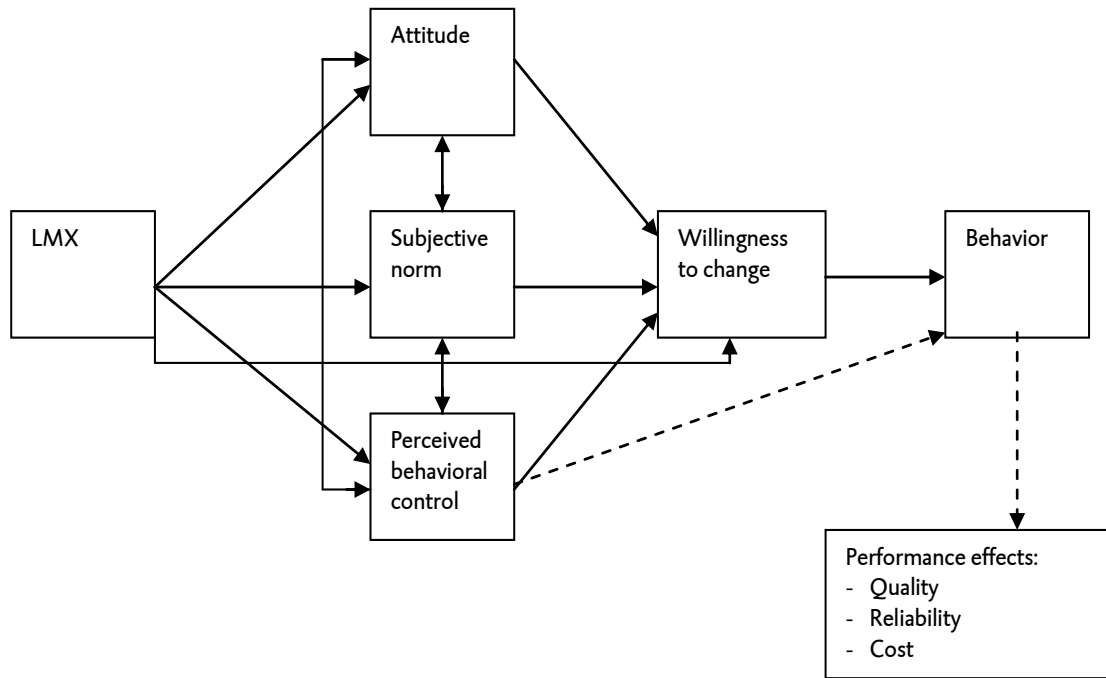


Figure 4: Conceptual Model

### 3. Research Methods

#### 3.1 Data collection

Several data collection methods have been used to gather the necessary data. Data was collected by means of a questionnaire. A questionnaire is an arranged instrument for the determination of attitudes, feelings, perceptions, behavior and facts<sup>72</sup>. By using a questionnaire a large amount of respondents can be reached. The questionnaire used within this research was web-based and was sent to all staff-members<sup>73</sup>, residents, registration assistants and nurses affected by the Poli Op Naam. The questionnaire was confidential so possible hesitations with regard to responding the questionnaires were removed. A major limitation of the questionnaire is the type and amount of information that can be secured<sup>74</sup>. As a researcher you cannot probe deeply into topics. To overcome this limitation several additional interviews were conducted. In order to explore on the performance effects of the Poli Op Naam, data concerned with the amount of consults and no shows was gathered from Xcare<sup>75</sup>.

##### 3.1.1 Characteristics

The department O&G is the subject of research. This department employs approximately 70 employees. These employees are divided over the sub departments Obstetrics and Gynecology, and are employed in the following functions: staff member, residents, registration assistant and nurses. The questionnaire was sent to all staff members, residents, registration assistants and nurses

<sup>72</sup> Cooper & Schindler, 2003

<sup>73</sup> Medical specialists, who are very often part of the daily board of the department O&G

<sup>74</sup> Cooper & Schindler, 2003

<sup>75</sup> Hospital information system

affected by the Poli Op Naam. This population consists of 64 employees. A total of 49 respondents returned their

completed questionnaire, which is a response rate of 76,6 %. In the table below the response rates are assigned to the different organizational functions:

Function	Total amount of employees	Completed questionnaires	Response rate
Staff member	17	13	76,5%
Residents	17	14	82,4%
Registration assistant	23	16	69,6%
Nurse	7	6	85,7%

**Table 1:** Response rates of questionnaire

##### 3.1.2 Questionnaire

The questionnaire consisted of four parts starting with some general questions about respondent's age, function and the amount of hours the respondent works within their function. The second part of the questionnaire was about willingness to change of employees within the department O&G. This part of the questionnaire was derived from the DINAMO questionnaire which was initially focused on managers. A latter version of this questionnaire was adapted to be applicable for measurement of willingness to change among groups and employees. This latter version is used in this research. The items concerning the measurement of willingness to change and its antecedents attitude, subjective norm and perceived behavioral control change and related subcomponents (as was presented in the theory section), were tailored to the specific situation of the Poli Op Naam. All the answer options were on a five-point Likert scale and these answer options ranged from 'completely agree' to 'completely disagree'. The third part of the questionnaire was devoted to the Leader-Member Exchange (LMX). The items with regard to the Leader-



Member Exchange were derived from the LMX-7 questionnaire<sup>76</sup>. There are several questionnaires available for the measurement of LMX, but the LMX-7 questionnaire is seen as the most appropriate and recommended measure of LMX<sup>77</sup>. All the answer options were on a five-point Likert scale and ranged from 'rarely' to 'very often', 'not at all' to 'fully', 'none' to 'very high', 'completely agree' to 'completely disagree' and 'extremely ineffective' to 'extremely effective'. Because the questions about LMX derived from the LMX-7 questionnaire were in English and the questionnaire used in this research was in Dutch, these questions needed translation. The questionnaire ended with questions about quality as a performance effect of the Poli Op Naam. Sub components of quality were the learning curve of residents, insight in their medical treatment, satisfaction with the Poli Op Naam and their opinion on satisfaction of patients. All the answer options were on a five-point Likert scale and these answer options ranged from 'completely agree' to 'completely disagree'.

### 3.1.3 Qualitative research

Several interviews were conducted in order to complement and explain the results gathered from the quantitative part of this research, and to gather additional insights that can be used as a foundation for providing recommendations. The interview questions were derived from relevant literature on the DINAMO model of Metselaar and Cozijnsen (2005) and LMX<sup>78</sup> and were asked in Dutch as neutral as possible. The classification in different stakeholder groups (residents, staff-members, registration assistants and nurses) was also applied in the qualitative part of this research. One employee of each group was interviewed. The selection of the respondents was done by making use of a simple random sampling procedure.

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<sup>76</sup> Seers & Graen, 1984

<sup>77</sup> Graen & Uhl-Bien, 1991

<sup>78</sup> Seers & Graen, 1984

## 3.2 Data Analysis

This paragraph will outline the different statistical techniques, analysis and procedures that were conducted, and these choices will be substantiated.

### 3.2.1 Questionnaire

The results of the questionnaire have been analyzed in a digital way by making use of the statistical program SPSS. Reliability analysis was conducted<sup>79</sup> and those items that decreased the reliability of the scale considerably were removed in order to keep the scale as reliable as possible. Factor analysis was also conducted<sup>80</sup>. There was no simple structure found within this factor analysis, even after rotation. A reasonable explanation for not finding a simple structure might be the fact that not enough respondents participated in this research for conducting an adequate factor analysis. Pallant (2005) stated that for a factor analysis to be valid, at least 150 respondents should participate in the research. Because no simple structure was found within the factor analysis, the structure of the DINAMO research was used within this research. Correlation and regression analysis were conducted in order to test the hypotheses. The requirements of normality and homoscedacity were met for all the regressed hypotheses<sup>81</sup>. Respondents were divided into several sub-groups, where the classification was based on gender, function and number of hours working within the departments O&G. In order to test whether there are differences between groups an independent samples T-test and an analysis of variance (one-way ANOVA) was conducted. Additional to the analysis of variance, a post-hoc Bonferroni analysis was carried out in order to determine which groups differed from each other.

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<sup>79</sup> Attachment 1

<sup>80</sup> Attachment 2

<sup>81</sup> Attachment 3

### 3.2.2 Qualitative research

After the interviews were recorded, they were analysed by using the qualitative method of directed content analysis<sup>82</sup>. Before coding all the relevant passages from the interviews, several codes were developed<sup>83</sup> by making use of the earlier mentioned literature on the DINAMO model and LMX. Coding is performed within ATLAS.TI by working with the predetermined codes.

### 3.2.3 Performance effects of the Poli Op Naam

The first performance effect, quality, was measured by means of several items within the questionnaire. A score of 3 on the different sub-factors of quality indicates neutrality. Every score above 3 is seen as an increase in quality. The performance effect reliability is measured by means of the ratio no show/ total amount of consults. A lower ratio in this case means a decrease in no show and an increase in reliability. The implementation of the Poli Op Naam was accomplished in the period 1-1-2008 until 1-6-2008, so for acceptance of the hypothesis we expect a decrease of the ratio for this period when compared with the periods 1-1-2007 until 1-7-2007 and 1-7-2007 until 1-1-2008. The performance effect cost is measured by means of the ratio recurrence consults/first consults. A lower ratio in this case means a decrease of recurrence consults when compared with first consults, and means a decrease in costs. Since the Poli Op Naam was actually implemented on 1-1-2008 we expect a decrease in the ratio for this period compared with the other period.

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<sup>82</sup> Hsieh & Shannon, 2005

<sup>83</sup> Attachment 4



## 4. Results

Providing the outline of the introduction, the theoretical section and the methods used within this research, the results will now be examined. This chapter starts by describing the respondents and the results. After discussing the hypotheses of this research with the help of correlation and regression analysis an additional comparative analysis is carried out. This chapter will end with an emphasis on the results of qualitative research and the results of the evaluation of the performance effects.

### 4.1 Describing the respondents

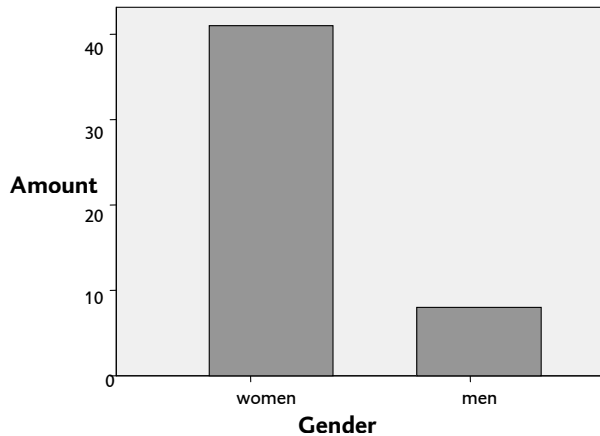


Figure 5.1: Demographic characteristics of the population: gender

The total population of research consisted of 64 employees of the department O&G. There were 49 people who completed their questionnaire which is a response rate of 76.6%. There are 42 women who returned their completed

questionnaire (84%) and 8 men who returned their completed questionnaire (16%) (Figure 5.1).

When compared with the general proportions of men and women, this response presents a rather normal picture. The majority of employees within the department O&G is female, so this majority of females within the respondents group was expected.

Figure 5.2 shows respondents divided by the amount of hours working within the departments O&G on weekly bases. Just one employee works for less than 10 hours (2%). There are 8 employees who work for 11-20 hours (16%). This amount of 8 employees (16%) can also be found for the people who work for 21-30 and 31-40 hours. The majority of employees, 25 (50%), works for more than 40 hours on weekly bases.

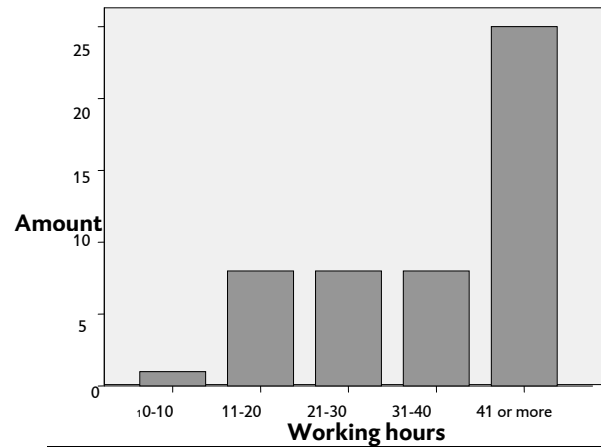


Figure 5.2: Amount of hours working on Department O&G

Figure 5.3 shows the respondents divided by function. Sixteen respondents are working as residents (32%). Twelve staff members completed their questionnaire (24%). Sixteen registration assistants completed the entire

questionnaire (32%). There were also six nurses who completed the questionnaire (12%).

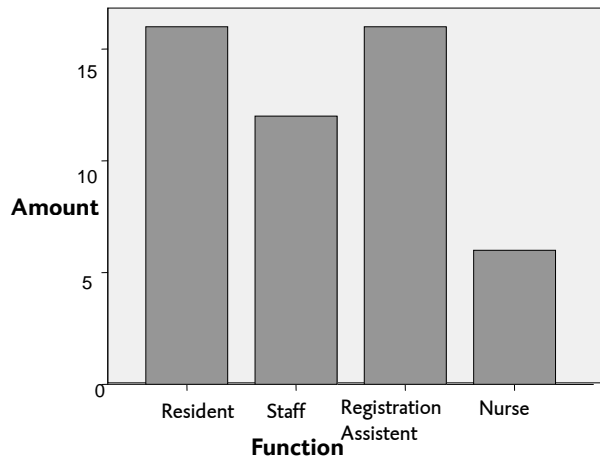


Figure 5.3: Function within department O&G.

## 4.2 Describing the results

Figure 6<sup>84</sup> provides an overview of the measured variables and results. In the columns the number of respondents, the minimum, maximum, mean, standard deviation and variance are given for each factor. All factors and related sub-factors are on a five-point Likert scale, where the lowest score equals 1 and the highest score 5. A score of 3 equals neutrality.

Respondents hold a rather positive attitude towards the Poli Op Naam. When we consider the underlying dimensions or factors of one's attitude towards the Poli Op Naam, we see that the affective reaction is evaluated most positive. Emotional commitment and expected outcomes for the organization also hold rather positive ratings. The expected outcome for the work itself is the lowest scoring item.

<sup>84</sup> Attachment 6

The second main antecedent of one's willingness to change, subjective norm, also holds a rather positive score. The third antecedent of one's willingness to change, perceived behavioral control, is evaluated close to neutrality. Exploring the underlying factors of perceived behavioural control gives us some additional insight. The timing of the change process is evaluated quite positive. Complexity and management of the change process are also valued positive, with means slightly above neutrality. Experience with change projects holds a score equal to neutrality. The lowest scoring item is time and resources available. The last factors measured are the willingness to change and the Leader-Member Exchange (LMX), which were both evaluated as very positive, with means substantially above neutrality.

## 4.3 Testing the hypotheses

Several hypotheses have been outlined in the theory section. In order to test these hypotheses correlation analyses have been conducted. Figure 7 shows all correlations between the measured factors and sub-factors. Besides the correlation analysis, regression analysis has been conducted in order to be able to accept or reject the sub-hypotheses. Correlation and regression analysis will be conducted for every single hypothesis.

4.3.1 Hypothesis 1: The more positive the attitude towards the change, the higher the willingness to change

Figure 7 shows that attitude towards the change and willingness to change are strongly positively correlated. This correlation is also significant, so hypothesis 1 is accepted. Exploring on the correlations at sub-factor level shows that all the sub-factors of one's attitude towards the change are positively correlated with one's willingness to change. These correlations are all significant.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>1.Att-Affective reaction</b>														
<b>2.Att-Emotional commitment</b>	,69**													
<b>3 Att-Expected outcomes organization</b>	,70**	,54**												
<b>4.Att-Expected outcomes Work/self</b>	,44**	,40**	,59**											
<b>5. Attitude</b>	,88**	,85**	,84**	,70**										
<b>6. Subjective norm</b>	,52**	,24	,45**	,11	,40**									
<b>7 Pbc-Experience with change projects</b>	,34*	,48**	,25	,05	,37**	,30*								
<b>8.Pbc-Time and Resources</b>	-,08	-,70	,03	-,03	-,05	-,06	,07							
<b>9 Pbc-Complexity</b>	,46**	,35*	,40**	,08	,41**	,42**	,43**	,41**						
<b>10 Pbc-Timing change process</b>	,41**	,32*	,35*	,13	,38**	,51**	,41**	,05	,37**					
<b>11 Pbc-Management of change process</b>	,31*	,26	,36*	-,13	,25	,48**	,44**	,31*	,62**	,43**				
<b>12. Perceived behavioral control</b>	,44**	,42**	,41**	,00	,41**	,51**	,71**	,44**	,80**	,67**	,83**			
<b>13. Willingness to change</b>	,57**	,50**	,50**	,39**	,58**	,57**	,59**	-,90	,50**	,57**	,34**	,58**		
<b>14. LMX</b>	,21	,09	,34*	-,04	,18	,27	,15	,14	,37**	-,09	,36**	,27	,03	

█ p < .05    **\*\*** p < .01

Figure 7: Correlations of all variables

In order to find out what the relative influence of these different sub-factors is, a multiple regression analyses has been conducted in which willingness to change is the dependent variable. The results are summarized in table 7.

Independent variable	t-value	Beta	Significance
Expected outcomes for work	1,435	,211	,158
Expected outcomes for organization	,898	-,165	,374
Emotions (affective reaction)	2,396	,463	,021
Emotional commitment	1,140	,187	,026

**Table 7:** Regression analysis of attitude towards change and willingness to change

Table 7 shows that the affective reaction with regard to the Poli Op Naam explains most of the variance within one's willingness to change. Emotional commitment also predicts some of the variance within one's willingness to change. The expected outcomes for the work itself and the organization have no significant influence on one's willingness to change. Considering this information means we accept hypotheses 1c and 1d. Hypotheses 1a and 1b are rejected.

4.3.2 Hypothesis 2: The more positive the subjective norm, the higher the willingness to change

Figure 7 shows a strong positive correlation between subjective norm and one's willingness to change. This correlation is also significant, which means that hypothesis 2 is accepted. Since there are no underlying hypotheses, regression analysis is superfluous.

4.3.3. Hypothesis 3: The higher the perceived behavioral control, the higher the willingness to change

Figure 7 shows that perceived behavioral control and willingness to change are positively correlated. Hypothesis 3 is accepted, because this correlation is significant. With regard to the sub-factors we can state that experience with change projects, timing of the change process and management of the change process are positive and significantly correlated with one's willingness to change. Complexity was expected to be negatively correlated with willingness to change. In contrast with this figure 7 shows a significant and positive correlation between complexity and one's willingness to change. The (negative) correlation between time and resources and willingness to change is not significant.

To explore on the relative influence of the four significant correlated sub-factors of perceived behavioral control on willingness to change, a multiple regression analysis was conducted. The results are summarized in table 8.

Independent Variable	t-value	Beta	Significance
Experience with preceding change projects	3,179	,381	,003
Complexity of the change process	2,357	,315	,023
Timing of the change process	3,203	,376	,003
Management of the change process	-1,349	-,185	,184

**Table 8:** Regression analysis of perceived behavioral control and willingness to change

Table 8 shows that experience with change projects explains a large amount of variance within one's willingness to change. Complexity and timing of the change process both explain a reasonable amount of variance within willingness to change. Since a negative correlation between

complexity and willingness to change was expected and a positive correlation was found, we have to reject hypothesis 3c despite the above mentioned results of the regression analysis. Management of the change process has no influence. Considering the abovementioned information we accept hypotheses 3a and d. Hypotheses 3b, c and e are rejected.

#### 4.3.4 Hypothesis 4: The higher the quality of the LMX relationship, the higher the willingness to change

This hypothesis assumes a positive relationship between Leader- Member Exchange (LMX) and willingness to change. According to figure 7 LMX and willingness to change are weakly positive correlated, but this correlation is not significant. This means we reject hypothesis 4. At sub-factor level this conclusion is supported. LMX is positively correlated with one's attitude towards the change, subjective norm and perceived behavioral control, but all these correlation are not significant.

This information shows there is a trend where LMX is weakly or moderately correlated with the different antecedents of willingness to change (attitude towards the change, subjective norm and perceived behavioral control). Because these correlations are not significant we reject hypothesis 4 and the accompanying hypotheses 4a, b and c, despite the fact that positive correlations are found.

### 4.4 The main antecedents of willingness to change

To get a better insight in the relative influence of the main antecedents of willingness to change, regression analyses has been conducted in which the main antecedents of willingness to change (attitude, subjective norm, perceived behavioral control and LMX) are the independent variables and willingness to change is the dependent variable. Table 9 gives an overview of the regression analysis conducted.

Independent	t-value	Beta	Significance
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variable			
<b>Attitude</b>	3,127	,347	,003
<b>Subjective norm</b>	2,645	,313	,011
<b>Perceived behavioral control</b>	2,828	,337	,007
<b>LMX</b>	-1,958	-,202	,056

**Table 9:** Regression analysis of the main antecedents of willingness to change, willingness to change is the dependent variable

Approximately 57 % of the variance in willingness to change is explained by the main antecedents of willingness to change ( $R^2 = ,568$ ;  $F = 14,790$ ;  $p = ,000$ ). According to table 9, attitude towards the change predicts most of the variance within willingness to change. Perceived behavioral control and subjective norm also predict quite a lot of variance within one's willingness to change. LMX seems to have no significant influence.

### 4.5 Comparing groups of respondents

Within the questionnaire several general questions have been asked about people's gender, function and the amount of hours working within the department O&G. It is interesting to see whether these different groups hold significantly different scores on the evaluated factors. In the following paragraphs the differences in scores on the factors are examined for the group classification gender, function and hours working.

#### 4.5.1 Gender

Central question within this comparative analysis is whether women or men hold different views and have different scores on the factors with regard to the change



process, willingness to change and LMX. Table 10<sup>85</sup> shows the scores of women and men on the different factors. Women hold lower scores for most of the factors, except for the factors time and resources available, management of the change process and perceived behavioral control. An independent samples t-test<sup>86</sup> have been conducted in order to see whether these differences are significant. The results of this test show that women have significantly less experience with preceding change projects compared with men.

#### 4.5.2 Function

It is tested whether employees within different functions hold different views with regard to the factors explored within the questionnaire. Table 11<sup>87</sup> shows the differences in mean ratings for the residents, staff, registration assistants and nurses. It is interesting to determine whether these mean ratings of every group are equal to each other or if they differ significantly. This is determined by means of an analysis of variance (one-way ANOVA). There are significant differences between employees in different functions for the factors subjective norm, willingness to change and LMX<sup>88</sup>.

In addition, we want to determine which groups differ significantly from each other. To examine this, a post-hoc Bonferroni analysis was conducted for the factors subjective norm, willingness to change and LMX. Residents and registration assistant differ significantly when it concerns their mean rating on subjective norm, where the mean rating of residents is significantly higher<sup>89</sup>. The staff members differ significantly from the registration assistants on the factor subjective norm. The mean ratings of the staff members were significantly higher when compared to the mean rating of the registration assistants<sup>90</sup>.

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<sup>85</sup> Attachment 7

<sup>86</sup> Attachment 7, table 10.1

<sup>87</sup> Attachment 8

<sup>88</sup> Attachment 8, table 11.1

<sup>89</sup> Attachment 8, table 11.2

<sup>90</sup> Attachment 8, table 11.2

Table 11.3<sup>91</sup> shows that the mean ratings of the staff members differed significantly from the mean ratings of the registration assistants, where the staff members scored significantly higher on the factor willingness to change.

The mean ratings of residents are significantly lower when compared with the mean ratings of staff members for the factor LMX<sup>92</sup>. There is also a significant difference on the mean ratings of LMX between staff members and nurses. Staff members score significantly higher on this factor compared with nurses.

#### 4.5.3 Amount of hours working

It was tested as to whether employees working different numbers of hours hold different views with regard to the factors explored within the questionnaire. Table 12<sup>93</sup> shows the differences in mean ratings for the employees who work for 0-10 hours, 11-20 hours, 21-30 hours, 31-40 hours and 41 or more hours. The conducted analysis of variance (one-way ANOVA) shows there are significant differences between groups on the factors subjective norm and willingness to change<sup>94</sup>.

We also want to know which of these groups differ significantly from each other. To examine this, a post-hoc Bonferroni analysis was conducted for the factors subjective norm and willingness to change. Table 12.2<sup>95</sup> shows that the mean rating on the factor subjective norm is significantly lower for the employees who work for 0-10 hours when compared with the employees who work for 41 hours or more. The mean ratings on the factor subjective norm are also significantly lower for the employees who work for 11-20 hours when compared with the employees who work for 41 hours or more. This conclusion can also be drawn when we compare the

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<sup>91</sup> Attachment 8

<sup>92</sup> Attachment 8, table 11.4

<sup>93</sup> Attachment 9

<sup>94</sup> Attachment 9, table 12.1

<sup>95</sup> Attachment 9

employees working for 21-30 hours with the group of employees who work for 41 hours or more. There are no significant differences between pairs of groups for the mean ratings on the factor willingness to change<sup>96</sup>.

## 4.6 Qualitative research

### 4.6.1 Attitude Towards the Change

The four sub-factors of one's attitude towards the Poli Op Naam are all discussed in the interviews that are conducted. The respondents rate the first sub-factor, the consequences for the department O&G and the UMCG, moderately positive. The Poli Op Naam has several medical and educational advantages when compared with the old situation. *"There is a higher chance of seeing your patient again and the chance of doing the same work twice is reduced"* (1a). Besides these advantages of the Poli Op Naam, there also seem to be some downsides. *"A disadvantage remains nevertheless that whenever there is no place at the patients doctor, the patient will still be scheduled at another doctor. It is also still not possible to schedule Poli's in advance of when they are carried out."* (2a). In particular people in the lower echelons of the department O&G are not fully aware of the possible advantages of the Poli Op Naam. *"The appreciation of the Poli Op Naam is not yet clear for me. I will encounter the same problems with the division of rooms."* (3n). The residents experience several advantages of the Poli Op Naam for their own work, especially from an educational perspective. *"As residents we do have more insight in our own medical treatment."* (4a). However, the consequences of the Poli Op Naam for the work of other stakeholders seem to be negative, especially when it concerns the work of registration assistants. As one registration assistant mentioned: *"Disadvantages by far exceed the advantages,*

*because many more agendas have to be inserted manually"*. (5r).

The affective reaction towards the Poli Op Naam received the highest rating when compared with the other sub-factors. *"The Poli Op Naam was mainly experienced in a positive way"*. (6a).

The respondent's reactions when it concerns their opinion on emotional commitment present a somewhat mixed view. *"Because the Poli Op Naam had many consequences for me I felt committed towards it. However, my colleagues from the care administration were not involved with the Poli Op Naam"* (7r). There are also different opinions on whether or not it would be useful to involve a larger part of stakeholders in the introduction phase of the Poli Op Naam. *"We possibly had to involve the staff members more in the implementation of the Poli Op Naam"* (8s). In contrast with this, one of the respondents mentioned the following: *"Medical assistant nevertheless occupy themselves rather with the medical instead of matters such as the Poli Op Naam"* (9a).

In conclusion it can be said that the affective reaction is rated as the most positive sub-factor of one's attitude towards the Poli Op Naam. The consequences for the departments of O&G and the UMCG and the emotional commitment are both rated moderately positive and present a somewhat mixed view. The consequences of the Poli Op Naam on the work itself received the lowest rating. Especially for registration assistants the Poli Op Naam seems to have some important downsides.

### 4.6.2 Subjective norm

Two forms of pressure can be distinguished with regard to the subjective norm. First, there is the pressure from colleagues to cooperate with the implementation of the Poli Op Naam. The respondents of the interviews do not experience this pressure. However, all respondents experience pressure from the management. *"It was obvious that the daily governing board supported the Poli Op Naam. This was discussed at work consultations and transfer moments."* (10r). If the management of the

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<sup>96</sup> Attachment 9, table 12.3

department O&G wants something to happen, it must be done.

#### 4.6.3 Perceived behavioural control

The first sub-factor of perceived behavioural control is concerned with the management of the implementation of the Poli Op Naam. It was difficult for respondents to describe the actual management of the Poli Op Naam. *"It is hard to say something about the management because it is difficult to define. However, a clear address point should have been helpful"* (11a). This implicates the difficulty of defining your opinion on the management, what causes the respondents to rate it neutrally. However, it was important for management to get people committed and to make sure they cooperate with the Poli Op Naam. *"Supervision was mainly concerned with getting people along who worked at different levels."* (12s)

Timing of the Poli Op Naam was rated moderately positive. In particular, residents hold the opinion that the Poli Op Naam could be introduced earlier. *"When it concerns the residents, the Poli Op Naam could have been introduced earlier because the request was already there for quite a long time. However, the fact remains that you are always dependent on your technical resources and possibilities"* (13a). A possible obstacle for the Poli Op Naam were other priorities. However, with the Poli Op Naam this was not the case. *"There were no other matters that could play a role in blocking the implementation of the Poli Op Naam"* (14r)

With regard to the time and resources available for the development and implementation of the Poli Op Naam, an important notion is the initial time path that exceeded. *"The implementation of the Poli Op Naam took more time than we initially expected. The time path was tight"* (15s)

The complexity of the process of implementation with regard to the Poli Op Naam seems to be low. Assigning tasks to important stakeholders was obvious and transparent. Content complexity was also quite low. *"The change is minimal for residents. It is just a change of name.*

*For the registration assistant, the change is also not very complex."* (16a)

The respondents seem to have a moderate amount of experience with change projects. One of the examples the respondents gave was the colour system with regard to scheduling, which was a preamble of the Poli Op Naam. *"We have some experience with changes. For example, we had the colour system"* (17r).

With regard to the Poli Op Naam it can be concluded that the amount of experience employees have with change projects and timing of the Poli Op Naam were rated moderately positive. The Poli Op Naam is not a very complex change, but in contrast with this, the initial time path was exceeded. The supervision or management of the Poli Op Naam was not visible for most of the respondents, and therefore hard to define.

#### 4.6.4 Willingness to change

Especially the residents are willing to change. *"The residents have been asking for the Poli Op Naam for many years. From this point of view, they were committed and willing to cooperate with the Poli Op Naam."* (18a). This willingness to change of residents seems logical, because the Poli Op Naam has many advantages for them. However, the registration assistants and nurses are also willing to cooperate with the Poli Op Naam, even if this makes their work more complex and intensive. The question remains whether they are willing to change because they believe in the Poli Op Naam or just because they are forced to.

#### 4.6.5 Leader-Member Exchange (LMX)

It is hard for employees to define the relationship with their leader. *"There are so many different leaders. It is hard for employees to appoint their own leader"* (19s).

For example, residents work within different sections within the department O&G every six weeks. So each time they have to deal with different leaders. With regard to a relationship between LMX and one's willingness to change the following is mentioned: *"Logically people who can go along well with their leader are more willing to help him or her"* (20s).

#### 4.7 Performance effects of the implementation of the Poli Op Naam

4.7.1 Hypothesis 5: The perceived quality of education for the residents increases due to the implementation of the Poli Op Naam.

The results for quality as measured as a performance effect are examined by determining the mean ratings on the different sub-factors of quality.

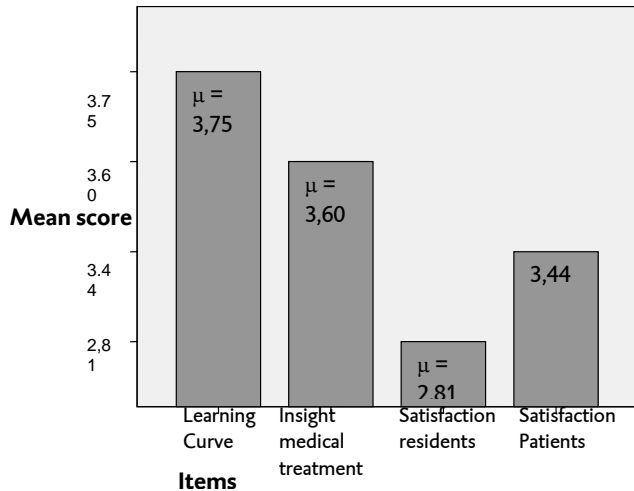


Figure 8: Mean ratings on quality factors

Figure 8 shows the mean ratings on the different sub-factors of quality. The factors learning curve, insight in own medical treatment and satisfaction of patients all hold means above neutrality. Only the satisfaction of residents with regard to the daily procedure of the Poli Op Naam is negatively rated. Because three of four sub-factors are rated above neutrality, we accept hypothesis 5.

Period	Gyne-	Obste-	Reproduction

4.7.2 Hypothesis 6: The reliability of the treatment route increases due to the implementation of the Poli Op Naam

This hypothesis assumes that the percentage of non appearance or no show with regard to consults will decrease through the implementation of the Poli Op Naam. This is measured by the ratio no show/ total amount of consults. This ratio will be calculated for the specialisms Gynecology, Obstetrics and Reproduction Medicine.

Period	Gyne-cology	Obste-trics	Reproduction Medicine
1-1-2007 – 1-7-2007	0,100	0,027	0,021
1-7-2007 – 1-1-2008	0,248	0,000	0,174
1-1-2008 – 1-6-2008	0,055	0,003	0,029

Table 13: The ratio no shows/total amount of consults for specialisms Gynecology, Obstetrics and Reproduction Medicine

Table 13 shows that for the specialisms Gynecology and Reproduction Medicine a decreased ratio no shows/ total amount of consults can be seen when we compare the ratio of 2008 with the ratio of the second half of 2007. In the case of Obstetrics there is no decrease in no show because the ratio no show/ total amount of consults is not decreased in 2008 when comparing it with the former period in 2007. This means we can accept hypothesis 7 because the ratio no show/ total amount of consults is decreased for 2 out of 3 specialisms.

4.7.3 Hypothesis 7: The amount of recurrence consults decreases (and by means of this the costs) due to the implementation of the Poli Op Naam.

To answer this hypothesis we look at the ratio: recurrence consults/ first consults. This ratio will be calculated for the specialisms Gynecology, Obstetrics and Reproduction Medicine.

	cology	trics	Medicine

1-1-2007 – 1-7-2007	1,138	5,348	7,490
1-7-2007 – 1-1-2008	1,362	3,431	4,004
1-1-2008 – 1-6-2008	1,071	5,505	1,219

**Table 14:** Ratio recurrence consults/ first consults for specialisms Gynecology, Obstetrics and Reproduction Medicine

Table 14 shows that the ratio recurrence consults/ first consults decreases for the specialisms Gynecology and Reproduction Medicine when comparing the period in 2008 with the former period in 2007, and increased for the specialism Obstetrics. This means we can accept hypothesis 8 for the specialisms Gynecology and Reproduction Medicine and reject the hypothesis for the specialism Obstetrics.

## 5. Discussion

This chapter discusses the interpretation of the results that are presented in the former chapter. The results of the former chapter are interpreted. Based on these results several recommendations will be made. After exploring the scientific implications of this research, a reflection on the research will be given. This chapter ends with a conclusion on the conducted research.

### 5.1 Results

Recall that the main research questions of this research are:

(1) *What are the effects of the implementation of the Poli Op Naam on the management and education for the department O&G, and (2) to what extent were the employees of the department O&G 'willing to change' during the development and implementation of the Poli Op Naam, and how is this influenced by attitude, subjective norm, perceived behavioral control and the quality of Leader- Member Exchange (LMX).* In order to answer these questions several sub-questions have been outlined. Answers to these sub-questions are provided in the succeeding paragraphs.

5.1.1 The extent to which one's attitude, subjective norm and perceived behavioral control influences one's willingness to change

This sub-question is accompanied and relates to hypotheses 1, 2 and 3. From the results section of this thesis it can be concluded that attitude towards the change, subjective norm and perceived behavioral control are all positively and significant correlated to one's willingness to change. One's attitude towards the change is the most important factor influencing one's willingness to change, quickly followed by perceived behavioral control and

subjective norm. Considering the results on sub-factor level some additional notions can be made.

With regard to one's attitude towards the change we find the affective reaction towards the Poli Op Naam to be the most important sub-factor influencing one's willingness to change. Emotional commitment towards the Poli Op Naam is another sub-factor with a significant influence on one's willingness to change. With regard to this factor the qualitative part of this study shows that a relatively small group of employees were involved with the implementation of the Poli Op Naam and felt actually committed to it. The majority of employees, especially people within lower echelons of the organization, did not participate with the Poli Op Naam and felt no commitment towards it.

The other sub-factors of one's attitude towards the Poli Op Naam, consequences for the work itself and for the organization (cognitive reactions), have no significant influence on one's willingness to change. The results of this study, when it concerns the sub-factors of one's attitude towards the change, confirm the notions of Metselaar and Cozijnsen (2005) who determined the affective reactions to be a stronger predictor of one's willingness to change compared with the cognitive reactions.

With regard to the perceived behavioral control the following conclusions can be drawn. Experience with change projects explains most of the variance within one's willingness to change compared with the other sub-factors. Respondents within the interviews indicated the moderate amount of experience they had with changes like the Poli Op Naam. The color system is an example of a change project similar to the Poli Op Naam. The results of this study confirm the findings of Metselaar and Cozijnsen (2005) and Stuart (2005) who both determined experience with change projects to be one of the most important factors influencing one's willingness to change. Timing of the change process is another sub-factor with a significant influence on one's willingness to change. Residents

indicated that the Poli Op Naam could have been introduced in an earlier stage, but its introduction was possibly blocked by the technical possibilities available. Complexity was expected to have a negative relationship with one's willingness to change. In contrast with this a positive relationship between complexity and one's willingness to change was determined. The last two sub-factors of perceived behavioral control, time and resources available and management of the change process, have no significant influence on one's willingness to change.

Overall it can be concluded that one's attitude towards the change, subjective norm and perceived behavioral control are all significant correlated to one's willingness to change. On a sub-factor level the affective reaction, emotional commitment, experience with preceding change projects and timing of the change process are the most important factors influencing one's willingness to change. This is an important notion for management because it shows them which factors should receive attention in order to enhance willingness to change with regard to the Poli Op Naam or similar changes in the future.

5.1.2 The extent to which the quality of LMX influence one's willingness to change

Leader-Member Exchange (LMX) is positively correlated with one's willingness to change and its antecedents attitude, subjective norm and perceived behavioral control. However, these correlations are not significant. A reasonable explanation is given by Furst and Cable (2008) who state that besides the direct influence of LMX on willingness to change, LMX may also act as a moderator between different managerial influence tactics and willingness to change. This moderator role of LMX might explain the absence of a direct positive and significant correlation between LMX and willingness to change. Another explanation is provided within the qualitative part of this research where the difficulty of defining your leader is noted. Overall it can be concluded that this research confirms the positive relationship between LMX and

willingness to change found in literature, but these correlations are not found to be significant.

5.1.3 The extent to which the quality of education is increased due to the implementation of the Poli Op Naam Hypothesis 5, which deals with the quality of education, is accepted within the results paragraph of this thesis. Residents have a faster learning curve, more insight in their own medical treatment and satisfaction of patients is increased. The only sub-factor that contrasts with the acceptance of hypothesis 5 is the satisfaction with the Poli Op Naam from a resident point of view. The residents are not fully satisfied with the daily procedure of the Poli Op Naam, because there are still some operational problems. These problems are in most circumstances related to scheduling.

5.1.4 The extent to which the reliability of the treatment route is increased due to the implementation of the Poli Op Naam

Hypothesis 6, which is concerned with the reliability of the treatment route, is accepted. For the specialisms Gynecology and Reproduction Medicine the ratio no show/ total amount of consults decreased for the period 2008 when compared with the former period in 2007. Only for the specialism Obstetrics this hypothesis was not accepted, because no decrease in the ratio no show/ total amount of consults was determined. The acceptance of hypothesis 6 means the reliability of the treatment route is increased due to the implementation of the Poli Op Naam.

5.1.5 The extent to which costs are decreased due to the implementation of the Poli Op Naam

Hypothesis 7, which is concerned with costs, is accepted. This implies costs are decreased due to the implementation of the Poli Op Naam. Costs are measured by means of the ratio recurrence consults/ first consult. This ratio increased for the specialisms Gynecology and Reproduction Medicine when we compare the period in 2008 with the former period in 2007. This means we can accept

hypothesis 7 for these specialisms. For the specialism Obstetrics hypothesis 7 is rejected, because no decrease in the above mentioned ratio is determined.

## 5.2 Recommendations

The former paragraph shows the importance of the (sub) factors affective reaction, emotional commitment, experience with preceding change projects, timing of the change process and subjective norm with regard to their influence on willingness to change. The following recommendations provide some guidelines and suggestions for management on how to deal with these factors.

### 5.2.1 Creating awareness with two-way communication

One of the most important notions from the interviews was that a substantial part of the employees within the department O&G, especially people within the lower echelons of the organization, were not aware of the content and advantages of the Poli Op Naam. This clearly indicates a lack of information about the Poli Op Naam. Management should provide employees with detailed and concrete information on the change process of the Poli Op Naam in order to enhance their understanding of the necessity of the Poli Op Naam, and to clarify what is expected from them. This research shows that willingness to change with regard to the Poli Op Naam is not a problem. However, awareness of expectations concerned with the Poli Op Naam is a condition that must be met in order for employees to act according to the rules of the new situation.

Another important notion is that communication should be a two-way process. Employees should be able to give their opinion on the change process. An example of this might be concerned with the factor timing of the change process, which is determined to be one of the most important predictors of one's willingness to change. Employees are in a good position to determine whether there are obstacles that could possibly hamper the implementation of a change

like the Poli Op Naam. Timing of the implementation of the change should be adapted to the opinions of employees in order to enhance the possibility of a successful implementation. Listening to employees and adapting plans based on their observations is an important notion for management. In addition, management should show employees that they are taken seriously by presenting their adapted plans to those employees. This will enhance employee's motivation to provide management with useful observations.

### 5.2.2 Acknowledging differences between employees

The comparative analysis pointed out that not every employee is equal. For example, the registration assistant hold lower scores on the factor willingness to change when compared with staff members. Similar conclusions can be drawn for the factor subjective norm, where residents and staff members indicate they experience more pressure compared with registration assistants. It is important for the management of the Poli Op Naam to acknowledge that not every employee can be treated equally. Some employees may feel the need to receive more information due to their function or the number of hours they work. With regard to the Poli Op Naam this implies that management should give the registration assistants extra attention and additional information to enhance their willingness to change. In general we can state that adapting communication to the different needs of employees can enhance people's willingness to change while ensuring their cooperation with the Poli Op Naam or similar changes in the future.

### 5.2.3 Participation

Emotional commitment was determined to be one of the most important predictors of one's willingness to change when it concerns the Poli Op Naam. Enabling employees to participate in the development and implementation of a change project is believed to increase emotional



commitment<sup>97</sup>. One of the respondents within the interviews mentioned that a relatively small group of stakeholders participated in the development and implementation of the Poli Op Naam. Enabling important stakeholders to participate in brainstorm sessions about the Poli Op Naam is a feasible and realistic intervention that will increase commitment of these important stakeholders with the Poli Op Naam. Communication within these brainstorm sessions should be a two-way process (as was mentioned in the first recommendation). This will enhance the quality of these sessions and will assure the outcomes reflect the opinions of employees. Since residents indicated that they are not fully satisfied with the daily procedure with regard to the Poli Op Naam, this could be a possible subject within a brain storm session.

#### 5.2.4 Stimulating informal communication

Subjective norm is an important factor influencing one's willingness to change. Pressure can come from peers or management. The results of the qualitative part of this research indicated that experienced pressure mainly came from management. According to Metselaar and Cozijnsen (2005) this might be counter-productive because employees might experience pressure from management as negative. This indicates a need for informal communication in addition to the (two-way) formal communication coming from management. In order to stimulate informal communication, management might use opinion leaders. These are individuals who have a particular influence on the beliefs and actions of colleagues<sup>98</sup>. They help to convince colleagues of the importance and advantages of the Poli Op Naam. This may motivate employees to perform the behavior expected from them with regard to the Poli Op Naam.

#### 5.2.5 Coaching and training employees

The affective reaction is an important factor influencing one's willingness to change. Dealing with emotions

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<sup>97</sup> Chawla & Kelloway, 2004

<sup>98</sup> Greenalgh e.a., 2004

concerned with change requires a coaching approach<sup>99</sup>. Open conversations with a coach can help employees to cope with their emotions, by analyzing opportunities and threats the change brings along. By opposing and discussing these opportunities and threats, employees will be able to channel their emotions. Another important factor influencing one's willingness to change is experience with preceding change projects. Open conversations with a coach can be helpful when employees lack experience in organizational changes. However, talking and informing is probably not enough. A lack of experience and knowledge with regard to organizational change indicates a learning need that can be fulfilled by training employees. Training employees in organizational change themes like dealing with resistance, insecurity, stress and other change related aspects can be done on an individual or group level. Training employees in those change themes can help them to compensate for their lack of experience with regard to preceding change projects.

### 5.3 Scientific implications

Contrary to most studies, this study took a different perspective on resistance to change. Instead of using the negative model of resistance to change, this research used the positive model of willingness to change. For the conceptualization of this model the DINAMO research of Metselaar and Cozijnsen (2005) was used. By using the positive concept of willingness to change, this research holds some additional value for scientific research into the field of change management, since research into this concept is rather limited and unmentioned in literature. This research proves the applicability of the DINAMO model within a health care context. The DINAMO research is also provided a more solid base, because most of the results of the current research confirm the findings of the DINAMO research. Attitude towards change, subjective norm and perceived behavioral control were all determined

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<sup>99</sup> Metselaar & Cozijnsen, 2005

to be strong antecedents of one's willingness to change, while also at sub-factor level this research confirmed a high proportion of the results from the DINAMO research. Emotional commitment was added to the initial DINAMO model. The current research shows a positive significant correlation between emotional commitment and willingness to change. This result justifies the addition of emotional commitment to the initial DINAMO model. Another factor that was added to the DINAMO model is timing of the change process. This addition is also justified since a strong positive and significant correlation is found between timing of the change process and willingness to change.

LMX was added to the original DINAMO model, and is believed to be an antecedent of willingness to change and its main determinants: attitude, subjective norm and perceived behavioral control. This research showed a positive trend where positive correlations between LMX and willingness to change (and its antecedents) were determined. However, these correlations were not significant. Further research into this subject is necessary to provide insight in the relationship between LMX and willingness to change.

The DINAMO model was complemented by adding specific factors that influence willingness to change and its antecedents. However, the added factors that are mentioned above are not the only factors that could possibly influence willingness to change and its antecedents. Factors that have not been included in the research are, for instance, factors like communication and participation which are believed to be possible determinants of willingness to change (van Dam, Oreg & Schyns, 2008). In addition, it may be an interesting line of research to further study which factors influence one's willingness to change and its main antecedents.

## 5.4 Reflection

### 5.4.1 Reliability

A measurement procedure is considered reliable if a repeated measurement produces the same outcome whereas nothing else is changed (de Leeuw, 1996). As mentioned earlier, statistical reliability analyses were conducted in order to determine reliability of the research. It can be concluded that the main factors (willingness to change, LMX and quality) measured within the questionnaire scored Cronbach's Alpha's  $> 0,8$ . This means the research is considered reliable.

An absolute number of 49 respondents took part in this research. This is a sufficient number of respondents for conducting the statistical analysis necessary for answering the research questions of this thesis. However, the relatively small number of respondents decreases the generalizability of the research. Despite the small amount of respondents the results seems to be relatively representative, because the results are similar to the results found within the DINAMO research.

The response rate of the questionnaire was high (75%). The researcher aimed to keep the response as high as possible through a letter of the chef de clinique, in which employees were asked to cooperate with the research and several reminders that were send to respondents.

The response is representative for the department O&G because the average rates in the department are reflected by the respondents: there are similar rates with regard to the ratio male/female, function and number of hours working. The response may be representative for the department O&G, but this does not mean that the response and the results are representative for other departments of the UMCG or similar departments in other hospitals. The extent to which the findings of this research are applicable to these research contexts needs to be determined by conducting further research.

#### 5.4.2 Validity

A measurement procedure is considered valid if it measures what it aimed to measure (de Leeuw, 1996). With regard to the content validity (de Leeuw, 1996) we can state that by using valid instruments like the DINAMO questionnaire and the LMX-7 questionnaire we can assume that all currently known aspects of the concepts willingness to change and LMX are explored within this research. In the section with regard to the theoretical implications the researcher already mentioned the possibility of the existence of not yet defined antecedents of willingness to change and LMX.

With regard to the construct validity (de Leeuw, 1996) a similar notion can be made. By using the conceptual definitions from the valid instruments mentioned above, the researcher guaranteed the conceptual or constructs validity of the research. Because some of the items used in this research needed translation from English to Dutch, some items might have received a slightly different meaning. The researcher tried to overcome this problem by having two specialists in the English language translate the items from English to Dutch and from Dutch to English again.

Within the current research willingness to change is measured with regard to the Poli Op Naam. This does not mean that willingness to change found for the Poli Op Naam is congruent with the general willingness to change of the employees from the department O&G. We should remember that the willingness to change measured in this research, is the willingness to change at this point in time and only with regard to the Poli Op Naam. When a different change intervention will be introduced in the future, the results of this research would not necessarily mean the same results will be found for a different change intervention. To increase external validity it is necessary to do more research on willingness to change when it concerns different change interventions at the department O&G or within other departments.

#### 5.4.3 Focus of research

The research conducted is particularly focused on willingness to change and the antecedents attitude, subjective norm, perceived behavioral control and LMX. The research could be made broader by including other possible antecedents of willingness to change. However, this would lead to less detailed analyses of the factors under study. This would also lead to an extended length of the questionnaire, which would possibly reduce the response of the questionnaire.

#### 5.4.4 Longitudinal research

One of the major limitations of writing a master thesis is the factor of time. Due to the limited amount of time available it is almost impossible to do more than one measurement of willingness to change and its antecedents. Therefore, the current research is a measuring at one point in time. It is interesting to explore how the different variables of the DINAMO model evolve on a longitudinal base, and what causes this evolution. This could lead to a better understanding of what willingness to change exactly is and which variables influence this willingness to change.

### 5.5 Conclusion

There were two research questions within this research. The first research question is: *What are the effects of the implementation of the Poli Op Naam on the management and education for the department O&G?* This is measured by means of the performance objectives quality, reliability and costs. Quality and reliability increased while costs decreased due to the implementation of the Poli Op Naam. These results were intended with the implementation of the Poli Op Naam and can therefore be regarded as positive. In addition it must be noted that no increase in reliability and decrease in costs was visible for Obstetrics (only for Gynecology and Reproduction Medicine).

The second research question is: *To what extent were the employees of the department O&G 'willing to change' during the development and implementation of the Poli Op Naam, and how is this influenced by attitude, subjective norm, perceived behavioral control and the quality of Leader- Member Exchange (LMX)?* Both the questionnaire and the interviews showed the willingness to change with regard to the Poli Op Naam. The majority of factors with regard to willingness to change and its antecedents attitude, subjective norm and perceived behavioral were rated positive (above neutrality) within both components of this research. In addition to this positive evaluation of willingness to change, this thesis presented some recommendations that could further enhance this willingness to change. Attitude towards the Poli Op Naam, subjective norm and perceived behavioral control all have a significant influence on one's willingness to change, where attitude is determined to be the most important predictor of one's willingness to change. Leader- Member Exchange (LMX) is positively related with one's willingness to change, but this relationship is not significant.



## 6. References

- Ajzen, I. 1991. The Theory of Planned Behaviour. *Organizational Behaviour and Human Decision Processes*. 50: 179-211.
- Ajzen, I., Madden, T.J. 1986. Prediction of goal directed behavior: Attitudes, intentions and perceived behavioral control. *Journal of experimental Social Psychology*. 22: 453-474.
- Armenakis, A.A, Harris, S.G., Mossholder, K.W. Creating readiness for organizational change. *Human relations*. 46: 681-703.
- Bandura, A. 1977. Self-efficacy: Towards a unifying theory of behavioral change. *Psychological review*. 84: 191-215.
- Barnard, C.I. 1938. *The functions of the executive*. Cambridge, MA: Harvard University Press.
- Bordia, P., Hunt, E., Paulsen, N., Tourish, D., DiFonzo, N. 2004. Uncertainty during organizational change: It is all about control. *European Journal of Work and Organizational Psychology*. 13: 345-365.
- Carr, D. K., Hard, K. J., Trahan, W. J. 1995. *Managing the change process: a field book for change agents, consultants, team leaders and reengineering managers*.
- Chawla, A., Kelloway, E.K. 2004. Predicting openness and commitment to change. *The leadership and organization development journal*. 25: 485-498.
- Cooper, D., Schindler, P. 2003. *Business research methods*. 8<sup>th</sup> edition: Mcgraw Hill companies
- Dansereau, F., Graen, G.B., Haga, W. 1975. A vertical dyad linkage approach to leadership in formal organizations. *Organizational Behavior and Human Performance*. 13: 46-78.
- David, D., Zaccaro, V., Stephen, J. 2007. Leadership: A critical historical analysis of leadership trait. *Historical perspectives in industrial and organizational psychology*. 383-405.
- Dirks, K.T., Ferrin, D.L. 2002 Trust in leadership: Meta analytic findings and implications for research and practice. *Journal of Applied Psychology*. 87: 611-628.
- Fairhurst, G.T, Chandler, T.A. 1989. Social structure in leader-member exchange interaction. *Communication Monograph*. 56: 215-239.
- Fiorelli, J.S, Margolis, H. 1993. Managing and understanding large systems change: Guidelines for executives and change agents. *Organization Development Journal*. 11: 1-13.
- Furst, S., Cable, D. 2008. Employee resistance to organizational change: Managerial influence tactics and Leader-Member Exchange. *Journal of Applied Psychology*. 93: 453-462.
- Goldstein, J. A far-from-equilibrium systems approach to resistance to change. *Organizational Dynamics*: 16-26.
- Graen, G.B., Liden, R., Hoel, W. 1982. Role of leadership in the employee withdrawal process. *Journal of Applied Psychology*. 67:868-872.
- Graen, G.B., Orris, D., Johnson, T. 1973. Role assimilation processes in a complex organization. *Journal of Vocational Behavior*. 3: 395-420.

- Graen, G.B., Novak, M., Sommerkamp, P. 1982. The effects of leader-member exchange and job design on productivity and satisfaction: Testing a dual attachment model. *Organizational Behavior and Human Performance*. 30: 109-131.
- Graen, G.B., Scandura, T.A., Graen, M.R. 1986. A field experimental test of the moderating effects of growth need strength on productivity. *Journal of Applied Psychology*. 71: 484-491.
- Graen, G.B., Scandura, T. 1987. Toward a psychology of dyadic organizing. *Research in organizational behavior*. 9: 175-208.
- Graen, G.B., Uhl-Bien, M. 1991. The transformation of professionals into self-managing and partially self-designing contributions: Toward a theory of leader-making. *Journal of Management System*. 3(3): 33-48.
- Graen, G., Uhl-Bien, M. 1995. Relationship based approaches to leadership: Development of the leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *Leadership Quarterly*. 6(2): 219-247.
- Greenalgh, T., Robert, G., MacFarlane, F., Bate, P., Kyriakidou, O. 2005. Diffusion of innovations in service organizations: Review and Recommendations. *The Millbank Quarterly*. 82 (4): 581-629.
- Hackman, J.R., Oldham, G.R. 1980. *Work redesign*. Reading, MA: Addison-Wesley.
- Hofmann, D.A., Morgeson, F.P., Gerras, S.J. 2003. Climate as a moderator of the relationship between leader-member exchange and content specific citizenship; Safety climate as an exemplar. *Journal of Applied Psychology*. 88: 170-178.
- Homan, T. 2005. *Organisatiedynamica*. Nederlands Academic Service.
- Hsieh, H. Shannon, S.E. 2005. Three approaches to qualitative content analysis. *Qualitative health research*. 15: 1277-1288
- Jaarverslag Obstetrie en Gynaecologie. 2006.
- Jaarverslag UMCG, 2006
- Judge, T.A., Thoresen, C.J, Pucik, V., Welbourne, T.M. 1999. Managerial coping with organizational change. A dispositional perspective. *Journal of Applied Psychology*. 84: 107-122.
- Katz, D., Kahn, R.L. 1978. *The social psychology of organizations*. 2nd edition. New York: John Wiley & Sons.
- Kim, J., Mueller, C. W. 1978. *Introduction to Factor Analysis. What it is and how to do it*. California: Sage Publications.
- Lawrence, P.R. 1954. How to deal with resistance to change. *Harvard Business Review*. 32:49-57.
- Leeuw, A.C.J., 1996. *Bedrijfskundige methodologie: management van onderzoek*. 3<sup>e</sup> druk
- Liden, R., Graen, G.B. 1980. Generalizability of the vertical dyad linkage model of leadership. *Academy of management journal*. 23: 451-465.
- Maurer, R. 1996. Transforming resistance. *Training & Development*. 50: 20-23.
- Meindl, J.R., Erlich, S.B., Dukerich, J.M. 1985. The romance of leadership. *Administrative Science Quarterly*. 30: 78-102.

Merron, K. 1993. Let's bury the term resistance. *Organization development journal*. 11: 77-86.

Metselaar, E., Cozijnsen, A. J. 2005. *Van weerstand naar veranderingsbereidheid over willen, moeten en kunnen veranderen*. (4e druk) Heemstede: Holland Business Publications.

Meyer, J. Herscovitch, L. 2002. Commitment to organizational change: Extension of a three-component model. *Journal of Applied Psychology*. 87: 474-487.

Miller, V.D., Johnson, J.R., Grau, J. 1994. Antecedents to willingness to participate in a planned organizational change. *Journal of Applied Communication Research*. 22: 59-80.

Pallant, J. 2005. *SPSS survival manual*. Open University Press: Berkshire U.K.

Piderit, S. K. 2000. Rethinking resistance and recognizing ambivalence: a multidimensional view of attitudes toward organizational change. *Academy of management review*. 25: 783-794.

Scandura, T., Graen, G.B. 1984. Moderating effects of initial leader-member exchange status on the effects of a leadership intervention. *Journal of Applied Psychology*. 69: 428-436.

Scott, S. 1993. *The influence of climate perceptions on innovation behavior*. Unpublished Ph.D. dissertation, Department of Management, University of Cincinnati.

Seers, A., Graen, G.B. 1984. The dual attachment concept: A longitudinal investigation of the combination of task characteristics and leader-member exchange. *Organizational Behavior & Human Performance*. 33: 283-306.

Slack, N., Chambers, S., Johnston, R. 2007. **Operations Management** (5th ed). Prentice Hall

Snyder, R.A., Bruning, N.S. 1985. Quality of vertical dyad linkages: Congruence of supervisor and subordinate competence and role stress as explanatory variables. *Group & Organization Studies*. 10: 81-94.

Stuart, E. 2005. *Veranderingsbereidheid door leiderschap: Is leiderschap de sleutel tot succesvol veranderen?* Thesis. Amsterdam: Vrije Universiteit.

Turban, D.B., Jones, A.P., Rozelle, R.M. 1990. Influences of supervisor liking of a subordinate and the reward context on the treatment and evaluation of that subordinate. *Motivation and Emotion*. 14: 215-233.

Van Dam, K., Oreg, S., Schyns, B. 2008. Daily work contexts and resistance to organizational change: The role of leader-member exchange, development climate, and change process characteristics. *Journal of Applied Psychology*. 57: 313-334.

Vecchio, R.P. 1982. A further test of leadership effects due to between-group and within-group variation. *Journal of Applied Psychology*. 67: 200-208.

Vecchio, R.P., Gobdel, B.C. 1984. The vertical dyad linkage model of leadership: Problems and prospects. *Organizational Behavior & Human Performance*. 34: 1-20.

Wakabayashi, M., Graen, G.B. 1984. The Japanese career progress study: A 7 year follow-up. *Journal of Applied Psychology*. 69: 603-614.



Watson, T.J. 1982. Group ideologies and organizational change. *Journal of Management Studies*. 19: 259-275.

Wissema, J. G., Messer, H. M., Wijers, G. J. 1996. *Angst voor veranderen? Een mythe! Of: hoe u veranderingsbereidheid op de werkvloer vergroot*. 7e druk. Assen etc.: Van Gorcum

## Attachment 1

Component	Cronbach's Alpha
Attitude - expected outcomes organization	0,577 to 0,625 (1 item excluded)
Attitude - expected outcomes work itself	0,573 to 0,592 (1 item excluded)
Attitude - affective reaction	0,744
Attitude – emotional commitment	0,759
Subjective norm	0,767
Perceived behavioral control - experience	0,598 to 0,664 (1 item excluded)
Perceived behavioral control - time/resources	0,655
Perceived behavioral control - complexity	0,699
Perceived behavioral control - timing	0,685 to 0,704 (1 item excluded)
Perceived behavioral control - management	0,869
Willingness to change	0,840
LMX	0,901
Quality	0,895

**Table 2:** Cronbach's alpha of different components of questionnaire

## Attachment 2

Factor	KMO
Attitude	,69
Subjective norm	,63
Perceived behavioral control	,72

**Table 3:** Kaiser-Meyer-Olkin criterion for factors attitude, subjective norm and perceived behavioral control

Items	Factor 1	Factor 2	Factor 3	Factor 4
Affective reaction 1	,388	,318	,556	
Affective reaction 2	,483	,324	,352	,530
Affective reaction 3		,674		
Affective reaction 4	,615	,318		-,334
Affective reaction 5		,682		
Emotional commitment 1		,362	,767	
Emotional commitment 2	,345			,408
Emotional commitment 3	,667		,514	
Emotional commitment 4			,837	
Outcomes organization 1		,716		
Outcomes organization 2	,830			
Outcomes organization 3		,540		,663
Outcomes organization 4	,821			
Outcomes Work itself 1		,769		,377
Outcomes Work itself 2			,587	,442
Outcomes Work itself 3				,855
Outcomes Work itself 4	,524			,508

**Table 4:** Factor analysis for Attitude: Rotation component matrix

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.  
 Rotation converged in 8 iterations.  
 Values less than 0,3 have been removed from the table.

Items	Factor 1
Subjective norm 1	,566
Subjective norm 2	,872
Subjective norm 3	,870
Subjective norm 4	,774

**Table 5:** Factor analysis for Subjective Norm: Component matrix

Extraction Method: Principal Component Analysis.  
1 component extracted.

Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Management 1	,678		,435		,434	
Management 2	,819				,313	
Management 3	,696			,308		
Management 4	,821					
Complexity 1	,754					
Complexity 2				,477		,651
Complexity 3	,417		,624			
Complexity 4	,379					,759
Experience 1					,857	
Experience 2		,827				
Experience 3	,365	,478			,655	
Experience 4		,666				
Timing 1		,674		,514		
Timing 2				,751		
Timing 3				,860		
Timing 4	,590			,382		-,319
Time and resources 1			,785			
Time and resources 2			,820			

**Table 6:** Factor analysis for Perceived Behavioural Control: Rotation component matrix

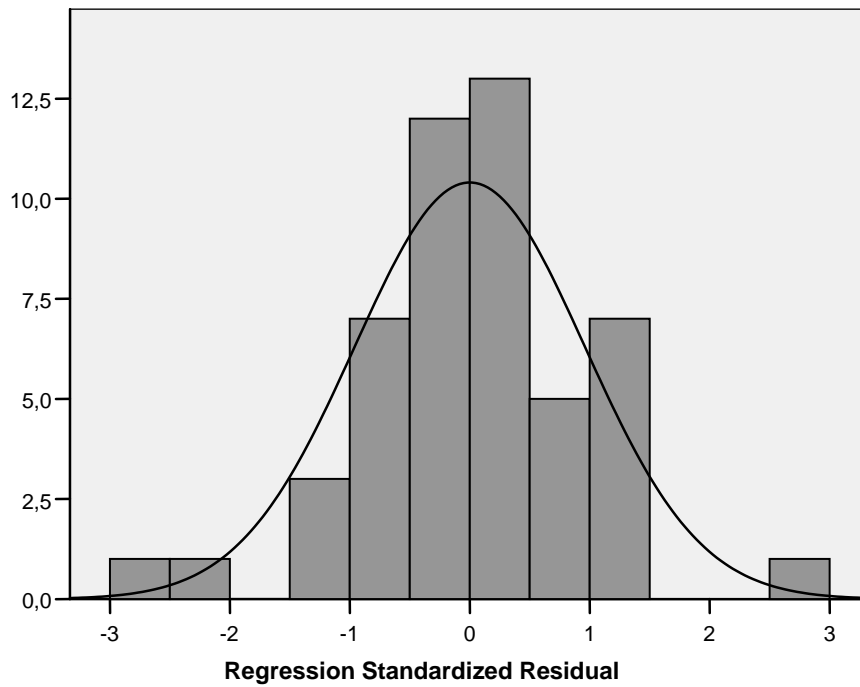
Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.  
Rotation converged in 9 iterations.  
Values less than 0,3 have been removed from the table.

### Attachment 3

Test of normality for hypothesis 1.

#### Histogram

Dependent Variable: Willingness to change

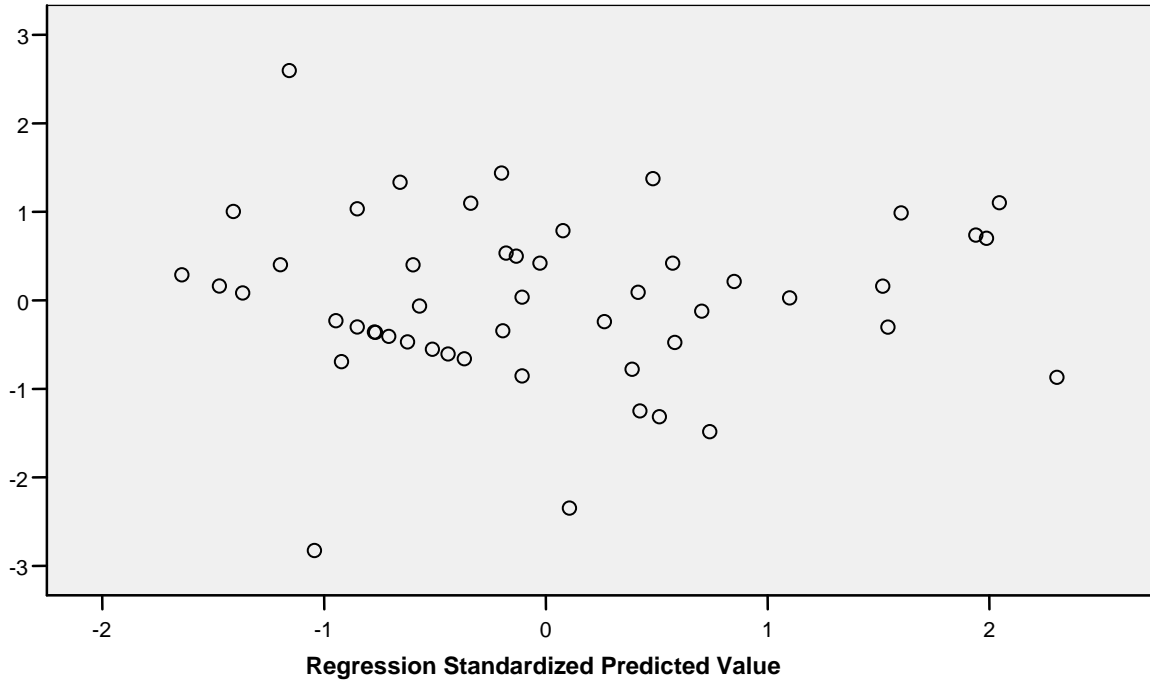


Mean = -9,69E-16  
Std. Dev. = 0,958  
N = 50

**Test of homoscedacity for hypothesis 1.**

**Scatterplot**

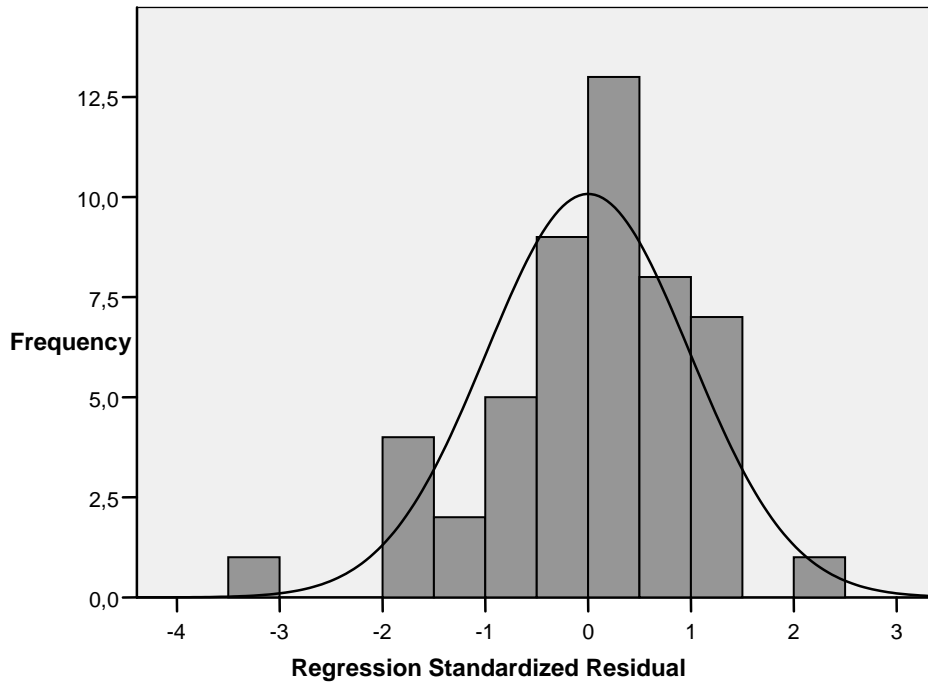
**Dependent Variable: willingness to change**



**Test of normality for hypothesis 2.**

**Histogram**

**Dependent Variable: willingness to change**

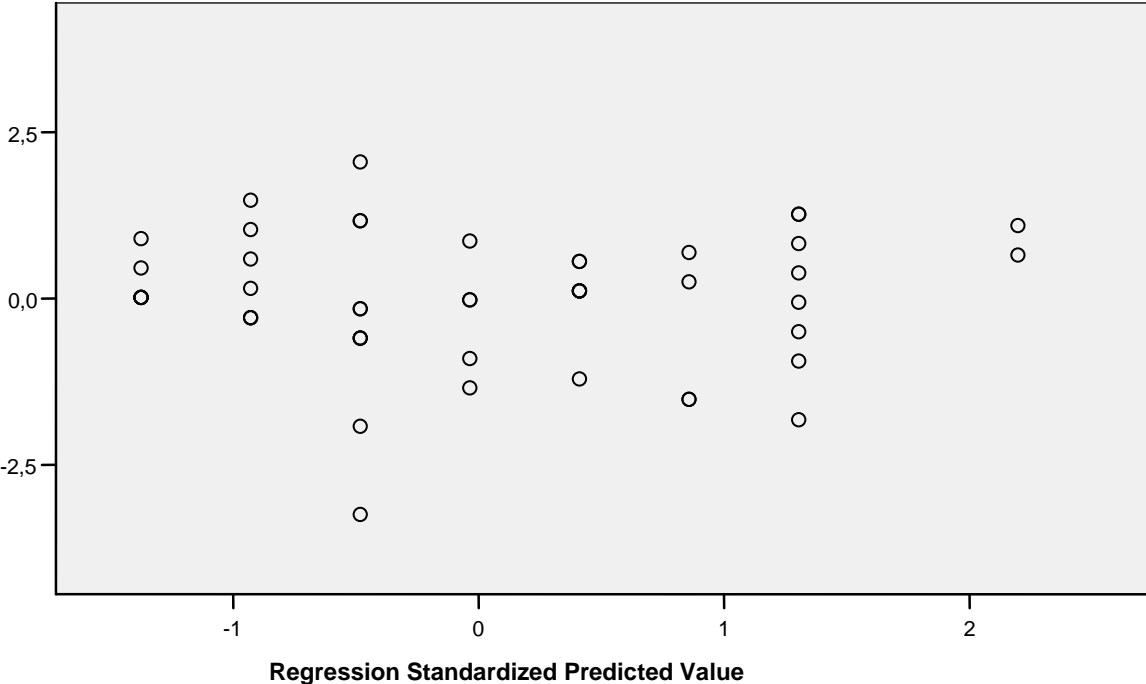


Mean =8,67E-17  
Std. Dev. =0,99  
N =50

Test of homoscedacity for hypothesis 2.

Scatterplot

Dependent Variable: willingness to change

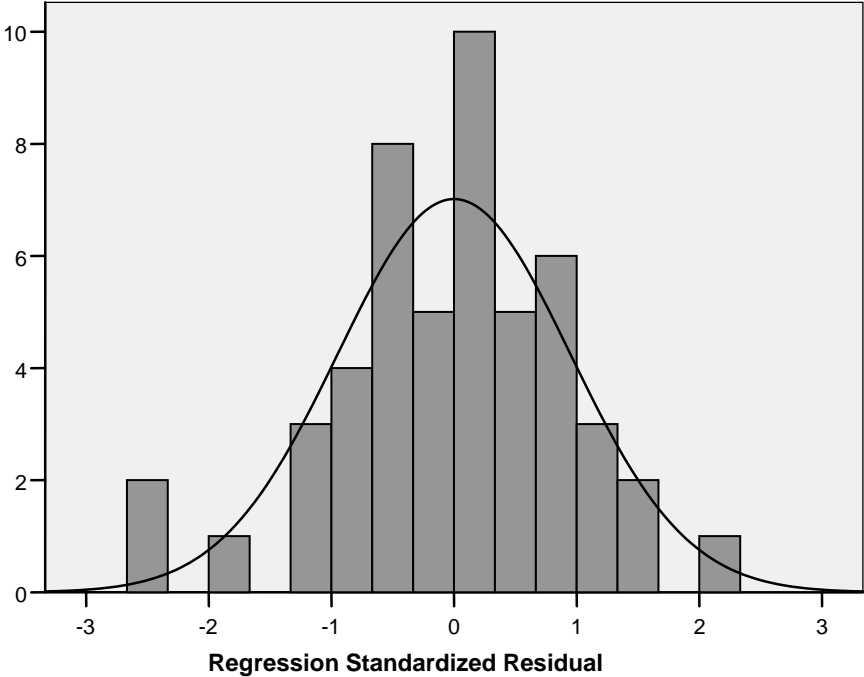




Test of normality for hypothesis 3.

Histogram

Dependent Variable: willingness to change

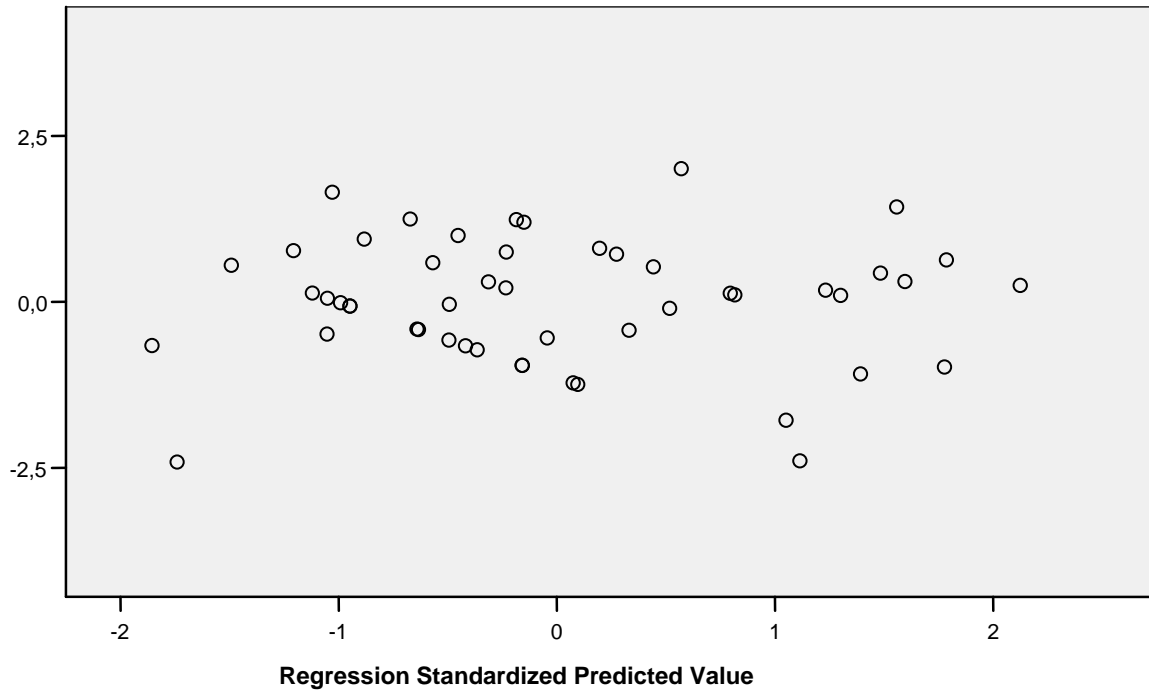


Mean = -6,04E-16  
Std. Dev. = 0,948  
N = 50

**Test of homoscedacity for hypothesis 3.**

**Scatterplot**

**Dependent Variable: willingness to change**



## Attachment 4

### Interview questions and preliminary codes.

Variables	Component	Questions	Answer possibilities	Codes	Respondents
Attitude	Advantage for department O&G	To what extent did you think the Poli Op Naam had an advantage for the department O&G and the UMCG as a whole?	Open answer	Consequences organization/department	AIOS, staff, registration assistants and nurses
Attitude	Advantage for the work itself	To what extent did you think the Poli Op Naam had an advantage for the work itself?	Open answer	Consequences work	AIOS, staff, registration assistants and nurses
Attitude	Affective reaction	Can you describe your affective/emotional reaction towards the Poli Op Naam and its implementation?	Open answer	Affective reaction	AIOS, staff, registration assistants and nurses
Attitude	Emotional commitment	To what extent did you feel emotionally committed towards the Poli Op Naam and its implementation?	Open answer	Emotional commitment	AIOS, staff, registration assistants and nurses
Subjective norm	Subjective norm	To what extent did you feel pressure from colleagues or management to cooperate with the Poli Op Naam and its implementation?	Open answer	Subjective norm	AIOS, staff, registration assistants and nurses
Perceived behavioural control	Management	Can you describe the management of the implementation of the Poli Op Naam, and your opinion on the management?	Open answer	Management	AIOS, staff, registration assistants and nurses
Perceived behavioural control	Timing	What did you think of the timing of the implementation of the Poli Op Naam?	Open answer	Timing	AIOS, staff, registration assistants and nurses

Perceived behavioural control	Time and resources	To what extent where their enough time and resources available for the implementation of the Poli Op Naam	Open answer	Time and resources	AIOS, staff, registration assistants and nurses
Perceived behavioural control	Complexity	To what extent was the Poli Op Nam and its implementation complex?	Open answer	complexity	AIOS, staff, registration assistants and nurses
Perceived behavioural control	Experience	To what extent do you have experience with change projects like the Poli Op Naam?	Open answer	Experience	AIOS, staff, registration assistants and nurses
Willingness to change	Willingness to change	To what extent where you willing to cooperate with the Poli Op Naam and its implementation?	Open answer	Willingness to change	AIOS, staff, registration assistants and nurses
LMX	LMX	How would you describe your relationship with your leader?	Open answer	LMX	AIOS, staff, registration assistants and nurses
LMX	LMX	To what extent did you relationship with your leader influence your willingness to change?	Open answer	LMX	AIOS, staff, registration assistants and nurses

## Attachment 5

### Original Dutch transcripts of presented quotes.

#### Attitude

##### Consequences for department O&G and UMCG

1a *"Je hebt grotere kans op het terugzien van patiënten en hebt minder dubbel werk".*

2a *"Nadeel van de Poli op Naam blijft toch dat wanneer er geen plaats is bij de arts van een patiënt hij alsnog bij een andere arts zal worden ingeroosterd. Tevens kunnen de Poli's nog steeds niet ver van tevoren worden ingeroosterd"*

3n *"De meerwaarde van de Poli op Naam is mij niet geheel duidelijk. Ik zal nog steeds dezelfde problemen met de kamerindeling hebben"*

##### Consequences for the work itself

4a *"We hebben als AIOS nu meer inzicht in ons medisch handelen"*

5r *"De nadelen zijn groter dan de voordelen omdat er nu veel meer agenda's handmatig moeten worden ingevoerd"*

##### Affective reaction

6a *"De Poli op Naam werd overwegend als positief ervaren"*

##### Emotional commitment

7r *"Omdat ik veel te maken heb met de gevolgen van de Poli op Naam voelde ik me erg betrokken bij de invoering ervan. Mijn collega's van de zorgadministratie zijn er echter weinig tot niet bij betrokken geweest".*

8s *"Mogelijk hadden we de andere stafleden meer moeten betrekken bij de invoering van de Poli op Naam"*

9a *"Veel Assistenten houden zich toch liever bezig met het medische in plaats van zaken zoals de Poli op Naam".*

#### Subjective norm

10r *"Het was duidelijk dat het dagelijks bestuur achter de Poli op Naam stond. Dit werd naar voren gebracht op het werkoverleg en op de overdrachtmomenten"*

#### Perceived behavioral control

##### Management

11a *"Het is moeilijk om wat te zeggen over de aansturing omdat deze moeilijk te omschrijven is. Er had in ieder geval wel een duidelijker aanspreekpunt moeten zijn."*

12s *"De aansturing hield vooral in mensen meekrijgen die zich op verschillende niveaus bevinden."*

##### Timing

13a *"Het had wat de AIOS betreft wel eerder gekund, zeker gezien het feit dat het verzoek er al langere tijd lag. Maar je bent nou eenmaal afhankelijk van de beschikbare technische middelen en mogelijkheden."*

14r *"Er speelden geen andere zaken die de invoering van de Poli op Naam in de weg konden staan."*

##### Time and Resources

15s *"De invoering van de Poli op Naam heeft uiteindelijk wel langer geduurd dan we in eerste instantie hadden gedacht. Het tijdspad was erg strak."*

### Complexity

16a "Voor de AIOS is de verandering echt minimaal. Hoogstens een naamsverandering. Voor de registratie assistenten is de verandering ook niet heel complex"

### Experience

17r "We hebben wel wat ervaring met veranderingen. We hebben het kleurensysteem gehad bijvoorbeeld."

### **Willingness to change**

18a "Er wordt al jaren gevraagd naar de Poli op Naam door de AIOS. Zo bekeken voelen ze zich wel betrokken en bereid om mee te doen"

### **LMX**

19s "Er zijn zoveel verschillende hoofden. Het is moeilijk voor medewerkers om hun leidinggevende te benoemen"

20s "Logischerwijs is het wel zo dat mensen die goed met hun leidinggevende overweg kunnen eerder bereid zijn hem of haar te helpen"

A = AIOS

S = Staff member

R = Registration assistant

N = Nurse

## Attachment 6

	N	Minimum	Maximum	Mean	Standard Deviation	Variance
<i>Attitude: Affective reaction</i>	50	3,00	5,00	3,796	0,556	0,309
<i>Attitude: Emotional commitment</i>	50	1,50	5,00	3,220	0,811	0,657
<i>Attitude: Expected outcomes for organization</i>	50	2,25	5,00	3,575	0,523	0,274
<i>Attitude: Expected outcomes for self/work</i>	50	1,50	4,00	2,950	0,544	0,296
<b>Attitude</b>	50	2,47	4,65	3,409	0,498	0,248
<b>Subjective norm</b>	50	3,00	5,00	3,770	0,560	0,313
<i>Perceived behavioral control: Experience with change projects</i>	50	1,50	4,25	3,000	0,625	0,390
<i>Perceived behavioral control: Time and resources</i>	50	1,00	4,00	2,310	0,735	0,540
<i>Perceived behavioral control: Complexity</i>	50	2,00	5,00	3,310	0,531	0,282
<i>Perceived behavioral control: Timing of change process</i>	50	2,00	4,75	3,470	0,557	0,310
<i>Perceived behavioral control: Management of change process</i>	50	1,50	5,00	3,260	0,674	0,454
<b>Perceived behavioral control</b>	50	2,33	4,33	3,154	0,437	0,191
<b>Willingness to change</b>	50	1,50	5,00	3,525	0,682	0,465
<b>LMX</b>	50	1,57	5,00	3,365	0,714	0,510

Figure 6: Values of all variables

## Attachment 7

Variable	$\mu$ women	$\mu$ men
<b>1.Attitude:</b> <b>Affective reaction</b>	3,747	4,050
<b>2.Attitude:</b> <b>Emotional commitment</b>	3,167	3,500
<b>3 Attitude:</b> <b>Expected outcomes organization</b>	3,547	3,718
<b>4.Attitude</b> <b>Expected outcomes</b> <b>Work/self</b>	2,940	3,000
5. Attitude	3,373	3,596
6.Subjective norm	3,738	3,938
<b>7. Perceived behavioural control:</b> <b>Experience with change projects</b>	2,923	3,406
<b>8. Perceived behavioural control:</b> <b>Time and Resources</b>	2,381	1,938
<b>9. Perceived behavioural control:</b> <b>Complexity</b>	3,292	3,406
<b>10. Perceived behavioural control:</b> <b>Timing change process</b>	3,458	3,531
<b>11. Perceived behavioural control:</b> <b>Management of change process</b>	3,304	3,031
12.Perceived behavioral control	3,148	3,188
13.Willingness to change	3,476	3,781
14. LMX	3,281	3,365

**Table 10:** Mean ratings for women and men on the different factors

Variable	t	df	Sig.	Mean difference	Standard error difference
<b>Perceived behavioural control:</b> <b>Experience with change projects</b>	-2,073	48	,044	-,484	,233

**Table 10.1:** Significant differences (2-tailed at the  $<.05$ ) in mean scores between women and men



## Attachment 8

Variable	$\mu$ AIOS	$\mu$ staff	$\mu$ registration assistants	$\mu$ nurses
<b>1. Attitude: Affective reaction</b>	3,775	4,083	3,675	3,600
<b>2. Attitude: Emotional commitment</b>	3,234	3,146	3,297	3,125
<b>3 Attitude: Expected outcomes organization</b>	3,578	3,729	3,469	3,542
<b>4. Attitude Expected outcomes Work/self</b>	2,984	2,958	2,813	3,208
5. Attitude	3,415	3,514	3,335	3,382
6. Subjective norm	3,922	4,167	3,406	3,542
<b>7. Perceived behavioural control: Experience with change projects</b>	2,984	3,292	2,828	2,917
<b>8. Perceived behavioural control: Time and Resources</b>	2,063	2,292	2,313	3,000
<b>9. Perceived behavioural control: Complexity</b>	3,218	3,500	3,281	3,250
<b>10. Perceived behavioural control: Timing change process</b>	3,688	3,479	3,328	3,250
<b>11. Perceived behavioural control: Management of change process</b>	3,186	3,542	3,219	3,000
12. Perceived behavioral control	3,135	3,324	3,069	3,093
13. Willingness to change	3,625	3,958	3,203	3,250
14. LMX	3,137	3,861	3,429	2,810

**Table 11:** Mean ratings for AIOS, staff, registration assistants and nurses on the different factors

Variable	Sum of squares	df	Mean square	F	Sig.
Subjective norm	4,687	3	1,562	6,737	,001
Willingness to change	4,525	3	1,508	3,800	,016
LMX	5,702	3	1,901	4,529	,007

Table 11.1: Significant differences (2-tailed at the  $<.05$ ) in mean scores between AIOS, staff, registration assistants and nurses

Functions	Mean difference	Sig.
AIOS-staff	-,245	1,000
AIOS-registration assistant	,516	,024
AIOS-nurse	,380	,635
Staff-registration assistant	,760	,001
Staff-nurse	,625	,076
Registration assistant-nurse	,135	1,000

Table 11.2: Post-hoc Bonferroni analysis for subjective norm

Functions	Mean difference	Sig.
AIOS-staff	-,333	1,000
AIOS-registration assistant	,422	,387
AIOS-nurse	,375	1,000
Staff-registration assistant	,755	,018
Staff-nurse	,708	,176
Registration assistant-nurse	,047	1,000

Table 11.3: Post-hoc Bonferroni analysis for willingness to change

Functions	Mean difference	Sig.
AIOS-staff	-,724	,032
AIOS-registration assistant	-,292	1,000
AIOS-nurse	,327	1,000
Staff-registration assistant	,433	,522
Staff-nurse	1,052708	,013
Registration assistant-nurse	,619	,311

Table 11.4: Post-hoc Bonferroni analysis for LMX

## Attachment 9

Variable	$\mu$ 0-10 hours	$\mu$ 11-20 hours	$\mu$ 21-30 hours	$\mu$ 31-40 hours	$\mu$ 41 hours or more
<b>1. Attitude:</b> <b>Affective reaction</b>	4,000	3,550	3,825	3,675	3,896
<b>2. Attitude:</b> <b>Emotional commitment</b>	4,000	3,094	3,5000	3,156	3,160
<b>3 Attitude:</b> <b>Expected outcomes organization</b>	3,750	3,375	3,656	3,438	3,650
<b>4. Attitude</b> <b>Expected outcomes Work/self</b>	3,000	3,063	2,781	2,813	3,010
5. Attitude	3,706	3,287	3,463	3,294	3,457
6. Subjective norm	3,000	3,438	3,375	3,594	4,090
<b>7. Perceived behavioural control:</b> <b>Experience with change projects</b>	3,000	2,813	3,063	2,781	3,110
<b>8. Perceived behavioural control:</b> <b>Time and Resources</b>	3,000	2,625	2,313	2,563	2,100
<b>9. Perceived behavioural control:</b> <b>Complexity</b>	3,000	3,125	3,469	3,313	3,330
<b>10. Perceived behavioural control:</b> <b>Timing change process</b>	3,000	3,094	3,469	3,531	3,590
<b>11. Perceived behavioural control:</b> <b>Management of change process</b>	3,000	3,000	3,313	3,250	3,340
12. Perceived behavioral control	3,000	2,965	3,215	3,146	3,204
13. Willingness to change	3,000	3,063	3,375	3,344	3,800
14. LMX	4,000	3,220	3,589	3,335	3,364

**Table 12:** Mean ratings for employees working for 0-10 hours, 11-20 hours, 21-30 hours, 31-40 hours and 41 or more hours.