

Leadership

in community pharmacies



A study on the influence of leadership on the organizational performance of community pharmacies and job satisfaction of pharmacy technicians, respectively

Student: Mirna C. Hessels, MSc
Coach: A.G. Andrei, MSc
Co-reader: Prof. Dr. S.R. Giessner
Student number: 490216

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Author: M.C. Hessels (490216)
Student Executive master bedrijfskunde
Rotterdam School of management
Erasmus University Rotterdam

Supervisor: A.G. Andrei, MSc
Department of Strategic Management and Entrepreneurship
Rotterdam School of Management (RSM)
Erasmus University Rotterdam

Co-reader: Prof. Dr. S. R. Giessner
Professor of Organizational Behavior and Change
Department of Organization and Personnel Management
Rotterdam School of Management (RSM)
Erasmus University Rotterdam

ABSTRACT

A survey-based, cross-sectional study to investigate the (in)direct relationship between leadership behavior on Patient Reported Experience Measures (PREM), a parameter used for firm performance within Dutch community pharmacies was performed. Postulated was that this relationship could be mediated via job satisfaction of moderated by ownership type. This study shows that leadership behavior is indeed positively and significantly associated with job satisfaction among pharmacy technicians. The relationship between transactional leadership and job (Unst. B 0,34 [0,08-0,33], $P < 0.001$), the unstandardized coefficients were lower than the respective coefficients in the models for transformational leadership (Unst. B 0,47 [0,35-0,58], $P < 0.001$). Therefore, it seems that transformational leadership scores indeed have more impact on both job satisfaction. No significant association between leadership behavior and PREM (transformational: (Exp (B) 0,57 [0,27-1,16], $P = 0,12$); transactional (Exp (B) 1,15 [0,69-1,79], $P = 0,65$), nor a mediation effect of job satisfaction is found. Interestingly, results show that ownership type of the pharmacy does not seem to moderate the effect of leadership behavior on either PREM or job satisfaction, but is independently, positively associated with PREM. In light of these results, further research should focus on ownership as mediating variable for the relation between leader behaviors and additional parameters for PREM to measure firm performance.

Keywords: Job satisfaction, ownership type, ownership type, pharmacist, community pharmacy, transformational leadership, transactional leadership, upper echelon theory.

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Rotterdam, July 2019

Mirna C. Hessels

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1. INTRODUCTION

Pharmacists are placed in a leading position without any managerial education (Pronk, Blom, Jonkers, & Bakker, 2002). A leading position does not necessarily make a person a good leader, therefore it is suggested that development of proper leadership skills is one of the driving forces for organizational success (Özer & Tinaztepe, 2014). How a manager should act or behave in order to run a firm successful and effective (van Knippenberg, van Knippenberg, De Cremer, & Hogg, 2004) and which specific personality subsets of leader behaviors influences this success is a widely studied topic (Ling, Simsek, Lubatkin, & Veiga, 2008), because proper leadership is seen as a problem solving solution (Alvesson & Spicer, 2012).

Within literature, the relationship between leadership and firm performance is not always drawn directly, but most frequently involves job satisfaction of employees (Peterson, Walumbwa, Byron, & Myrowitz, 2011). Job satisfaction is the major construct that is measured and is closely related to job happiness (Fisher, 2010). The opposite, job dissatisfaction, can be a negative predictor for firm performance, because it is related to stress, burnout, employee turnover which results in lower job performance, engagement and commitment (Gandi, Wai, Karick, & Dagona, 2011; Platis, Reklitis, & Zimeras, 2015). Besides tracking inventory and abide to licensing formalities, a pharmacist has the major task to effectively manage his/her staff (Birkinshaw, 2018; McKinlay, 2005; Rohrbeck & Kum, 2018). Due to the increasing complexity of pharmaceutical care, pharmacy technicians are asked to take over work that formerly belonged to the pharmacist, which increases their workload (Koehler & Brown, 2017). Besides leadership, it is believed that firm performance is influenced by environmental factors (Meyer & Dean, 1990; Ting, Azizan, & Kweh, 2015; Weinzimmer, 1997). As explained in appendix 1, different industry level factors have been reported to play an important role for community pharmacies in determining firm performance (Rohrbeck & Kum, 2018). Transformational leadership is believed to increase job satisfaction by encouraging employees to perform beyond expectations and motivate to participate in organizational performance (Judge, Bono, Thoresen, & Patton, 2001). Transactional leadership is believed to

enhance the job satisfaction by enhancing the commitment towards the organization.

Encouragement and a positive work attitude may increase the quality of work (Feenstra et al., 2016; Judge & Piccol, 2004), therefore it is thought that job satisfaction increases job performance (Judge et al., 2001).

Within the pharmacy there are broadly three types of ownership; independent, franchise or chain. Pharmacists working within a chain have to report to the headquarters and therefore are believed to experience barriers for implementation of a strategy and have a matrix of performance measures which limits their 'leadership freedom' (see appendix 1). This postulated moderation does not influence firm performance itself, but influences the relationship between firm performance and independent parameters, i.e. leadership behaviors.

This study provides a contribution to the existing body of literature about leadership by investigating how different styles of leadership behavior influence firm performance and job satisfaction, based on ownership type, within the Dutch pharmaceutical industry. The aim is to first determine what the influences of transformational and transactional leadership behaviors of a pharmacist are on the performance of Dutch community pharmacies. Additionally, to test whether there is a moderating effect of ownership type on the influence of this leader behaviors. Lastly, whether job satisfaction mediates this effect. The research question that is based on this objective, is articulated as follows: Does leadership behavior influence firm performance directly or indirectly within the community pharmaceutical industry and is this effect moderated via ownership type?

In order to properly provide answers on this main question, this study uses a questionnaire to test the theoretical assumptions made within the following chapters. Firstly, the theoretical background that undermines the formulated hypotheses in this thesis is given (chapter 2), ending with the constructed conceptual model. In chapter 3 the methodology used within this thesis is described. Chapter 4 describes the results and findings of the analyses done with the questionnaire. To end, the discussion section (chapter 5) describes the contributions and limitations of the research and leads for future research.

2. LITERATURE REVIEW AND THEORY

An average community pharmacy is a small organization employing an average of 11,2 Full Time equivalent (FTE) (Stichting Farmaceutische Kengetallen., 2017). Evidence suggests that inadequate leadership negatively influence the firm performance of small enterprises (Davies, Hides, & Powell, 2002). Therefore, in this thesis, it is examined which leadership skills of a pharmacist are effective to convert the community pharmacy towards a successful organization.

2.1 Transactional and transformational leader behaviors and firm performance

When pharmacists start working, they are around the age of 25 years old. During university, most attention goes to evidence-based medicine care and other forms of patient care (Capaciteitsorgaan, 2017). Because little attention is given to managerial education, most pharmacists lack the deep knowledge of financials. It is obvious that the complexity of managing a community pharmacy and colliding interests of myriad owners and stakeholders in a modern Dutch community pharmacy is demanding (Ministerie van Volksgezondheid Welzijn en Sport, 2016; Prahalad & Ramaswamy, 2004; Vries & Kossen, 2014).

The Upper Echelons Theory (UET) connects the vision, open mindedness and ability of a leader (pharmacist), to set limits for how well a team – and in turn – the organization (community pharmacy) can operate (Hambrick & Mason, 1984). Based on this theory, for example the educational background or age could affect the perception and vision of a pharmacist, and these personalized characteristics increase in importance based on the difficulty of the decision (Ling et al., 2008; Ting et al., 2015). In line, it is believed that leadership characteristics affect the firm performance directly (S. Nielsen, 2010).

Organizations need more adaptive and flexible forms of leadership, because the environment is changing with an accelerating rate (Bass, Avolio, Jung, & Berson, 2003). To measure which leadership behaviors are important for a pharmacist to durably lead his community pharmacy, focus within this thesis is on two commonly described leadership behaviors, transactional -and transformational leader behaviors. The first is often described as a managerial- and the latter as a

charismatic form of leader behavior (Barling, Weber, & Kelloway, 1996; Bass et al., 2003; Philip M. Podsakoff et al., 1990).

Firstly, Transactional behaviors are founded on an exchange process in which the leader provides rewards in return of the employees' effort. Transactional leadership might be positively correlated with firm performance, because these leaders clarify expectations, set frameworks, and compliment their employees for achieving results which positively contribute to higher levels of endeavor and output (Barling et al., 1996; Bass et al., 2003; Philip M. Podsakoff et al., 1990). There are three main sub constructs related to transactional leadership behavior; contingent reward, passive -, and active management by exception (Avolio & Gardner, 2005; Bass et al., 2003; P. M. Podsakoff, Todor, & Skov, 1982; Xirasagar, 2008). (1) contingent reward is a first-order transactional leader behavior construct that establishes follower credibility via clarification of performance expectations, and is sometimes used to singlehandedly describe transactional leadership (Philip M. Podsakoff et al., 1990) (2) Management by exception in a passive way, is a trait where the leader only acts when deviations from the expected norms and standards occur. Lastly, (3) management by exception in an active way, is a trait where a leader actively searches for possible deviations in order to preventively act before these expected deviations do occur. (Avolio & Gardner, 2005; Bass et al., 2003; Xirasagar, 2008).

Secondly, transformational leadership behavior encourages the employees' development. A leader does this by coaching and providing support and thus creating trust (Avolio & Gardner, 2005; Bass et al., 2003; Ling et al., 2008; P. M. Podsakoff et al., 1982). This leadership style consists of six key behaviors, (1) identifying and articulating a vision, in which new opportunities for the future are identified, and others are inspired with the leaders' vision for the future; (2) Providing an appropriate model, whereby the leader provides a role model to follow for others; (3) Fostering the acceptance of group goals, where the leader promotes cooperation among employees, among others by setting a common goal; (4) High performance expectations, in which the leader demonstrates his expectations for high performance; (5) Providing Individualized support, in which

a leader shows followers that he is concerned about their personal feelings and needs; (6) Intellectual Stimulation, in which the leader challenges his employees to re-examine basic assumptions about work (Avolio & Gardner, 2005; Bass et al., 2003; P. M. Podsakoff et al., 1982; Xirasagar, 2008).

Both transformational and transactional leaders are active forms of leadership because they intervene and try to prevent problems actively (Den Hartog, Van Muijen, & Koopman, 1997). Both leadership behaviors might therefore have a positive influence on firm performance. Transformational leaders were found to be more prone to optimize development and innovation, and not just achieve performance (Avolio & Bass, 1995). Additionally it is found that transformational CEO's are believed to enhance entrepreneurial creativity by being enthusiastic about innovation (Ling et al., 2008). In a simulated management game played by Master of Business Administration (MBA) students, the students that scored higher on transformational leadership style gained higher company profits than leaders that were mostly deemed transactional (Avolio, Waldman, & Einstein, 1988; Koene, Vogelaar, & Soeters, 2002). Similar results were found within a study where bank managers were found to have a better financial performance when considered mostly transformational rather than transactional (Steyrer, J., & Mende, 1994). Lastly, Bass (1985) postulated that transformational leadership also has an additional effect; it augments the impact of transactional leadership (Bass, 1985). This hypothesis was later partly confirmed by several studies that used transformational behavior characteristics as substitutional measures for transactional leadership (Howell & Avolio, 1993; Seltzer & Bass, 1990; Waldman, Bass, & Yammarino, 1990). However, the level of augmentation seems to be influenced by the implemented items to measure transactional leadership (Avolio & Bass, 1995). For example, Goodwin et al. showed that transactional leaders are more closely correlated with transformational leaders when they deal with intrinsic motivators (Goodwin, Wofford, & Whittington, 2001). Contingent reward, as a measure for transactional leadership, in fact has more similarities with transformational leadership, and therefore the augmentation effect of transformational leadership might be slightly

less (Avolio & Bass, 1995; Bass, 1985). However, to our knowledge, whether this statement holds true in community pharmacies has never been investigated, but it seems that transformational leadership is more strongly associated with firm performance than transactional leadership. This leads to the following hypotheses:

Hypothesis 1a: *Ratings of transformational leadership for pharmacists will positively predict community pharmacy's firm performance.*

Hypothesis 1b: *Ratings of transactional leadership for pharmacists will positively predict community pharmacy's firm performance but to a lesser degree than transformational leadership.*

2.2 Leadership behavior and job satisfaction

Next to the effects of leadership behaviors on job performance, it is important to investigate whether there are other consequences of proper leadership. The impact of transformational leadership behaviors has become a widely studied subject in the last three decades (Avolio & Bass, 1995; Lowe, Kroeck, & Sivasubramaniam, 1996). For example, in 1985, Bass et al. gathered several studies that found a positive relationship between leadership behaviors, employees' satisfaction and job performance (Bass, 1985). In line, (Howell & Frost, 1989) found that charismatic leaders had higher job satisfaction and eventually better job performance, compared to transactional leaders. However, different insights have led to understanding that these previous studies did not fully capture the total capacity of transformational leadership and state that the full potential can be investigated when the extra efforts of transformational leaders are taken into account (J. R. Graham & Harvey, 2001; J. W. Graham, Hunt, Baliga, Dachler, & Schriesheim, 1988; Philip M. Podsakoff et al., 1990) This aspect is also partly based on older studies, which stated that transformational leaders should act above routine directives (Katz & Kahn, 1978). Podsakoff et al. therefore, as previously described, distributed transformational leadership into six major components, taking into account these extra efforts (Philip M. Podsakoff et al., 1990). (Bycio,

Hackett, & Allen, 1995) found that scores on transformational leadership were strongly correlated to higher efforts, which was later found to also benefit firm performance (Sosik, Bruce, & Surinder, 1997). In 2009, a meta-analysis performed by De Groot et al also confirmed this strong correlation between charismatic leadership behaviors and job satisfaction (DeGroot, Kiker, & Cross, 2009). As for the healthcare sector, the same correlation between transformational work environments and job satisfaction have been found within a population of nurses (Failla & Stichler, 2008; K. Nielsen, Yarker, Randall, & Munir, 2009; Weberg, 2010). However, to our knowledge, this relationship has never been tested for community pharmacies, therefore the following hypothesis was formulated:

Hypothesis 2a: Ratings of transformational leadership for pharmacists will be positively related to ratings of job satisfaction within the Dutch community pharmacy.

Most studies that investigate leadership behaviors, prioritize transformational leadership over transactional leadership, as it is believed that transactional leadership only last shortly given the punishment aspects that come together with the reward (Naidu & Van der Walt, 2012; Saleem, 2015). Moreover, transactional leaders are believed to delegate their employees to perform in their preferred way, only to achieve maximum results (Kanungo N., 2001), resulting in higher voluntary job leave compared to employees with transformational leaders (Robbins, 2003). Still, the contingent rewarding system does set targets for employees which clarifies expectations and the forthcoming rewards (Bycio et al., 1995; Piccolo & Judge, 2004). Some employees value clear targets and clarifications, also resulting in higher job satisfaction. Therefore, it is believed that the effectiveness of both transactional and transformational leadership styles varies based on the specific field or industry in which they are executed (Epitropaki & Martin, 2005). Moreover, based on literature it cannot be stated that only one of both leadership styles benefits job satisfaction. As for the healthcare sector, transformational leadership seems to be more efficient than transactional leadership behavior (Failla & Stichler, 2008; K. Nielsen et al., 2009; Weberg, 2010). However, as

for H1a, this has never been tested for community pharmacies. Therefore, the following hypothesis was formulated:

Hypothesis 2b: *Ratings of transactional leadership for pharmacists will positively relate to ratings of job satisfaction but to a lesser degree than transformational leadership within the Dutch community pharmacy.*

2.3 Mediating effect of Job satisfaction and firm performance

Organ et al. reviewed empirical studies and stated that the job satisfaction can be seen as an important determinant of extravert transformational leadership behaviors (Organ, 1988)(Organ, 1989). Inversely, job dissatisfaction is strongly related to stress and burnout, which are indicators for decreased job performance (Gandi et al., 2011; Platis et al., 2015). Therefore, job (dis)satisfaction is seen as a key issue for healthcare professionals (Platis et al., 2015). Job dissatisfaction is closely related to the perception of the job which creates feelings of liking or disliking a job (Mowday and Steers, 1979; Munir & Rahman, 2016). Within the pharmaceutical care, dissatisfaction of employees could eventually lead to a decreased quality of delivered healthcare (Mowday and Steers, 1979; Platis et al., 2015). For long term financial performance, it is important to improve job commitment and reduce employee turnover (Fisher, 2010; Koehler & Brown, 2017b). A person leaving, leads to possibly negative effects on staff attitude and extra labor (Munir & Rahman, 2016). Leadership behavior in an organization might have a significant role in reducing stress which leads to (voluntary) employee turnover by enhancing or retaining interest and commitment of the employees (Andrews, Richard, Robinson, Celano, & Hallaron, 2012; Bass et al., 2003; Bass & Steidlmeier, 1999). Combined with the provided literature in chapter 2.1 and 2.2, some researchers believe that job satisfaction is a potential mediator of the relationship between transformational leadership behaviors and firm performance (Philip M. Podsakoff et al., 1990). However, to our knowledge, no studies have investigated whether this mediation effect is also seen

in community pharmacies. Furthermore, as we postulated that ratings of transactional leadership for pharmacists will positively relate to job satisfaction (H1b) and ratings of job satisfaction (H2b), it would be interesting whether job satisfaction also mediates the effect between transactional leadership and firm performance. Together, we formulated the following two hypotheses:

Hypothesis 2c: Transformational leadership will have a positive effect on firm performance, but is mediated via job satisfaction

Hypotheses 2d: Transactional leadership will have a positive effect on firm performance, but is mediated via job satisfaction

2.4. The moderating effect of organizational ownership

Whether the upper echelon characteristics or the firm-centric characteristics influence the overall performance and growth of a small enterprise, is still disputed (Bino Paul, G.D.; Anantha Padhmanabha, 2017; Hambrick, 2007). The firm-centric view encompasses factors such as the abilities of the business and the opportunity environment (Bino Paul, G.D.; Anantha Padhmanabha, 2017). To compensate for the lower margins Dutch pharmacists receive for providing prescription medicines, a trend is seen towards merging of separate pharmacies or pharmacies joining a pharmacy chain (Rabobank, 2019). Business clustering is prevalent in almost all industries, because it gives competitive advantages which fosters efficient production (Bino Paul, G.D.; Anantha Padhmanabha, 2017). The community pharmacy itself can be seen as a small organization, but the ownership type can differ. There are three main pharmacy ownership types as shown in the figure below (Stichting Farmaceutische Kengetallen., 2017).

1. A pharmacist is the owner of a pharmacy (251)
2. A pharmacist is the owner of a pharmacy but buys a franchise formula (1148)
3. The pharmacy is owned by a chain and the pharmacist runs the pharmacy (590)

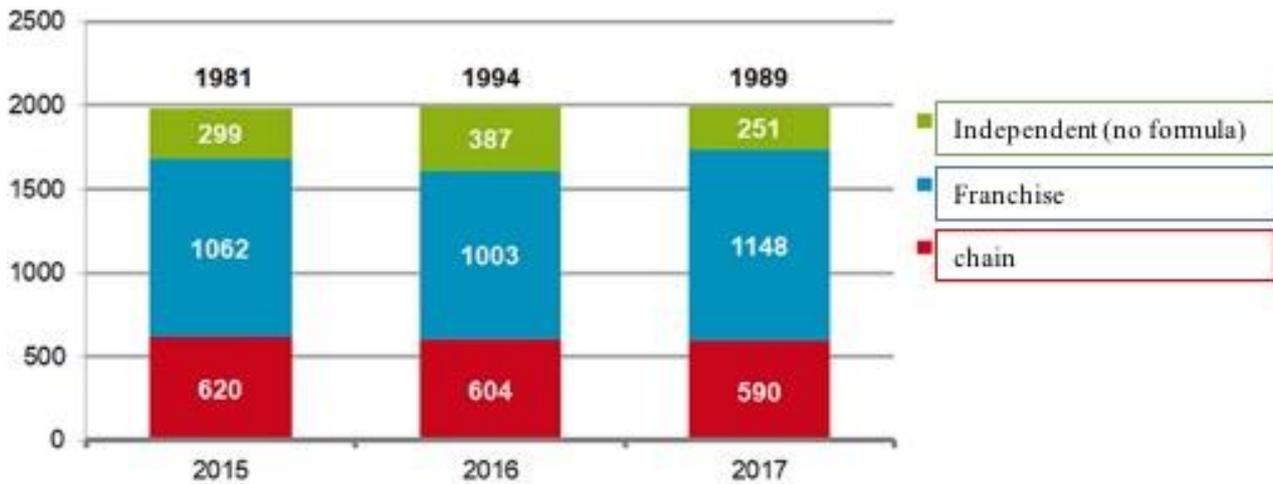


Figure 1; The Netherlands pharmacy ownership development; Pharmacies in ownership of an individual (no formula), green; Pharmacies in ownership of an individual (franchise formula), blue; Pharmacies in ownership of a chain, red (Stichting Farmaceutische Kengetallen., 2017)

Organizational outcomes are influenced by the product of the psychological and observable values and cognitive basis of the top management team (Meyer & Dean, 1990). When a community pharmacy belongs to a chain, it belongs to a bigger organization, which implies that there are other upper echelons within the organization in the headquarters making the strategic decisions. The deregulation of pharmacy ownership has led to a decrease in total amount of pharmacies, an increase in size and an increase in the number of pharmacies owned by a chain (McKinlay, 2005). Pharmacists who work at a chain-pharmacy have a stable income and might make other decisions compared to pharmacist whose decisions directly influence their income. Prior studies have suggested that the impact of leadership behavior may decrease as organizational size increases (Koene et al., 2002; Vaccaro, Jansen, van den Bosch, & Volberda, 2012). The objective choices a pharmacist can make are more limited when a pharmacist works in a chain-pharmacy. In fact, in this situation he is in middle management of a bigger organization. From the middle management position, a pharmacist is expected to run the pharmacy while the main strategic decisions are made by the ‘upper echelons’ of the headquarters (Hambrick, 2007; Hambrick & Mason, 1984). The ownership of a chain could have a positive effect on the firm performance, because many bureaucratic matters and strategic choices have been arranged through headquarters. The pharmacist

has to spend less time making strategic decisions and filling out (governmental) paperwork and can use this time on running the pharmacy (McKinlay, 2005). On the other side, the freedom of choice may be limited. Pharmacists within these chains are expected to encounter more difficulty in initiating change, this may imply that the effect of leadership behavior on firm performance is moderated by the ownership type.

Extrapolating the abovementioned findings to community pharmacies, it is expected that working in a community pharmacy belonging to a chain might have a neutralizing effect on the impact of direct leadership behavior by a pharmacist. Of note, this does not influence the firm performance of this community pharmacy, but only limits the amount of strategic choices a pharmacist can independently make. Accordingly, the following hypotheses were formulated:

Hypothesis 3a: *Ownership type moderates the pre-hypothesized positive relation between transformational leadership score and financial performance in the Dutch pharmaceutical industry, such that for chain-owned pharmacies the influence of leadership on financial performance is reduced.*

Hypothesis 3b: *Ownership type moderates the pre-hypothesized positive relation between transactional leadership score and financial performance in the Dutch pharmaceutical industry, such that for chain-owned pharmacies the influence of leadership on financial performance is reduced.*

2.5. Conceptual model

The focus was on pharmacists (leaders), and pharmacy technicians (employees) who work in Dutch community pharmacies with different ownership types. The conceptual model is shown in figure 2.

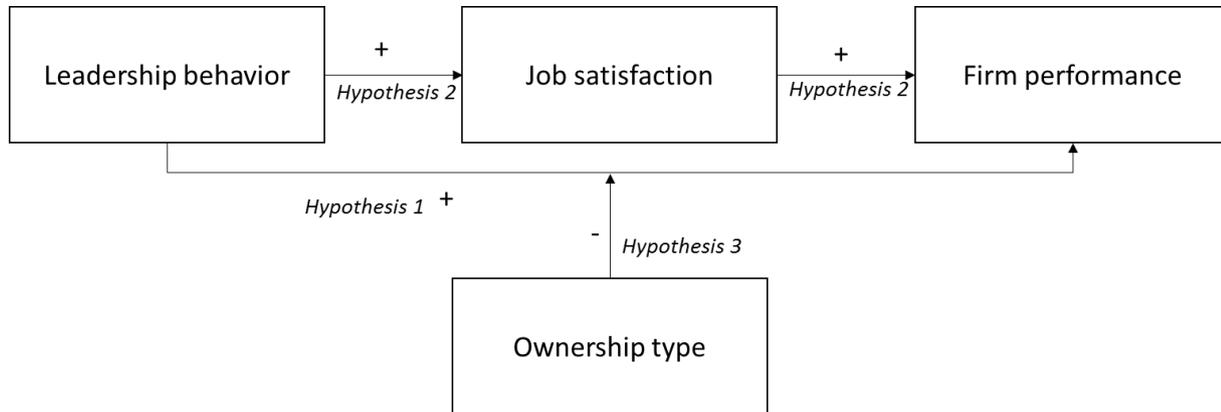


Figure 2: Conceptual relationship between leader behaviors and financial firm performance. This effect can be mediated by job satisfaction of employees or be moderated by ownership type.

A pharmacist is believed to positively influence firm performance directly or via the mediator job satisfaction. Being part of a chain could limit the strategic choices of a pharmacist, suggesting ownership type could moderate the relation between leadership behavior and firm performance (Bass et al., 2003; Hambrick, 2007; Meyer & Dean, 1990; Philip M. Podsakoff et al., 1990)

The intended contribution of this research was to (1) find the effect of leadership on a community pharmacies firm performance; (2) explore the moderating effect of ownership type on the direct positive effect of pharmacists' leader behaviors on firm performance, (3) find a possible mediating effect of job satisfaction. Lastly, explore the positive effect of the perception of pharmacists' leadership on job satisfaction by pharmacist technicians.

3. METHODOLOGY

In this chapter, the applied method of research is described to elaborate the process of testing the hypotheses formed in chapter 2 in this study. This chapter contains information about the sample characteristics, data collection, measurement of constructs, followed by detailed information about the statistical analyses performed.

3.1 Sample

This study consists of empirical research, where both interviews and questionnaires are used to approach the previously formulated hypotheses in this thesis. Data were collected from community pharmacists and pharmacy technicians who work in a Dutch community pharmacy located throughout the Netherlands. In 2017, community pharmacies - franchise organizations (1184), pharmacies that are part of a chain (590) and pharmacies that are owned by entrepreneurial (251) pharmacists - were employing an average of 11,2 full-time equivalents (FTE) (Stichting Farmaceutische Kengetallen., 2017), of which on average 5,6 FTE pharmacy technicians (Griens, Kroon, Lukaart, & Vaart, 2018; Stichting Farmaceutische Kengetallen., 2017). Despite the fact that the chain module differs in terms of support from the headquarters, all pharmacies are considered similar in terms of formal rules, (governmental) norms and regulations, insurer's rules, job specifications, education and reward systems. By doing the research within a specific branch, internal validity is considered higher than investigating different branches (Judge & Piccol, 2004). The sample characteristics are listed in table 1 sample characteristics.

3.2 Data collection

3.2.1. Procedure

3.2.1.1. Interviews

The interview format and the elaboration of the interviews can be found in

Appendix 2: Format for semi-structured **interviews**. The interviews were conducted face to face with 6 pharmacists within the Netherlands. The goal of the interviews was to determine whether there are any aspects within the conceptual model that are not yet accounted for. These interviews provide anecdotal evidence concerning the link between leadership behavior and the financial firm performance. The advantages of these semi-structured interviews were flexibility in sequencing the questions, details and the possibility to rephrase questions. These interviews offered the opportunity to test and rephrase the survey questions, and gave an indication of the likelihood that the constructs suggested within the conceptual model might actually hold true in practice. At the start of each interview, the pharmacists were ensured anonymity. Details of the interviewed pharmacists are listed below. Pharmacist 1, 3 and 5 worked at a chain, whereas pharmacist 2 was working at a secondment agency, pharmacist 4 was a registered pharmacist working for a ‘non-chain pharmacist’ and 6 was in training to become a registered pharmacist in a pharmacy not affiliated to a chain.

Table 3.2.1. Information about the interviewed pharmacist

Person	Age	Gender	Position	Ownership type
1	58	F	Senior team manager/ registered pharmacist	Chain
2	41	F	Registered pharmacist (Interim)	Interim
3	28	F	Second pharmacist (APIOS)	Chain
4	39	F	Registered pharmacist	Franchise
5	25	F	Second pharmacist, (APnIOS)	Chain
6	27	F	Second pharmacist (APIOS)	Entrepreneur

3.2.1.2. Survey

In this thesis, two different self-administered web-based surveys (SurveyMonkey) were used to measure self-reported leadership style and firm performance of the pharmacist, and perceptual

leadership style reported by the pharmacy technicians on the pharmacist, and personal job satisfaction and happiness, respectively. The objective of this study was to describe the self-perception of leadership styles among pharmacists and to determine the effects of leadership styles on firm performance and job satisfaction. To cope with space constraints in the survey form, the survey was adapted for use with the target group based on the outcomes of pilot interviews as described above. Also, a preliminary version of this survey was handed out to several pharmacists and pharmacy technicians. They were asked to evaluate both the overall concept of questions and whether questions could possibly be misunderstood or needed improvement. It must be noted, however, that the answers to the questions were not used for preliminary testing.

Distribution of the survey is done via a two-step approach. At first, the surveys were posted on intranet, an online (information) platform accessible for pharmacists and pharmacy technicians working at PharmaLead and sent via e-mail to work-groups of the Vereniging van Jonge Apothekers (VJA). Since the response rate was insufficient with the first approach, a personal approach was applied. All pharmacists and pharmacy technicians within the author's personal LinkedIn were selected based on job title and current work place. All pharmacists and pharmacy technicians received a personal message with the request to fill in the survey and forward it to their pharmacy technicians. Also, separately, pharmacy technicians received the request to fill in the survey and forward it to their leading pharmacist. In total 247 pharmacists' technicians and 176 pharmacists have started with the survey. All participants who did not complete the survey for >30% were excluded. In total, 92 pharmacists and 79 pharmacy technicians completed the survey and were eligible for further research.

3.3 Measurements of the constructs

3.3.1. The independent variable

To determine which style a leader has, a Dutch translation of the questionnaire from the study of Podsakoff et al (1990) was used (Philip M. Podsakoff et al., 1990). This test measures the operating transformational and transactional leadership theories (Den Hartog et al., 1997, 1997; Eriksson,

2015; Northouse, 2010). Pharmacists were asked to evaluate how they engage in characteristics of transformational leadership and on transactional leadership on a scale ranging from 1 ('do not agree at all') to 7 ('do totally agree'). Pharmacy technicians were asked to rate their pharmacist on the same scales, ranging from 1 ('do not agree at all') to 7 ('do totally agree'). The main difference was that pharmacists were asked to answer in the 'I-form' and pharmacy technicians in the 'he/she form' (Philip M. Podsakoff et al., 1990). Within this thesis, six measures that have been identified as important for transformational leadership behavior, were measured:

- (1) *Identifying and Articulating a Vision*- five questions are used to measure the leader's capabilities at identifying new opportunities for his/her pharmacy;
- (2) *Providing an appropriate model* – Is measured with three items to measure the pharmacists' behavior on setting examples for his/her employees;
- (3) *Fostering the acceptance of group goals* – four questions were asked to measure the behavior of the leader aimed at promoting cooperation among employees and fostering group goals;
- (4) *Providing Individualized Support* - four questions were asked to measure the amount of individualized support a leader provides among his/her employees. Two questions were framed in a reversed manner;
- (5) *Intellectual Stimulation* – four questions were included within the questionnaire to measure whether the leader challenges his/her employees to think outside of the box, and
- (6) *High performance expectations* – Three questions were asked to measure whether the leader is stimulating his/her employees to always strive for best results.

To measure Transactional leader behavior, *Contingent reward behavior* is used because it is a first-order transactional leader behavior construct. Also, it was found that contingent reward is more valid as a proxy for transactional leadership than the previously mentioned *management by exception*. - this construct is measured by 5 questions, one of which is a reversed question.

In the survey, items belonging to different measures were mixed to avoid stereotype answering.

Also, to improve the validity and consistency, reversed questions were used. These latter questions

were tested for consistency with their respective counter questions and excluded before entering further analyses to avoid multicollinearity (Forza, 2002).

3.1.2. The dependent variables

Pharmacists were asked different questions about firm performance. Pharmacy technicians were asked to evaluate happiness and job satisfaction on a scale ranging from 1 ('totally disagree') to 5 ('totally agree').

3.1.2.1 Pharmacists

Firm performance

Firm performance is affected by the characteristics of the pharmacist, i.e. his/her education and experience (Hambrick & Mason, 1984). To assess the impact of leadership on firm performance, different parameters are asked in the survey. To make a distinction between actual absence of answers versus user missing, the option 'I don't know' was added as an additional option to the questions of firm performance (listed below). Including this option denotes the fact that the respondent is aware of the question, but intentionally answered the option of not knowing the answer, rather than just skipping the question unintentionally or intentionally. The questions used are based on literature and the interviews done with the pharmacists, an overview of the Dutch questionnaire, including all answer options is listed in Appendix 4: Survey for pharmacists and

Appendix 5: Survey for pharmacy technicians.

Customer satisfaction. Within the community pharmacies, customer experience is measured annually via the Patient Reported Experience Measures (PREM), which gives an indication of how well the patients experience the pharmaceutical care (Amini & Kruijtenbosch, 2013; Griens et al., 2018; KNMP, 2018a; Pronk et al., 2002). For pharmacists, among others the PREM-score is a factor which determines the reimbursement tariff for the following year and thus influences financial performance for the following year. In every pharmacy, details on PREM are readily available; every pharmacist can see the actual percentage of PREM in combination with the overall national mean score. In the questionnaire pharmacists were asked to answer how the PREM of their pharmacy relates to the national average score; option 1 ‘PREM is average/below average’, option 2 ‘PREM is above average’.

Key performance indicators; Policy related to Key performance indicators is important to meet the requirements of the government policy and the Royal Dutch Pharmacists Association (Koninklijke Nederlandse Maatschappij ter bevordering der Pharmacie, KNMP) which are important for long term success of a pharmacy (KNMP, 2018a). Overall, three questions were asked about KPIs; ‘How does the pharmacist inform the team about the current KPIs?’, ‘Which team players are aware of the current KPIs?’, ‘How often, the KPIs are being revised?’.

Earnings Before Taxes and Amortization (EBITA), operational profit compared to revenue is a profitability measure and can be influenced by either internal or external ownership (Hambrick, 2007; Meyer & Dean, 1990; Weinzimmer, 1997). This is important, because it gives an indication of the profit from the pharmacists core business, operations, excluding deductions (Sheela, 2012). Target setting; objectives for adequate firm performance is determined by organizational profitability, variation in profitability, growth and survival (Hambrick, 2007; Meyer & Dean, 1990). Revenue performance is important for long term financial performance (Voss & Voss, 2012). The pharmacists were asked information about ‘the EBITA as opposed to total revenue’.

Personnel costs; Percentage costs as opposed to labor compared to revenue is an indicator for firm performance. Dissatisfied labor gives higher labor costs due to higher revenue ratios and lower job performance (Judge et al., 2001). Pharmacists were asked for the ‘Percentage of personnel costs as opposed to the total expenses of the pharmacy’.

3.1.2.2 Pharmacy technicians

Job satisfaction

Employees are the most valuable resources a community pharmacist has. To measure Job satisfaction, a total of six questions with the 5-point Likert scale, 1 being ‘totally disagree’ and 5 being ‘totally agree’, were used based on the study of Wood et al (1986).

One of the last questions within the survey of pharmacy technicians was to ask whether they would recommend their workplace to another pharmacy technician on a scale from 1-10 and an open-ended box in which was asked to fill in the main reason.

Happiness: Happiness is a measure related to overall satisfaction and stress (Veenhoven, 2003). To measure Happiness, a total of two questions ranging from 1-10 were asked. The questions can be found in part 4 appendix 5.

3.3.3. Moderating variable

Ownership type. Ownership type is considered a moderating factor for the influence a pharmacist’s leadership style can have on firm performance (Salancik & Pfeffer, 2018). This is measured by asking the pharmacist in which type of community pharmacy they operate; independent, franchise or belonging to a chain.

3.3.4. Control variables

Gender. This study controls for gender, as previous research found that gender could influence firm performance based on the shareholder protections of the country (Meyer & Dean, 1990; Post & Byron, 2015).

Age. Previous literature has found that age is an important characteristic of a leader which is significantly and positively related to future firm performance (Ali & Zhang, 2015; Wang, Holmes, Oh, & Zhu, 2016) (Meyer & Dean, 1990).

Shortage of Staff: Within the interviews, the pharmacists conclude that there currently is a shortage of qualified labor within the pharmacy. To measure this, the current number of Fulltime equivalent (FTE) is asked as opposed to the qualified labor working within the pharmacy in idealized situation (Capaciteitsorgaan, 2017). Human Resource management questions related to absence and sick leave within the pharmacist questionnaire measure the policy how pharmacists handle sick leave.

Education. Previous literature has found that formal education is an important characteristic of a leader which is significantly and positively related to strategic actions firm performance (Ali & Zhang, 2015; Meyer & Dean, 1990; Wang et al., 2016).

Role within pharmacy. The role of a pharmacist within a pharmacy can differ and this determines the responsibilities he/she has. Also, the position and role of a pharmacy technician can differ.

Context of pharmacy: As previously indicated, pharmacies are comparable in many aspects, even the activities in most pharmacies are similar. Nevertheless, besides pharmacy size and ownership type, the main difference in activities is due to the type of pharmacy (community, hospital, institutional or polyclinic) (Capaciteitsorgaan, 2017). The context in which a pharmacy operates might influence both firm performance and job satisfaction and is therefore included in the analysis as control variable.

3.4 Analyses

Statistical analyses were performed using IBM SPSS Statistics 23.0 for Windows (SPSS Inc., Chicago, IL, USA). Dichotomous and ordinal data were presented as number of participants with the respective percentages. Overall, for all tests in this study, a two-sided P-value <0.05 was considered statistically significant.

3.4.1. Assumption testing

After halting the questionnaires, all obtained data was investigated. First, all incomplete entries (<30% responses) were removed from the dataset as previously described. Next, outlier analysis was performed, but no outliers were detected. Therefore, all remaining subjects were found to be eligible for further analysis. Lastly, to test the reliability of the results generated through the use of the non-parametric and parametric tests in this thesis all assumptions of the respective tests were tested (Field, 2013). Importantly, because the required sample size of at least 300 participants was not met, skewness and kurtosis of all mean scaled variables were tested. As the skewness and kurtosis values range between -2 and +2 it can be concluded that the assumption of normal distribution was not violated (George & Mallery, 2019). Furthermore, all other required assumptions were met.

3.4.2. Principal component analyses

Since leadership factors show some conceptual redundancy, to determine which items are strongly related, a principal component analyses (PCA) is performed for the different items measuring transformational leadership and contingent reward measuring transactional leadership.

Before entering PCA, it was checked whether the reversely phrased questions indeed reflected their pre-hypothesized counter questions by testing correlation. If these reversely phrased questions indeed reflected their counter questions, the reverse questions were excluded. Next, a correlation matrix of all variables is created to validate the pre-existing literature-based components in the questionnaire that was carried out under pharmacists. First, it was checked whether the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) value was $>0,70$. Next, it was checked whether individual questions indeed scored a loading of $>0,40$ on their pre-hypothesized component of leadership. Lastly, if an individual question scored high loadings between different components ($>0,40$), the respective question was removed and the PCA was performed again.

The six scales measuring aspects of transformational leadership and one scale measuring transactional leadership were included in a principal component analysis with oblique rotation

(Oblimin with Kaiser normalization) and by evaluating the internal consistency of the scales calculating Cronbachs alpha's (Koene et al., 2002).

The component matrix for pharmacists identified the expected components described in previous literature (Philip M. Podsakoff et al., 1990). Several questions showed high loadings between different components and were therefore eliminated before further analysis. In order to be able to compare the leadership styles reported in both the pharmacists' questionnaire and the pharmacy assistants' questionnaire, the same questions were eliminated in the pharmacy assistants' database and for both cohorts, the mean scores for each identified factor were used, instead of the components scores.

3.4.3. Binary logistic regression analysis

Since the abovementioned questions regarding firm performance under pharmacists were divided into categories, we were not able to use a parametric regression test. For example, customer satisfaction, measured in terms of PREM, was asked on an ordinal scale ('below average', 'average' or 'above average'). However, because 'below average' and 'average' showed similar comparisons with the option 'above average' in preliminary tests, together with the fact that it is highly unlikely for a pharmacist to score exactly average (elaborated in discussion section), we decided to combine 'below average' with the group of 'average' and made it a dichotomous scale. Therefore, binary logistic regression is conducted. Also, the pre-hypothesized moderation variable of ownership type will be added separately into the analysis. Lastly, in order to test for potential effect moderation, a multiplicative interaction term between ownership type and leadership type was added to the last model to be able to interpret the results more carefully. Other than the fact that this study might not have sufficient power, all assumptions were met. This will be further discussed in the Discussion section of this thesis.

3.4.4. Hierarchical linear regression analysis

In the database of the pharmacy assistants, the dependent variables job satisfaction and happiness could be considered continuous variables, as they scored their answers on a 5-point Likert scale. Therefore, we were able to use parametric regression tests in this population. Univariable linear

regression analyses were used to investigate the association of the control variables and the independent variables with job satisfaction and happiness. To adjust for possible confounders, various stepwise multivariable models were built. Variables were considered possible confounders when they showed a significant association with the dependent variable (job satisfaction or happiness) in univariable analysis, or when an association has been reported in literature. Also, the pre-hypothesized moderation variable of ownership type will be added separately into the analysis. Lastly, in order to test for potential effect moderation, a multiplicative interaction term between ownership type and leadership type was added to the last model to be able to interpret the results more carefully.

4. RESULTS

This chapter elaborates the analytical approach and describes the results from these analyses.

4.1 Descriptive Statistics

Table 1: Summary of sample characteristics

	Pharmacist	Pharmacy technician
<i>Started the survey</i>	176	247
<i>Filled in >50%</i>	92 (52%)	84 (34%)
<i>Completion rate</i>	52,3%	34,0%
<i>Woman</i>	62 (67.4%)	77 (91.7%)
<i>Age</i>		
<i><20</i>	0	1 (1.2%)
<i>20-30</i>	46 (50%)	40 (47.6%)
<i>30-40</i>	29 (31.5%)	11 (13.1%)
<i>40-50</i>	10 (10.9%)	15 (17.9%)
<i>50-60</i>	4 (4.3%)	14 (16.7%)
<i>60-65</i>	3 (3.3%)	3 (3.6%)
<i>Pharmacy owner</i>	6 (6.5%)	
<i>Community pharmacist</i>	40 (43.5%)	
<i>Second Pharmacist</i>	46 (50%)	11 (13.1%)
<i>Pharmacy technician</i>		56 (66.7%)
<i>Pharmacy technician +</i>		17 (20.4%)
<i>Regular Community pharmacy</i>	70 (76.1%)	48 (57.1%)
<i>Policlinic pharmacy</i>	14 (15.2%)	28 (33.3%)
<i>Institution pharmacy</i>	6 (6.5%)	3 (3.6%)
<i>Hospital pharmacy</i>	2 (2.2%)	5 (6%)
<i>Ownership type</i>		
<i>Independent</i>	53 (57.6%)	43 (51.2%)
<i>Franchise</i>	15 (16.3%)	35 (41.7%)
<i>Chain</i>	24 (26.1%)	6 (7.1%)

In the present study, we included 92 pharmacists (67.4% female) and 84 pharmacy technicians (91.7% female). The completion rates were 52,3% and 34,0% for pharmacists and pharmacy technicians, respectively. Baseline characteristics of the study population are presented in table 1. Interestingly, > 50% of the respondents were in the age category of 20-30 years. Also, most respondents worked in a pharmacy with an independent ownership type, as opposed to the general situation in the Netherlands, where franchise organizations are the major represented group.

4.2. Principal Component Analysis

For the pharmacist dataset, a principal component analysis (PCA) to measure the concept of leadership variables for transactional and transformational leadership is conducted. All variables

that measure the dimensions of transformational (fostering the acceptance of goals, identifying and articulating a vision, providing individualized support, providing an appropriate model) and Transactional behavior (Contingent reward) as defined by Podsakoff were added to this analysis (Philip M. Podsakoff et al., 1990). Several questions loaded highly on more than one component and were therefore eliminated before further analysis. The eliminated questions were, according to literature, two questions belonging to the component of *Identifying and Articulating a Vision* and one question belonging to the component of *High Performance Expectations*. After excluding these three questions, the overall KMO of the model was 0,839. Also, separate Cronbach alpha values were calculated for each component. In table 2, key outcomes of the PCA in pharmacists are described. Overall, the components obtained from this PCA are in line with the components described in literature which enhances the validity of the variables.

Table 2. Results of a PCA with oblique rotation (Oblimin with Kaiser Normalization) and Cronbach's alpha values of leadership variables in pharmacists throughout the Netherlands (n = 92)

Item	Principal Components						
	1	2	3	4	5	6	7
<i>Fostering the Acceptance of Group Goals (.62)</i>							
Encourages employees to be "team players".	<u>0.85</u>	-0,05	0,04	0,07	0,10	-0,01	-0,06
Gets the group to work together for the same goal.	<u>0.78</u>	0,18	0,09	-0,02	0,04	-0,02	0,05
Develops a team attitude and spirit among employees.	<u>0.72</u>	0,11	-0,08	0,00	0,21	0,06	0,13
Fosters collaboration among work groups.	<u>0.55</u>	0,09	0,17	0,23	0,26	-0,08	0,06
<i>Identifying and Articulating a Vision (.90)</i>							
Inspires others with his/her plans for the future.	-0,02	<u>0.87</u>	-0,18	-0,11	-0,03	-0,05	0,23
Has a clear understanding of where we are going.	-0,01	<u>0.83</u>	-0,04	0,15	0,13	-0,08	0,02
Paints an interesting picture of the future for our group.	0,18	<u>0.75</u>	0,05	-0,01	-0,05	0,17	-0,16
<i>Providing Individualized Support (.53)</i>							
Shows respect for my personal feelings.	0,11	-0,07	<u>0.93</u>	-0,06	-0,02	0,00	0,02
Behaves in a manner thoughtful of my personal needs.	0,02	-0,10	<u>0.73</u>	0,05	0,13	-0,26	0,22
<i>Providing an Appropriate Model (.79)</i>							
Leads by "doing", rather than simply by "telling".	0,23	-0,10	-0,34	<u>0.84</u>	-0,01	-0,05	0,19
Leads by example.	-0,32	0,27	0,35	<u>0.68</u>	0,19	0,07	-0,21
Provides a good model for me to follow.	0,32	0,19	0,26	<u>0.48</u>	-0,12	0,06	0,05
<i>Transactional Leader Behavior Factor (.85)</i>							
Personally compliments me when I do outstanding work.	-0,04	0,02	-0,09	0,11	<u>0.95</u>	0,04	-0,02
Commends me when I do a better than average job.	0,20	-0,02	0,05	-0,07	<u>0.85</u>	0,03	0,03
Always gives me positive feedback when I perform well.	0,03	-0,07	0,25	0,05	<u>0.84</u>	0,13	0,03
Gives me special recognition when my work is very good.	0,25	0,13	-0,17	-0,18	<u>0.72</u>	-0,18	0,11
<i>High Performance Expectations (.89)</i>							
Insists on only the best performance.	-0,05	-0,04	-0,19	-0,01	0,11	<u>0.93</u>	0,00
Will not settle for second best.	0,05	0,32	0,26	0,07	-0,18	<u>0.53</u>	0,27
<i>Intellectual Stimulation (.81)</i>							
Challenges me to think about old problems in new ways.	-0,24	0,11	0,09	0,06	0,17	-0,11	<u>0.88</u>
Has ideas that have challenged me to reexamine some of the basic assumptions about my work.	0,20	-0,03	-0,10	0,10	-0,17	0,19	<u>0.77</u>
Asks questions that prompt me to think.	0,20	0,12	0,16	-0,03	0,10	-0,01	<u>0.66</u>
has stimulated me to rethink the way I do things.	0,17	0,02	0,34	-0,20	0,19	0,30	<u>0.53</u>
<i>Eigen value per component</i>							
	7,50	2,77	1,94	1,84	1,43	1,15	0,99
<i>Variance explained per component</i>							
	34,10	12,58	8,81	8,34	6,48	5,22	4,49
<i>Cumulated variance explained</i>							
	34,10	46,65	55,47	63,81	70,29	75,51	80,00

KMO Bartlett .762; Approx. Chi-square 1383.785; df. 231; sig. <0,001.

Extraction Method: Principal Component Analysis

Factor loadings are underlined. Values in parentheses represent the Cronbach's alpha value for each factor.

4.3. Effect control variables

To ensure that the effect in the conceptual models was not influenced by the control variables, the correlations between control variables and the variables in the model were analyzed.

In table 3, for pharmacists and in table 4 for pharmacy technicians, the means, standard deviations and correlations of these variables can be found. No surprising correlations were found between variables. As expected, transformational and transactional leadership are strongly and positively associated in both populations. Furthermore, as also expected, there is a strong and positive correlation between function of the pharmacist with age and gender. Given the natural and expected relationship between these variables, no variables were excluded from the dataset. In conclusion, these control variables do not significantly influence the variables investigated in this thesis.

Table 3, Mean, Standard deviation and intercorrelations of leadership, gender, age, function, education for pharmacists

Variable Pharmacists	M	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1 Gender	1.67	0,47									
2 Age (years)	1.79	1,022	-.17								
3 Function pharmacist	2.43	0,62	.299**	-.347**							
4 Level of Education	1.64	0,48	-.037	-.002	-.059						
5 Ownership type	1,68	0,86	.006	.034	-.084	.334**					
6 Type of pharmacy	1,35	0,7	-.059	.172	.107	-.180*	-.152				
7 Absence	1.40	.134	-.066	.297**	-.210*	-.017	.137	.086			
8 Transactional leadership	5,76	0,84	.136	-.015	.095	.113	.200*	.081	.084		
9 Transformational leadership	5,6	0,62	-.143	.087	-.067	.152	.039	.020	.081	.317**	
10 Customer satisfaction (PREM)	2,33	.080	.000	-.006	-.031	.028	.228*	.075	.045	.104	.331**

N=92 ** Correlation is significant at the 0.01 level (1-tailed); * Correlation is significant at the 0.05 level (1-tailed).

Table 4, Mean, Standard deviation and intercorrelations of leadership, gender, age, function, education for pharmacy technicians.

Pharmacy technicians	MEAN	SD	(1)	(2)	(3)	(4)	(5)	(6)
1 Gender	1,92	.267						
2 Age (years)	3,16	1.325	.213*					
3 Function pharmacist	1,61	1.043	.241*	.055				
4 Type of pharmacy	4,58	.826	-.047	.020	.028			
5 Ownership type Transactional	1,56	.635	-.077	.061	.079	.267**		
6 leadership Transformational	5,00	134.092	-.088	.008	.080	-.104	.016	
7 leadership	5,00	.85394	-.094	.002	.018	-.037	.008	.572**

N=79 ** Correlation is significant at the 0.01 level (1-tailed); * Correlation is significant at the 0.05 level (1-tailed).

4.4. Binary logistic regression

Binary logistics regression was used in the pharmacists' dataset, since the dichotomous variable Patient Reported Experience Measures (PREM) was used as measure for firm performance. Results of these stepwise, multivariable, binary logistic regression analyses for Transformational (table 5) and transactional (table 6) with PREM are discussed below.

4.4.1. Transformational leadership and firm performance

In table 5 the association between transformational leadership and PREM was investigated. Furthermore, whether ownership type is a moderator of this association. In the crude model (model 1), all control variables were entered in the model. In model 1, no significant association between any of the control variables and PREM was found. After adding the mean transformational leadership score as independent variable in the model, the model remained insignificant (model 2). The association between ownership type and PREM (model 3) did show a significantly positive association (Exp (B) 1,82 [1,05-3,16], $P < 0,05$). However, the multiplicative interaction term of transformational leadership score and ownership type did not show a significant relationship (model 4). Therefore, ownership type

seems to establish an independent relationship with PREM, rather than a moderation effect through transformational leadership score.

Table 5. Logistic regression for the association between transformational leadership and customer satisfaction (PREM)

DV: PREM	1	2	3	4
<i>Sex</i>	0,99 (0,39-2,52)	0,94 (0,37-2,44)	0,90 (0,34-2,39)	0,90 (0,34-2,40)
<i>Age</i>	0,92 (0,60-1,44)	0,93 (0,60-1,45)	0,91 (0,58-1,45)	0,91 (0,58-1,45)
<i>Function</i>	1,07 (0,51-2,23)	1,04 (0,49-2,21)	1,06 (0,49-2,28)	1,06 (0,49-2,28)
<i>Level of education</i>	1,11 (0,46-2,68)	1,23 (0,50-3,01)	0,88 (0,33-2,32)	0,87 (0,33-2,30)
<i>Type of Pharmacy</i>	0,84 (0,44-1,57)	0,86 (0,45-1,62)	0,90 (0,47-1,72)	0,90 (0,47-1,73)
<i>Absence</i>	1,03 (0,74-1,45)	1,07 (0,76-1,50)	1,01 (0,71-1,44)	1,01 (0,71-1,44)
Independent variable				
<i>Transformational Leadership score</i>		0,57 (0,27-1,17)	0,54 (0,26-1,14)	0,62 (0,14-2,66)
Possible Moderator				
<i>Ownership Type</i>			1,82 (1,05-3,16)**	1,84 (1,05-3,24)**
Interaction term				
<i>Ownership*Transformational leadership</i>				0,90 (0,35-2,34)
R-squared	0,01	0,05	0,05	0,11
Number of observations	92	92	92	92
N= 92, sig = *** p<0.01, ** p<0.05, * p<0.1				

4.4.2. Transactional leadership and firm performance

Second, in table 6 the association between transactional leadership and PREM was investigated. And similar to the previous analysis, whether ownership type is a moderator of this association. Similar results to the analysis for transformational leadership were found for transactional leadership, and the models are built in the same stepwise models. In model 1, no significant association between any of the control variables and PREM were found. After adding the mean transactional leadership score as independent variable in the model, the model remained insignificant (model 2). The association between ownership type and PREM (model 3) did show a significantly positive association (Exp (B) 1,77 [1,02-3,06] < 0,05).

However, the multiplicative interaction term of transactional leadership score and ownership type did not show a significant relationship (model 4). Therefore, ownership type seems to establish an independent relationship with PREM, rather than a moderation effect through transactional leadership score.

Table 6. Logistic regression for the association between transactional leadership and customer satisfaction (PREM)

DV: PREM		1	2	3	4
<i>Sex</i>	0,99 (0,39-2,52)	0,97 (0,38-2,49)	0,94 (0,36-2,47)	0,86 (0,32-2,31)	
<i>Age</i>	0,92 (0,60-1,44)	0,92 (0,59-1,43)	0,91 (0,58-1,43)	0,91 (0,57-1,45)	
<i>Function</i>	1,07 (0,51-2,23)	1,04 (0,49-2,20)	1,08 (0,50-2,33)	0,98 (0,45-2,14)	
<i>Level of education</i>	1,11 (0,46-2,68)	1,09 (0,45-2,64)	0,79 (0,30-2,07)	0,82 (0,31-2,17)	
<i>Type of Pharmacy</i>	0,84 (0,44-1,57)	0,86 (0,45-1,64)	0,88 (0,46-1,70)	0,99 (0,50-1,93)	
<i>Absence</i>	1,03 (0,74-1,45)	1,02 (0,73-1,44)	0,98 (0,69-1,39)	1,00 (0,71-1,43)	
Independent variable					
<i>Transactional Leadership score</i>		1,12 (0,69-1,79)	1,03 (0,63-1,67)	1,38 (0,76-2,50)	
Possible Moderator					
<i>Ownership Type</i>			1,77 (1,02-3,06)**	1,85 (1,04-3,27)**	
Interaction term					
Ownership*Transformational leadership				0,58 (0,31-1,08)	
R-squared	0,01	0,01	0,08	0,12	
Number of observations	92	92	92,00	92,00	

N= 92, sig = *** p<0.01, ** p<0.05, * p<0.1

4.5. Hierarchical linear regression.

Hierarchical linear regression was used in the pharmacy assistant's dataset, since job satisfaction and happiness could be considered continuous variables, as they scored on a 5-point Likert scale. Results of these stepwise, multivariable, hierarchical regression analyses for Transformational (table 7) and transactional (table 8) with job satisfaction and happiness are discussed below.

4.5.1. Transformational leadership with job satisfaction

On the left side of table 7 the association between transformational leadership and job satisfaction was investigated. Furthermore, whether ownership type is a moderator of this association. In the crude model (model 1), all control variables were entered in the model. In model 1, a negative trend ($P < 0,1$) between sex and job satisfaction was found, meaning that possibly men tend to be more satisfied than women. However, since this association is not considered a significant relationship ($p > 0,05$), no conclusions can be drawn for this dataset. After adding the mean transformational leadership score as independent variable in the model, the model is significant (model 2). In model 2, we found a significantly positive relationship between transformational leadership and job satisfaction (Unst. B 0,47 [0,35-0,58], $P < 0,001$). The association between ownership type and job satisfaction (model 3) did not show a significant association, although the relationship between transformational leadership and job satisfaction remained significant (Unst. B 0,47 [0,26-0,59], $P < 0,001$). Lastly, the multiplicative interaction term of transformational leadership score and ownership type did not show a significant relationship (model 4). Therefore, transformational leadership seems to establish an independent relationship with job satisfaction, and does not seem to be moderated by ownership type.

4.5.2. Transformational leadership and happiness

On the right side of table 7 the association between transformational leadership and happiness was investigated. Furthermore, whether ownership type is a moderator of this association. In the crude model (model 1), all control variables were entered in the model. In model 1, a negative trend between pharmacy type and happiness was found. However, in the subsequent model, this model does not seem to last. Also, since this association is not considered a significant relationship ($p > 0,05$), no conclusions can be drawn for this dataset. After adding the mean transformational leadership score as independent variable in the model,

the model is significant (model 2). In model 2, we found a significantly positive relationship between transformational leadership and happiness (Unst. B 0,59 [0,20-0,98], $P < 0.001$). The association between ownership type and happiness (model 3) did not show a significant association, although the relationship between transformational leadership and happiness remained significant (Unst. B 0,59 [0,20-0,99], $P < 0.001$). Lastly, the multiplicative interaction term of transformational leadership score and ownership type did not show a significant relationship (model 4). Therefore, transformational leadership seems to establish an independent relationship with job satisfaction, and does not seem to be moderated by ownership type.

Table 7. Hierarchical linear regression for the association between transformational leadership and job satisfaction, and happiness, respectively.

DV: PREM	Job satisfaction				Happiness			
	1	2	3	4	1	2	3	4
<i>Sex</i>	-0,64 (-1,28-0,01)*	-0,39 (-0,85-0,06)*	-0,46 (-0,93-0,01)*	-0,37 (-0,84-0,11)	-0,61 (-2,14-0,91)	-0,35 (-1,80-1,11)	-0,36 (-1,86-1,14)	-0,10 (-1,62-1,42)
<i>Age</i>	0,03 (-0,09-0,14)	0,02 (-0,06-0,11)	0,03 (-0,06-0,11)	0,02 (-0,06-0,10)	0,24 (-0,05-0,53)	0,23 (-0,04-0,51)	0,23 (-0,05-0,51)	0,22 (-0,05-0,50)
<i>Function</i>	0,02 (-0,13-0,17)	0,02 (-0,08-0,12)	0,01 (-0,09-0,12)	0,03 (-0,07-0,14)	0,22 (-0,16-0,59)	0,22 (-0,13-0,58)	0,22 (-0,14-0,58)	0,28 (-0,09-0,65)
<i>Type of Pharmacy</i>	-0,11 (-0,30-0,07)	-0,09 (-0,22-0,04)	-0,10 (-0,23-0,03)	-0,09 (-0,21-0,04)	-0,39 (-0,81-0,04)*	-0,34 (-0,74-0,07)	-0,34 (-0,76-0,08)	-0,31 (-0,73-0,10)
Independent variable								
<i>Transformational Leadership score</i>		0,47 (0,35-0,58)***	0,47 (0,36-0,59)***	0,18 (-0,15-0,51)		0,59 (0,20-0,98)***	0,59 (0,20-0,99)***	-0,25 (-1,38-0,88)
Possible Moderator								
<i>Ownership Type</i>			-0,09 (-0,25-0,08)	-1,02(-2,02;-0,02) *			-0,022 (-0,58-0,54)	-2,74 (-6,22-0,73)
Interaction term								
Ownership*Transformational leadership				0,19 (-0,01-0,40)*				0,56 (-0,15-1,27)
R-squared	0,10	0,56	0,57	0,60	0,10	0,21	0,21	0,24
Adjusted R-squared	0,04	0,53	0,53	0,59	0,05	0,15	0,14	0,16
F-value	1,69	16,05***	13,59***	12,65***	1,91	3,52**	2,89**	2,89**
Number of observations	68	68	68	68	73	73	73	73

*** p<0.01, ** p<0.05, * p<0.1

Table 8. Hierarchical linear regression for the association between transactional leadership and job satisfaction, and happiness, respectively.

DV: PREM	Job satisfaction				Happiness			
	1	2	3	4	1	2	3	4
<i>Sex</i>	-0,64 (-1,28-0,01)*	-0,48 (-1,01-0,06)*	-0,52(-1,08-0,04)*	-0,53(-1,10-0,04)	-0,61 (-2,14-0,91)	-0,41 (-1,88-1,06)	-0,40 (-1,92-1,13)	-0,42 (-1,95-1,12)
<i>Age</i>	0,03 (-0,09-0,14)	0,02 (-0,08-0,11)	0,02 (-0,08-0,12)	0,02 (-0,08-0,12)	0,24 (-0,05-0,53)	0,23 (-0,05-0,51)	0,23 (-0,05-0,51)	0,23 (-0,05-0,52)
<i>Function</i>	0,02 (-0,13-0,17)	0,07 (-0,05-0,20)	0,07 (-0,06-0,19)	0,07 (-0,06-0,20)	0,22 (-0,16-0,59)	0,29 (-0,07-0,51)	0,29 (-0,08-0,66)	0,31 (-0,07-0,68)
<i>Type of Pharmacy</i>	-0,11 (-0,30-0,07)	-0,09 (-0,24-0,06)	-0,09 (-0,25-0,06)	-0,09 (-0,25-0,06)	-0,39 (-0,81-0,04)*	-0,33 (-0,74-0,08)	-0,33 (-0,75-0,10)	-0,33 (-0,75-0,10)
Independent variable								
<i>Transactional Leadership score</i>		0,24 (0,15-0,33)***	0,24 (0,15-0,33)***	0,20 (-0,08-0,47)		0,34 (0,08-0,59)**	0,34 (0,08-0,59)**	0,15 (-0,65-0,95)
Possible Moderator								
<i>Ownership Type</i>			-0,05 (-0,25-0,14)	-0,17 (-0,95;-0,60)			0,02 (-0,55-0,59)	-0,52(-2,76-1,72)
Interaction term								
Ownership*Transactional leadership				0,02 (-0,13-0,18)				0,11 (-0,34-0,56)
R-squared	0,10	0,40	0,40	0,40	0,10	0,19	0,19	0,19
Adjusted R-squared	0,04	0,35	0,34	0,33	0,05	0,13	0,11	0,10
F-value	1,69	8,11***	6,27***	6,00***	1,91	3,05**	2,51**	2,16*
Number of observations	68	68	68	68	73	73	73	73

*** p<0.01, ** p<0.05, * p<0.1

4.5.3. Transactional leadership and job satisfaction

On the left side of table 8 the association between transformational leadership and job satisfaction was investigated. Furthermore, whether ownership type is a moderator of this association. In the crude model (model 1), all control variables were entered in the model and is exactly the same as model one from table 7. Again, since the association between sex and firm performance is not considered a significant relationship ($p > 0.05$), no conclusions can be drawn for this dataset. After adding the mean transactional leadership score as independent variable in the model, the model is significant (model 2). In model 2, we found a significantly positive relationship between transactional leadership and job satisfaction (Unst. B 0,34 [0,08-0,33], $P < 0.001$). The association between ownership type and job satisfaction (model 3) did not show a significant association, although the relationship between transactional leadership and job satisfaction remained significant (Unst. B 0,24 [0,15-0,33], $P < 0.001$). Lastly, the multiplicative interaction term of transactional leadership score and ownership type did not show a significant relationship (model 4). Therefore, transactional leadership seems to establish an independent relationship with job satisfaction, and does not seem to be moderated by ownership type.

4.5.4. Transactional leadership and happiness

On the right side of table 8 the association between transactional leadership and happiness was investigated. Furthermore, whether ownership type is a moderator of this association. In the crude model (model 1), all control variables were entered in the model and is exactly the same as model one from table 7. Again, a negative trend between pharmacy type and happiness was found. However, in the subsequent model, this model does not seem to last. Also, since this association is not considered a significant relationship ($p > 0.05$), no conclusions can be drawn for this dataset. After adding the mean transactional leadership score as independent variable in the model, the model is significant (model 2). In model 2, we found a significantly positive relationship between

transactional leadership and happiness (Unst. B 0,34 [0,08-0,59], $P < 0.05$). The association between ownership type and happiness (model 3) did not show a significant association, although the relationship between transactional leadership and happiness remained significant (Unst. B 0,34 [0,08-0,59], $P < 0.05$). Lastly, the multiplicative interaction term of transactional leadership score and ownership type did not show a significant relationship (model 4). Therefore, transactional leadership seems to establish an independent relationship with job satisfaction, and does not seem to be moderated by ownership type.

4.6. Interpretation of results in light of the investigated hypotheses.

Hypothesis 1a predicts that higher ratings of transformational leadership for pharmacists will positively predict community pharmacy's firm performance. In the binary logistic regression (see 4.4.1., table 5, model 2) the mean transformational leadership score was not significantly associated with PREM (Exp (B) 0,57 [0,27-1,16], $P = 0,12$). Based on the available data, we should reject H1a.

Hypothesis 1b predicts that higher ratings of transactional leadership for pharmacists will positively predict community pharmacy's firm performance but to a lesser degree than transformational leadership. In the binary logistic regression (see 4.4.2., table 6, model 2) the mean transformational leadership score was not significantly associated with PREM (Exp (B) 1,15 [0,69-1,79], $P = 0,65$). Based on the available data, we should reject H1b.

Hypothesis 2a predicts that higher Ratings of transformational leadership for pharmacists will be positively related to ratings of job satisfaction within the Dutch community pharmacy. In the hierarchical linear regression (see 4.5.1, table 7, model 2, left) the mean transformational leadership score was significantly, positively associated with job satisfaction (Unst. B 0,47 [0,35-0,58], $P < 0.001$). Interestingly, in a separate hierarchical linear regression (see 4.5.2, table 7, model 2, right) the mean transformational leadership score was also significantly, positively associated with

happiness (Unst. B 0,59 [0,20-0,98], $P < 0.001$). Based on the available data, we should accept hypothesis 2a.

Hypothesis 2b predicts that higher Ratings of transactional leadership for pharmacists will be positively related to ratings of job satisfaction within the Dutch community pharmacy but to a lesser degree than transformational leadership within the Dutch community pharmacy. In the hierarchical linear regression (see 4.5.3, table 8, model 2, left) the mean transactional leadership score was significantly, positively associated with job satisfaction (Unst. B 0,34 [0,08-0,33], $P < 0.001$). Interestingly, in a separate hierarchical linear regression (see 4.5.4, table 8, model 2, right) the mean transactional leadership score was also significantly, positively associated with happiness (Unst. B 0,34 [0,08-0,59], $P < 0.05$). In both models for transactional leadership investigating job satisfaction and happiness, the unstandardized coefficients were lower than the respective coefficients in the models for transformational leadership. Both leadership variables are on a 7-point Likert scale, therefore it seems that transformational leadership scores indeed have more impact on both job satisfaction and happiness. Based on the available data, we should accept hypothesis 2b.

Hypothesis 2c predicts that transformational leadership will have a positive effect on firm performance, but is mediated via job satisfaction. Because no significant effect was found between transformational leadership and PREM (see also H1a), it was not expected to find a mediation effect of job satisfaction or happiness on firm performance. Unfortunately, despite the fact that several questions were related to firm performance, all other variables were not viable for further analysis. Additionally, since firm performance was asked under pharmacists and job satisfaction among pharmacy technicians, questionnaires had to be merged. Unfortunately, only 14 pairs of pharmacist and pharmacist technicians could be formed, and the power was insufficient. In short, both the fact that H1a was not confirmed and the fact that the current gathering method did not provide sufficient data for analysis results in incapability of sufficient hypothesis testing. Therefore, based on the

available data, we can neither accept or reject H2c. An evaluation and future solutions will be discussed in the Discussion section of this thesis.

Hypotheses 2d predicts that transactional leadership will have a positive effect on firm performance, but is mediated via job satisfaction. Because no significant effect was found between transactional leadership and PREM (see also H1b), it was not expected to find a mediation effect of job satisfaction or happiness on firm performance. Also, the same problems regarding availability of alternatives for firm performance measures and methodological issues were encountered while testing this hypothesis. Therefore, we would like to refer to the answer of H2c (section 4.6) mentioned above. In short, both the fact that H1b was not confirmed and the fact that the current gathering method did not provide sufficient data for analysis results in incapability of sufficient hypothesis testing. Therefore, based on the available data, we can neither accept or reject H2d. An evaluation and future solutions will be discussed in the Discussion section of this thesis.

Hypothesis 3a predicts that Ownership type moderates the pre-hypothesized positive relation between transformational leadership score and financial performance in the Dutch pharmaceutical industry, such that for chain-owned pharmacies the influence of leadership on financial performance is reduced. As described above (see hypothesis 1a), in the binary logistic regression (see 4.4.1., table 5, model 2) the mean transformational leadership score was not significantly associated with PREM (Exp (B) 0,57 [0,27-1,16], $P = 0,12$). The association between ownership type and PREM (model 3) did show a significantly positive association (Exp (B) 1,82 [1,05-3,16], $P < 0,05$). However, the multiplicative interaction term of transformational leadership score and ownership type did not show a significant relationship (model 4). Based on the available data, we should reject H3a. Interestingly, ownership type seems to establish an independent relationship with PREM, rather than a moderation effect through transformational leadership score.

Hypothesis 3b predicts that Ownership type moderates the pre-hypothesized positive relation between transactional leadership score and financial performance in the Dutch pharmaceutical industry, such that for chain-owned pharmacies the influence of leadership on financial performance is reduced. As described above (see hypothesis 1b), in the binary logistic regression (see 4.4.2., table 6, model 2) the mean transformational leadership score was not significantly associated with PREM (Exp (B) 1,15 [0,69-1,79], P = 0,65). The association between ownership type and PREM (model 3) did show a significantly positive association (Exp (B) 1,77 [1,02-3,06] < 0,05). However, the multiplicative interaction term of transactional leadership score and ownership type did not show a significant relationship (model 4). Based on the available data, we should reject H3a. Interestingly, ownership type seems to establish an independent relationship with PREM, rather than a moderation effect through transactional leadership score.

5. DISCUSSION

In this survey-based, cross-sectional study, performed among pharmacists and pharmacy technicians of community pharmacies, we investigated (1) whether leadership behavior was positively associated with PREM, used as a proxy for firm performance; (2) whether, leadership behavior was positively associated with job satisfaction. Additionally, we investigated (3) whether ownership type moderates either the effect of leadership behavior and PREM or leadership behavior and job satisfaction. Lastly, we intended to investigate (4) a mediation effect of job satisfaction on the pre-hypothesized association between leadership behavior and firm performance. In this study we found that leadership behavior is indeed positively and significantly associated with job satisfaction among pharmacy technicians. However, we do not find a significant association between leadership behavior and PREM, nor were we able to show a mediation effect of job satisfaction on this association. Lastly, ownership type does not seem to moderate the effect of leadership behavior on PREM. Interestingly, we did find that ownership type of the pharmacy is independently, positively associated with PREM. Interpretations of these findings will be discussed below.

The fact that we did not find a significant relationship between leadership behavior and firm performance is not in line with literature. For example, Steyrer and Mende (1994), found that bank managers have a better financial performance when they were considered mostly transformational rather than transactional (Bass et al., 2003; Koene et al., 2002; Steyrer, J., & Mende, 1994). In addition, both transformational and transactional leaders are active forms of leadership and actively intervene and try to prevent problems (Den Hartog et al., 1997). The fact that we were not able to confirm the postulated hypothesis, could be the result of several limitations regarding the available data. Firstly, for pharmacists, among others the PREM-score is a factor which determines the reimbursement tariff for the following year and thus influences financial performance for the following year. Due to the financial importance of this parameter, pharmacists might influence this score to their advantage, making it subjective to reporting bias. Also, one might argue that the

distinction between ‘above average’ versus ‘average/below average’ could not be made, simply because the respondents might have different experience of what is considered ‘average’. However, every pharmacy in fact continuously has the ability to lookup their PREM-score and a national average score is given. In fact, while developing the questionnaire, this detail was not taken into account. It is highly unlikely for a pharmacy to exactly score ‘average’ on PREM. Therefore, we performed preliminary binary logistic tests to compare the different options and found that ‘below average’ and ‘average’ showed similar comparisons with the option ‘above average’. Together with the fact that it is highly unlikely for a pharmacist to score exactly average we decided to combine ‘below average’ with the group of ‘average’ and made it a dichotomous scale, benefitting interpretability of the results. Still, the fact that PREM-score was tested on a dichotomous scale, results in loss of power since we were not able to perform parametric regression tests for firm performance and outlier analysis could be considered more difficult. Secondly, despite the fact that several questions were related to firm performance, all other variables than PREM were not viable for further analysis. Unfortunately, for the other questions related to firm performance, the option ‘I do not know’ was filled in for >50% under respondents, therefore, these questions could not be taken into account. The low response rate on these remaining firm performance questions is interesting, since adequate performance is determined by knowledge on organizational profitability, variation in profitability, growth and survival (Hambrick, 2007; Meyer & Dean, 1990). Also, knowledge on revenue performance, measured as EBITA in this study, is deemed important for long term financial performance (Voss & Voss, 2012). Of course, since it was not announced before starting the survey that detailed financial questions would be asked, it could be that pharmacists in fact are aware of these numbers but did not have the details readily available at that specific moment. Still, the fact that most pharmacists filled in the option ‘I do not know’ could be marked as slightly concerning and therefore one might argue that the awareness on financials should be increased in the future.

The available data in this study was not able to confirm the well-known association between leadership behaviors and firm performance, also hampered the postulated moderation effect of type of ownership on this association. Interestingly, in our data, ownership type seems to establish an independent relationship with PREM, rather than a moderation effect through both transformational and transactional leadership score. This does not mean, however, that there is no moderation effect between leadership behavior and firm performance. The fact that the relationship between leadership behavior and firm performance is described in literature, in combination with the fact that we were able to find a significant relationship between ownership type and PREM suggests that it might be worthwhile to test this hypothesis in a different setting. Methodical aspects on how to perform such future research will be discussed below.

In this study, we found a significant relationship between leadership behavior and job satisfaction among pharmacy technicians contributes to literature. As mentioned previously, job dissatisfaction is strongly related to stress and burnout, which are indicators for decreased job performance (Gandi et al., 2011; Platis et al., 2015). Leadership is believed to have a direct relationship with job satisfaction (Emery & Barker, 2007; Schaufeli & Bakker, 2004). In this study we were able to confirm this direct relationship. Also, we found that in the relationship between transactional leadership and job satisfaction (Unst. B 0,34 [0,08-0,33], $P < 0.001$), the unstandardized coefficients were lower than the respective coefficients in the models for transformational leadership (Unst. B 0,47 [0,35-0,58], $P < 0.001$). Both leadership variables are measured on a 7-point Likert scale. Of note, in order to strengthen our results, we also investigated happiness, as a proxy of job satisfaction. Again, we found significant associations, and again, we found that in the relationship between transactional leadership and happiness (Unst. B 0,34 [0,08-0,59], $P < 0.05$), the unstandardized coefficients were lower than the respective coefficients in the models for transformational leadership (Unst. B 0,59 [0,20-0,98], $P < 0.001$). Lastly, this effect was not found to be moderated by ownership type. Therefore, it seems that transformational leadership scores indeed have more impact on both job satisfaction and happiness, confirming our hypotheses. Therefore, in

clinical practice, these results translate in the fact that pharmacists preferably score higher on transformational leadership compared to transactional leadership in terms of job satisfaction. In other words, pharmacy technicians, experience higher job satisfaction when their leader is mostly transformational.

Unfortunately, while investigating whether there was a mediating effect of job satisfaction on the association between leadership behavior and firm performance, we stumbled upon two major methodological errors. Firstly, since firm performance was asked under pharmacists and job satisfaction among pharmacy technicians, questionnaires had to be merged. Unfortunately, only 14 pairs of pharmacist and pharmacist technicians could be formed, and the power was insufficient. Of note, preliminary correlation tests and an underpowered logistic regression model also did not indicate any mediation effect. Secondly, pharmacy technicians were asked to score their direct leading pharmacist on the survey, while pharmacists were asked to score themselves. Since data was obtained from multiple pharmacists and pharmacy assistants per pharmacy institution, (1) different leadership scores were calculated, and (2) we were not able to distinguish which leader had been scored. Both methodological errors in combination with the fact that no significant association was found between leadership behavior and PREM, with no alternative proxies for firm performance available, resulted in halting the process of testing this mediation hypothesis. In short, the available data was insufficient to properly investigate a mediation effect. Speculations for future research will be discussed below.

Next to the methodological challenges we faced in this thesis, this study contains several limitations that affect the study overall. Firstly, in the present study, we included 92 pharmacists (67.4% female) and 84 pharmacy technicians (91.7% female). Interestingly, > 50% of the respondents were in the age category of 20-30 years. In fact, this age category has mostly just graduated. In education, most attention goes to evidence based medicine care and other forms of patient care, therefore most pharmacists of this age category lack the deep knowledge of financials (Capaciteitsorgaan, 2017). This could also possibly explain the low response rate on the firm

performance questions in the survey (Hambrick, 2007). Secondly, most respondents worked in a pharmacy with an independent ownership type, as opposed to the general situation in the Netherlands, where franchise organizations are the major represented group. This could be explained by the fact that some pharmacists and/or pharmacy technicians are unaware of the fact that their pharmacy is in fact not independent, but actually part of a franchise organization. This hypothesis is partially confirmed by the fact that merging the datasets of pharmacists with pharmacy technicians based on name of pharmacy showed inconsistency in the reported ownership type among respondents. Also, this could possibly be explained by the method of gathering respondents. Due to low response rates after distributing the survey via a web based link, participants were contacted via a personal message on LinkedIn via the students personal LinkedIn account, which increases the chance of selection bias (Bethlehem, 2010). This would also explain why > 50% of the respondents were in the age category of 20-30 years, as this is the student's age category as well. Unfortunately, the restricted time period of this thesis did not provide sufficient time to implement a third approach of gathering pharmacists by contacting the firms via their respective business mail addresses. Thirdly, one might argue that, while investigating leadership behavior, using the factor analytic approach would be better than using component scores, as this provides different weightings for each item. Using the original components' averaged score treats each item as having equal weight in the composite, and will result in two scales that have more overlap. Therefore, using average scores is more prone for presence of multicollinearity. Obviously, in this study correlations were tested to diminish the chance of underlying multicollinearity. In contrast, factor scores are based on the specific set of data and will be different in different datasets, making it difficult to compare scores with external data. Therefore, in order to be able to compare the leadership styles reported in both the pharmacists' questionnaire and the pharmacy assistants' questionnaire, the same questions were eliminated in the pharmacy assistants' database and for both cohorts, the mean scores for each identified factor were used, instead of the components scores. Lastly, the questions used within the survey were translated into Dutch phrases. Although the

questionnaire was validated by (Philip M. Podsakoff et al., 1990), it is not validated in other languages and translations are prone to typing errors. Also, the questions were distributed for pharmacist technicians in the he/she form, and in the I-form for pharmacists. The fact that we both changed the original language and the fact that we changed the original 'target group' could be considered as a serious methodological error. Therefore, we first used PCA to check whether the original components still held true in our dataset. Fortunately, despite the methodological uncertainty, the Dutch translation identified the original components as described by (Philip M. Podsakoff et al., 1990).

As mentioned previously, some hypotheses proved to be difficult to be properly investigated with the current data in this study. Therefore, in order to guide future researchers that are trying to do survey-based research, several speculations regarding proper methodological research will be discussed. Firstly, in order to properly investigate firm performance, it is important to use mostly continuous variables and it is important to make sure that respondents are aware of the fact that financial parameters are investigated before starting the survey. Secondly, it would be interesting to find a population that closely reflects the national population; therefore, it would be interesting to approach of gathering pharmacists by contacting the firms via their respective business mail addresses and ask participants to send the link to their direct counterpart (pharmacists vs pharmacy assistants). Achieving these direct links will also help in testing any mediation effects between measures reported by pharmacy assistants and dependent variables reported by their direct pharmacists. Lastly, it is important that all questions used in the survey are validated in the specific language and the specific target group. If not, then performing a preliminary validation test would be of importance.

In conclusion, this thesis was able to expand the existing body of literature by confirming that there is a link between leadership behaviors and job satisfaction among pharmacy assistants, which is not moderated by ownership type. Unfortunately, the available data was not able to confirm the well-known positive association between leadership behavior and firm performance, and therefore

no moderation effect could be found for ownership type among pharmacists. The fact that we were able to find a significantly positive association between ownership type and firm performance, however, is promising. This might guide future research to focus on investigating firm performance in depth and reestablish a similar dataset to investigate the postulated moderation effect of ownership type, investigated in this study.

Lastly, we would like to shortly discuss the implications of these findings for community pharmacies. Although, it could be hypothesized, based on literature, that higher transformational leadership course would also benefit firm performance, this study was insufficient to postulate on any implications for clinical practice. However, as mentioned in the interviews (appendix 3), shortage of qualified personal is a major problem among community pharmacies. As hypothesized in literature, and confirmed in this study, transformational leadership benefits job satisfaction. In line, higher transformational leadership scores are believed to decrease voluntary job leave. Therefore, for community pharmacies, it seems highly beneficial to appoint leaders that score highly on transformational leadership. Furthermore, Kirkbride (2006), mentioned the possibility to train leaders in order to express transformational leadership behaviors. This might implicate, that it would also be beneficial to invest in such education regarding (transformational) leadership to enhance job satisfaction.

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7. ATTACHMENTS

Appendix 1: Research background

Appendix 2: Format for interviews

Appendix 3: Elaboration of the Interviews

Appendix 4: Survey for pharmacists

Appendix 5: Survey for pharmacy technicians

Appendix 1: Research background

A 1.1 Dutch healthcare system

In the Netherlands healthcare is compulsory for everyone who lives or works in the Netherlands, it is governed via a couple of system acts. The Dutch government is responsible for the accessibility and quality of the healthcare system, but is not directly in charge of its management (Ministerie van Volksgezondheid Welzijn en Sport, 2016). When focusing on the pharmacy system, The Royal Dutch Pharmacists Association (Koninklijke Nederlandse Maatschappij ter bevordering der Pharmacie, KNMP), the Ministry of Health, Welfare and Sport (Inspection) and the healthcare insurers act (zorgverzekeringwet, Zvw) play an important role in policy determination. The Zvw is regulated by 24 private healthcare insurance companies. (Ministerie van Volksgezondheid Welzijn en Sport, 2016) (Vries & Kossen, 2014).

Health insurers in the Netherlands offer a choice between a naturapolis and restitutiepolis. 75% of Dutch citizens choose for naturapolis, this means that you only get full reimbursement for care delivered by contracted care providers. This implies that when a community pharmacy has no contract with the healthcare insurance company, patients insured at this healthcare insurance company have to pay for the delivered care themselves. A resitutiepolis reimburses all regular healthcare costs incurred regardless of the healthcare provider. Some forms of healthcare are independent of the polis, e.g. a general practitioner is always covered. Some forms of healthcare are always excluded, a number of prescription medicines and almost all over-the-counter medicine are excluded from reimbursement. (Ministerie van Volksgezondheid Welzijn en Sport, 2016) (Vries & Kossen, 2014) Healthcare expenses increase yearly due to our increasing age, welfare diseases and development of medical science. (Vries & Kossen, 2014). To increase cost effectiveness of Dutch healthcare and to reduce overall costs, health care organizations have been proposed to stimulate fundamental changes in the way primary care is delivered. (Maxwell, Odukoya, Stone, & Chui, 2014) Health insurers are permitted to limit which medicines are reimbursable, this directly influences the purchasing policy of the community pharmacies and this in turn leads to confusion and incomprehension among patients. This incomprehension leads to angry and suspicious patients

when communicating with their pharmacists and pharmacy technicians. (Vogler, Paris, & Panteli, 2018) This has a negative influence on patient communication and therefore quality of the healthcare. Pharmacists are asked to yearly fill in quality indicators to see how their performance is in comparison to other community pharmacies in the Netherlands. Within this annual request industry factors that drive quality are identified, where industry factors that drive profitability are not asked for (KNMP, 2018).

A 1.2 Reimbursement policies

In addition to the generic medicine industry, community pharmacists appear to be the major losers of the price preference policy as they encounter financial disadvantages. The main financial disadvantage of changes in pricing regulation is that the healthcare insurance companies took over the price negotiations with the pharmaceutical industry and now receive the discounts and bonuses instead of the pharmacists. The margins were cut due to financial constraints in the economy and redesigned to reward new pharmacy services. Single pharmacists filed court cases against the tendering policy, but usually lost them. Pharmacists still oppose tendering but rather see it as an unchangeable fact. (Amini & Kruijtenbosch, 2013; Vogler, Gombocz, & Zimmermann, 2017)

Medicines can be divided into different groups that are therapeutically interchangeable. Healthcare insurance companies set a maximum reimbursement for such a group based on the average price of medicines in the group. The healthcare insurers set targets for pharmacists for medicines delivered within preferential parameters. If an insured person chooses for a more expensive medicine, the pharmacist can pay the difference in an individual case. When more patients want the non-preferential medicine, this can have consequences for the contract with the healthcare insurer. When a pharmacist does not meet its preferential percentage, the prescription fee will be lowered for the next year or the pharmacist will get a worse contract in which patients with a naturapolis do not get their medicines reimbursed in this pharmacy. Dutch stakeholders have initially been opposing this policy, especially the generic medicine industry and pharmacists continue disapproving, but now aim for changes within the system. (Mastromatteo, 2011; Maxwell et al., 2014) (Vogler et al., 2017)

A big problem that follows the pricing policies is that the generic medicine industry is often unable to deliver sufficient amount of medicine for the Dutch population, which influences the access to medicine. There are no backup strategies implemented in the preference price policy to deal with supply limitations. (Amini & Kruijtenbosch, 2013; Vogler et al., 2017) (Maxwell et al., 2014) The pharmacy association (KNMP) has been running a register about delivery shortages, including information about the expected date of supply. (www.farmaco.knmp.nl)

Further models of the preference price policies are the IDEA model, which offers the community pharmacy a fixed price for all the patented medicines plus an increased prescription fee. In the IDEA model, there is a fixed remuneration price per medicine group which is set by the healthcare insurer, and pharmacies are incentivized to procedure a at a lower price and retain the difference. A community pharmacy can voluntary participate in this model, in case of non-participation, the preference price policy is applied. Pharmacists need to make careful, balanced judgments around the trade-offs embedded in government policy actions in order to factor them into long-term value creating strategies (Vogler et al., 2017).

Due to the tendering policy higher workload was experienced, including searching for alternative medicines in case of shortages and increased informative activities towards patients. Especially since the duration of the tender contracts is six months, which means changes in preferential medicines occur more often (Amini & Kruijtenbosch, 2013; Maxwell et al., 2014; Vogler et al., 2017).

Appendix 2: Interview format

All questions are listed in the table below in Dutch.

Table Appendix 2.1 Questions of semi- structured interviews held with 6 pharmacists

Table	Question
Appendix	
2.1	

‘Wat superfijn dat je tijd kunt maken om een interview met mij te doen. Ik wil je binnen dit interview graag een aantal vragen stellen en jouw expertise raadplegen op een aantal zaken binnen het apothekveld in het kader van mijn afstudeerscriptie bij de executive master bedrijfskunde. Zijn er nog zaken welke je vooraf wilt weten of verduidelijkt wil hebben?’

Wat is je naam, leeftijd, geslacht en positie in de apotheek?

Hoe vind je het huidige businessmodel van de apotheek?

Denk jij dat het huidige verdienmodel toekomst bestendig is?

Welke belangrijke (financiële) parameters zie jij binnen de apotheek als belangrijk voor toekomstig succes

Kun je me vertellen hoe je de productie performance bijhoudt?

Welke KPI's zou jij gebruiken om de performance van de apotheek te meten?

Hoe frequent worden deze KPI's gemeten?

Wie krijgt deze KPI data?

Wie zijn er betrokken van het opstellen en uitzoeken van de KPI's?

Houden jullie vaak werkoverleg? Kun je me vertellen over een recent werkoverleg hoe dit ging?

Wordt er concreet iets gedaan met de punten welke uit het overleg zijn gekomen?

Waarin zie jij het onderscheidend vermogen van de apotheek/ apotheker?

In welke mate denk jij dat je effect kunt hebben op het financiële bedrijfsresultaat van de apotheek

Zou jij jouw financiële parameters met mij willen delen?

Wat is de impact van het zorgverzekeraarsbeleid op jouw handelen? Doe je dingen die je graag zou willen nu niet bijvoorbeeld?

Neem jij het team mee in de motivatie achter de doelen?

Hoe ligt jij het team in over de doelen die er zijn?

Wat gebeurt er als een van de assistenten het totaal niet eens is met een besluit die jij hebt genomen?

In hoeverre denk jij dat jij invloed kunt hebben op de werkdruk die de assistenten ervaren?

Heb je een zelfstandige apotheek of ben je aangesloten bij een keten?

In hoeverre kan jij het financieel resultaat van de apotheek zelf beïnvloeden?

Job satisfaction

Vergeleken met andere apotheken, hoe tevreden/blij/betrokken zijn jouw assistenten denk jij?

Hoe is de werkdruk die zij ervaren denk jij?

Heb je een hoge omloop in assistenten?

Zijn jouw assistenten vaak ziek? Melden ze zich makkelijk ziek?

Heb je met al jouw assistenten een POP gemaakt op individueel niveau?

Heb je last van personeelstekort?

Als een van de goed presterende apothekersassistenten weg zou gaan, hoe zou jij reageren? Wat zou jij doen?

Kun je een voorbeeld geven van een van je toppers die bleef nadat ze wilde gaan?

Hoe ga je om met assistenten die slecht presteren? Kun je een voorbeeld geven?

Wat maakt jouw apotheek beter om bij te komen werken dan jouw concurrenten?

Als je jouw apotheek aan mij wil verkopen, hoe zou je dit doen?

Wat vinden mensen niet leuk aan werken bij jou in de apotheek?

Hoe ga je hiermee om?

Zijn er nog zaken die belangrijk zijn voor de apotheek gekeken naar de bedrijfsprestaties die ik zeker niet moet vergeten?

Appendix 3. Elaboration of the interviews:

Subject 1: firm performance in community pharmacy

Pharmacists were not willing to give me insights in their exact financials. But because all community pharmacies benchmark yearly and have access to benchmark data with Stichting Farmaceutische Kerngetallen (SFK), KNMP and other institutions (e.g. Ada4care) they could always be aware how they score compared to their colleagues.

Pharmacists nr 1: ‘I got the idea that healthcare insurers assume that good healthcare is always measurable and could be made quantitative, because we have an overload of bureaucratic paperwork’. After this, she refers to ‘het roer moet om’ a campaign of Dutch general practitioners, in which they make a fist against the governmental and insurers bureaucratic rules.

Pharmacist nr2: “Most key performance indicators are tracked formally. Tracking is overseen by KNMP and healthcare insurance companies”. Customer satisfaction is an important measure, annually measured via Patient Reported Experience Measure (PREM)(KNMP, 2018b). Pharmacist nr 6: “How honest these measurers are, is doubtful, because it determines partly the tariff for the following year, and I can imagine that some pharmacists, manipulate this data in order to get a higher ‘customer satisfaction score’ and a better tariff from the health insurer companies the following year”

There are multiple benchmarks and lists via which pharmacists can see how they score in comparison to their colleagues. “In order to deliver annual quality indicators, deliver information on quality of care and be able to compare your community pharmacy to others, the administrative load of community pharmacies has dramatically increased.” (pharmacist nr. 4).

Pharmacists nr 2: “A community pharmacy is the only healthcare professional easily accessible for health-related questions without an appointment. Unfortunately, patients and direct colleagues like general practitioners are not always aware of the professional services a pharmacist can offer.” Pharmacist nr 1: “Pharmacists are often seen as traditional medicine distributors instead of professionals with great pharmaceutical expertise on the combination of body, behavior and

medication. A couple of years ago we were still making medicines, but nowadays it is all outsourced”.

Pharmacist nr 4: “A pharmacist combines retailing services (over the counter (OTC)) with professional healthcare services (everything that is related to prescription medicine). There is a growing competition from non-pharmacy over-the-counter retailers like ‘etos or kruidvat’ and for customers it is sometimes hard to see the additional value of a pharmacist.”

Pharmacist nr 5: “The additional quality of healthcare a pharmacist provides is important, pharmacists services could be further expanded if we, pharmacists, fight barriers against the expansion of new pharmacist services”.

Pharmacists nr 2: “There are many ways to improve financials, via automation, for example via forward dispensing via ‘medicine repeat service’ and a medicine roll for the elderly who have difficulties ordering their medicines. In a lot of pharmacies they have different systems, but do not always use these systems correctly”

Pharmacist nr3: “Pharmacists have to demonstrate good practice and quantify their work in order to get reimbursements There are Q-modules to add extra value, but due to the current workload, there is not enough time.”

Pharmacist nr 6: “There are financial and non-financial goals. Not all goals are shared with the entire pharmacy team. I am clueless what our financial goals are..”

Pharmacist nr 5: “The pharmacy information system (AIS) and information technologies (IT) become increasingly important in providing different tools and techniques to the community pharmacy to overcome the challenges of the environment of increasing complex and extensive patient care. Our pharmacy is still working with an MS-dos system, which is really old, but still working, but in my opinion, needs significant improvements’

Subject 2: Job satisfaction

Pharmacist nr 2: “Due to the increasing amount of bureaucratic paperwork, angry impatient patients, my technicians sometimes feel they have inadequate time to perform patient care as they would love to.”

Pharmacist nr 5: “Activities that are important and time-consuming are not always reimbursed by health insurers, which is really frustrating.”

Pharmacist nr 5 “An example is the time a pharmacist spends on a patient when he/she just got out of the hospital and there are some major pharmaceutical changes which are unclear. Reaching a physician or colleague from the hospital pharmacy for clarification or confirmation can be time-consuming.”

Pharmacist nr 1” “Within my organization, ‘BENU’, a flying squad has been introduced to fill up the need for temporary extra educated pharmacists and pharmacy technicians, for example in the case of sickleave. If this is insufficient, there is external hiring from an employment agency like PharmaLead”

Pharmacist nr 4: “Pharmacy technicians are rewarded equally and regardless of performance. One can get extra pay when the person does a night shift, but that is CAO as well.”

Pharmacist nr: 4: “Due to shortage of labor within community pharmacies, poor performers are rarely removed from their positions because pharmacists ‘needs the extra hands’ even though some one does not show a great amount of effort.”

Subject 3: Leadership & firm performance

Pharmacist nr 3 and 6: The pharmacists who are in training to become registered community pharmacists, speak of communication trainings in the after-university education. There is increasingly attention for financials and effective communication.

Pharmacist nr 5: ‘The pharmacist working on the work floor carries the daily responsibility for enforcement of policies within the pharmacy. Due to the workload, he may not have as many opportunities to engage or listen really to the technicians, because the work has to be done, especially when patients are waiting, you just have to work a little bit harder.’

Pharmacist nr 3: “We are forced to multitask in order to run the day. During the day I’m mostly busy helping patients and some patients do not accept another label... When I give them the label they prefer, this means that I cannot ensure an acceptable profit level for this year.. which also might have negative implications for the following year.. If I do not give the patient the label they prefer, this means they might get angry and make ‘a show’ within the waiting room”.

Pharmacist nr 2: “When I am working in a pharmacy, I am mostly busy with running the day and only focus on short time successes.”

Pharmacist nr 1: “The pharmacist has to make a lot of decisions during the day without any time to zoom in and out in a specific situation in order to choose the most optimal approach. When patients are waiting, there is a waiting line, the phone is ringing, the pharmacy technicians are asking thousands of questions, you simply do not have the concentration or time to do something else:

Subject 4: Leadership related to work satisfaction

Pharmacist nr 2: “There is a great demand for (qualified) educated healthcare professionals, and this demand for qualified pharmacists and technicians will most probably increase in the following years due to growing healthcare needs of the baby boomer generation.”

Pharmacist nr 4: “ There are two challenges that cause extra pressure in the pharmacy. First there is a workforce shortage of high-quality staff within healthcare, the vacancy rate for pharmacists is approximately 4.4 percent. Secondly the financial costs of employee turnover and high costs to use temporary labor are building up.”

Pharmacist nr 6: I don’t think that pharmacy technicians’ work satisfaction is influenced by leadership. They are really stubbornly, and there are two things they do not like, change and the way things are. They complain a lot about things that the pharmacist cannot change... the reimbursement system for example”

Pharmacist nr 1: The increasing personal shortage is my a main concern.”

Differences in perceptions are evident and would differ within the team depending on who you ask.

Pharmacist nr 6: Personal goes on sick leave really easy. Whenever they have a bruise, they call in sick. The Bradford factor is said to be really high for pharmacy technicians”

Pharmacist Nr 3: “In general, is it suggested that personnel costs should be lower than 12% and EBITDA should be higher than 6% according to one of the pharmacists, I believe or something like this... Personal costs within a community pharmacy are on average high, because it is a labor-intensive organization.”

Pharmacist nr 1: Especially external labor is increasingly more expensive. Finding a solution for the experienced personal shortage by the entire team is a main focus point in order to achieve the best possible evidence based medicine for the patients”.

Concerning finding: Five out of the six pharmacists interviewed argued with reasonable certainty that they are considering a career switch in the future, because they experience a low work satisfaction.

Off- note: All pharmacists interviewed were not the owner of the pharmacy in financial terms.

Appendix 4: Survey for pharmacists

Apotheker

Leuk dat u mee doet!

Geweldig dat u mee doet aan mijn onderzoek. Deze vragenlijst bestaat uit 4 onderdelen die betrekking hebben op u of de apotheek waarin u werkt. De resultaten worden volledig geanonimiseerd. Dit betekent dat het op geen enkele wijze tot u of uw apotheek herleidbaar is.

Omdat mijn dank enorm groot is, verloot ik 5 cadeaubonnen van 10 euro onder de eerste 100 deelnemers.

Dankzij uw 10 minuten tijd kan ik straks afstuderen!

Alvast bedankt!

* 1. Welke apotheek bent u werkzaam? (direct verwijderd na koppelen)

* 2. Wat is uw geslacht?

- Man
 Vrouw

* 3. Wat is uw leeftijd

- 20-30 jaar
 31-40 jaar
 41-50 jaar
 51 -60 jaar
 ouder dan 60

* 4. Mijn functie in de apotheek is:

- Tweede apotheker
 Beherend apotheker
 Eigenaar

* 5. Welke hoogstgenoten opleiding heeft u gevolgd?

Farmacie (BSc en MSc)

Openbaar apotheker

Anders namelijk:

* 6. De apotheek waar ik werk is een

Openbare apotheek

Poliklinische apotheek

Instellingsapotheek

Ziekenhuis apotheek

* 7. Mijn apotheek is

Zelfstandig

Franchise

Aangesloten bij een keten

Anders namelijk:

Apotheker

Algemene apotheek karakteristieken

Deel 2/4

* 8. Hoeveel FTE werken binnen de apotheek?

* 9. Hoeveel FTE zou in de ideale situatie zijn?

* 10. Hoe gaat u om met personeelstekort?

- Geen last van
- Externe inhuur
- We lossen het intern op en vragen iedereen om (tijdelijk) extra uren te draaien
- Anders namelijk:

* 11. Wat is het percentage personeelskosten van de totale kosten?

- Weet ik niet
- <6 %
- 6 - 12 %
- meer dan 12%

* 12. Als uw werknemer plotseling een dag verlof moet vanwege een ziek kind, hoe pakt u dit over het algemeen aan?

- Nooit voorgekomen
- Ruil van parttime dag met een collega
- Niet toegestaan
- Neem verlof op
- Neem zoveel als nodig zonder uren opname
- Meld de werknemer ziek

* 13. Wat is uw verzuimpercentage?

- 0-3%
- >7%
- 3.1-5%
- Weet ik niet
- 5-7%

* 14. Waarvan lang verzuimers:

- 0
- 1
- 2 of meer

Apotheker

(Deel 3/4) Stellingen over u als persoon:

Er volgen nu 3 blokken met stellingen, geef voor elke stelling aan in hoeverre dit voor u van toepassing is door aan te geven of u het helemaal niet eens bent met de stelling (past niet bij u) of helemaal eens bent met de stelling (komt volledig overeen)

* 15. Ik ben een apotheker die:

	Helemaal niet mee eens	Niet mee eens	Deels mee oneens	Neutraal	Deels mee eens	Eens	Helemaal mee eens
Een duidelijke visie heeft waar we naar toe gaan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Een interessant beeld schetst van de toekomst voor het hele team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Altijd naar nieuwe kansen zoekt voor de apothek	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anderen inspireert met mijn plannen voor de toekomst	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anderen overtuigt mee te bouwen aan mijn droom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leiding neemt door 'te doen' in plaats van eenvoudig 'te vertellen'	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Een goed model geeft om te volgen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het goede voorbeeld geeft wat het team kan volgen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Samenwerking binnen het team bevordert	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
De assistenten aanmoedigt om 'teampayers' te zijn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het hele team laat samenwerken voor gezamenlijke doelen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Een team attitude en team spirit creëert binnen het team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 16. Ik ben een apotheker die

	Helemaal niet mee eens	Niet eens	Deels mee oneens	Neutraal	Deels mee eens	Mee eens	Helemaal mee eens
Laat zien dat ik veel van mijn team verwacht.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Aandringt op de beste prestaties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Geen genoeg neemt met een tweede plaats	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rationeel onderbouwde keuzes maakt onafhankelijk van de gevoelens van het team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rekening houdt met de gevoelens van het team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attent omgaat met de gevoelens van het team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het team uitdaagt oude problemen op een nieuwe manier aan te pakken	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vragen stelt die het team zelf laat nadenken	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het team stimuleert om na te denken over de manier hoe ze dingen aanpakken	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het team uitdaagt om een aantal basis aannames over het werk opnieuw te onderzoeken	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 17. Ik ben een apotheker die

	Helemaal niet mee eens	Niet eens	Deels mee oneens	Neutraal	Deels mee eens	Eens	Helemaal mee eens
Altijd positieve feedback geeft wanneer iemand uit het team goed presteert	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Erkenning geeft wanneer het werk van een collega erg goed is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Een assistent prijst wanneer ze boven gemiddeld presteert	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Persoonlijke complimenten geeft wanneer een collega uitstekend werk doet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vaak niet door heeft wanneer iemand beter dan anders presteert	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Apotheker

Kwaliteitsindicatoren

Deel 4/4

* 18. Mijn PREM (klanttevredenheidsscore) is bij 100% eerlijke meting ten opzichte van concurrenten

- lager dan gemiddeld
- Gemiddeld
- Hoger dan gemiddeld

* 19. Hoe heeft de operationele winst van de apotheek zich ontwikkeld over de afgelopen drie jaar?

- Steeg eerst, neemt nu af
- Daalde eerst, is nu stabiel
- Was stabiel, zit nu stijgende lijn in
- Weet ik niet

* 20. Hoe heeft de groei van uw apotheek zich ontwikkeld de afgelopen drie jaar? (Gemeten bij omzet groei)?

- Negatieve groei
- 0-5%
- meer dan 5%
- Weet ik niet

* 21. Hoe wordt het team geïnformeerd over de KPI's die er zijn?

- Opschrijven op een bord dat zichtbaar is voor iedereen
- Interne e-mail
- Intern communicatie schriftje of via interne post
- Mondeling
- Geen informatie
- Anders
- Weet ik niet

* 22. Zijn er doelen en hoe vaak worden de doelen (KPI's) geëvalueerd?

- Ja, we herzien deze vaker dan 1 jaar
- Ja, er zijn verbeterplannen voor meer dan 1 jaar
- Nee
- Weet ik niet

* 23. Wie kent de KPI's voor 2019?

- Alleen ik
- De meeste werknemers
- Iedereen die betrokken is
- Weet ik niet

* 24. Hoe reageert u wanneer de winst tegen valt?

- Kosten besparen
- Analyseren en strategie bijstellen
- Gewoon doorgaan, komt wel weer goed
- Weet ik niet

* 25. Besteedt u actief tijd om aan de bedrijfsvoering van de apotheek te werken?

- Nee, ik merk dat ik vaak te druk ben
- Soms, maar zou het meer moeten doen
- Ik doe bijna niks anders meer
- Ik heb daar vaste momenten voor

* 26. Waar staat de apotheek waar u werkt in 5 jaar?

- Dat is niet te voorspellen omdat de toekomst niet vast staat
- Pffff.. vijf jaar, bel me dan nog eens terug
- Stevig en stabiel in balans met de omgeving
- Top 10 beste apotheken, met enorme groei

* 27. Wat is de apotheek haar EBIT ten opzichte van totale omzet?

- Weet ik niet
- 0-5%
- 5-10%
- 10-15%
- 15-20%
- >20%

Apotheker

Bedankt voor uw deelname

Bedankt voor het mee doen aan de survey!

Indien u hieronder uw mailadres achterlaat, hoort u voor 1 juli 2019 of u een cadeaubon heeft gewonnen.

Vragen of opmerkingen:

Mail mij: 490216mh@eur.nl

28. Wilt u kans maken op de cadeaubon?

Nee

Ja ik wil winnen, dit is mijn mailadres:

Appendix 5: Survey for pharmacy technicians

Apothekersassistenten

Leuk dat je mee doet!

Geweldig dat je een bijdrage wil leveren aan mijn onderzoek middels het invullen van deze survey. De survey bestaat uit 4 onderdelen die betrekking hebben op jou of de apotheek waarin jij werkt. De resultaten zijn op geen enkele wijze tot jou of jouw apotheek herleidbaar.

Winnen(!): Ik verloot 5 cadeaubonnen van 10 euro onder de eerste 100 deelnemers die de vragenlijst tot het eind voltooien.

Mijn dank is groot, want mede dankzij jouw deelname kan ik straks afstuderen!

* 1. Welke apotheek ben je werkzaam? (direct verwijderd na koppelen)

2. Ik ben

- Man
 Vrouw

* 3. Wat is jouw leeftijd

- Jonger dan 20 41-50
 20-30 51-60
 31-40 60+

* 4. Mijn functie in de apotheek is

- Assistent
 Assistent +
 Farmakundige
 Tweede apotheker

* 5. De apotheek waar ik werk is een

- Openbare apotheek
- Poliklinische apotheek
- Instellingsapotheek
- Ziekenhuisapotheek

* 6. Mijn apotheek is

- Zelfstandig
- Onderdeel van een keten
- Franchise

Apothekersassistenten

Deel 2: Vragen over jouw apotheker

Geef bij de beantwoording van de volgende stellingen aan in hoeverre je het met deze uitspraak eens bent of niet. Denk hierbij aan jouw leidinggevende binnen de apotheek.

* 7. Mijn apotheker

	Helemaal mee oneens	Mee oneens	Deels mee oneens	Neutraal	Deels mee eens	Mee eens	Helemaal mee eens
Laat zien dat hij/zij veel van ons verwacht	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Geeft altijd positieve feedback wanneer ik goed presteer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Handelt zonder rekening te houden met mijn gevoelens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Schetst een interessant toekomstbeeld voor ons apotheekeam	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leidt het team door 'te doen' in plaats van alleen maar 'te vertellen'	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Geeft me speciale erkenning wanneer ik mijn werk erg goed doe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gaat respectvol om met mijn persoonlijke gevoelens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biedt mij een goed model om te volgen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gedraagt zich op een manier die rekening houdt met mijn persoonlijke behoeften	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 8. Mijn apotheker

	Helemaal mee oneens	Mee oneens	Deels mee oneens	Neutraal	Deels mee eens	Mee eens	Helemaal mee eens
Behandelt mij zonder rekening te houden met mijn persoonlijke gevoelens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heeft een duidelijk begrip van waar we naar toe gaan met de apotheek	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prijst me wanneer ik mijn werk bovengemiddeld doe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Neemt geen genoegen met een twee-a-beste oplossing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Komt naar me toe om mijn persoonlijk te complimenteren wanneer ik goed heb gewerkt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stimuleert samenwerking met andere teams (andere apotheek / huisarts assistenten / fysiotherapie / oid)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heeft het niet door wanneer ik beter presteer dan anders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspireert anderen met zijn/haar plannen voor de toekomst	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Daagt me uit om oude problemen op een nieuwe manier op te lossen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is in staat anderen te overtuigen mee te werken aan zijn/haar droom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stelt vragen die mij laten nadenken	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stimuleert ons om samen te werken als 'teamplayers'	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 12. Hoe gelukkig ben je in jouw baan?

0 10



* 13. Wat is de voornaamste reden hiervan?

Werkzaamheden, Leidinggevende, of Anders:

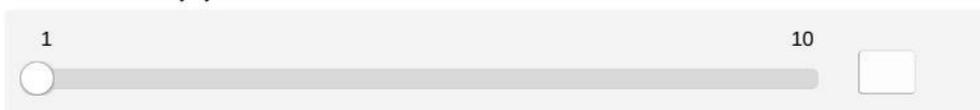
* 14. Hoe waarschijnlijk is het dat jij jouw werkplek zou aanbevelen aan een bekende om ook te komen werken?

1= niet aanbevelen

5 = neutraal

10 = Zeer waarschijnlijk

1 10



* 15. Wat is hiervan de voornaamste reden:

* 16. Vergelijk met andere werkplekken:

	Heel ontevreden	Ontevreden	Neutraal	Tevreden	Heel tevreden
Hoe tevreden ben je met de werkinhoud?	<input type="radio"/>				
In hoeverre houdt jouw werkplek rekening met jouw werk-privé balans?	<input type="radio"/>				
Hoe tevreden ben je met de sociale sfeer in jouw apotheek ?	<input type="radio"/>				
Hoe tevreden ben je over hoe jouw team wordt aangestuurd door de leidinggevende?	<input type="radio"/>				
Hoe tevreden ben je met jouw ontwikkelingsmogelijkheden binnen jouw werkplek?	<input type="radio"/>				
Hoe tevreden ben je met de secundaire arbeidsvoorwaarden?	<input type="radio"/>				
Hoe tevreden ben je met de beloning en waardering die je krijgt?	<input type="radio"/>				
Hoe trots ben je op jouw werkplek?	<input type="radio"/>				

Apothekersassistenten

EINDE!

Bedankt voor het mee doen aan de survey

Indien je hieronder jouw mailadres achterlaat, hoor je voor 1 juli 2019 of je een cadeaubon hebt gewonnen.

Vragen of opmerkingen:

Mail mij: 490216mh@eur.nl

17. Wil je kans maken op een cadeaubon?

Nee

Ja ik wil winnen, dit is mijn mailadres:

