# New Blood in the System: Taking the Pulse of Medical Professionals in a Digital Environment

A Study about the Effects of Digital Medical Consulting on Medical Professionals' Job Satisfaction.

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The digitalization of primary care has in recent years enabled the practice of digital medical consulting, affecting the working conditions of many medical professionals. Considering the subsequent effects, e.g. changed work location and patient communication, a corresponding shift in job satisfaction is not a surprising result. Despite the immature nature of the market, the digital shift has already attracted scholarly interest regarding the viewpoint of patients. The perspective of medical professionals, nevertheless, remains widely unexplored. The purpose of this study is to bridge this research gap by exploring how the transition from a physical to digital platform influences medical professionals' job satisfaction. To achieve this, 11 semi-structured interviews with medical professionals were conducted, to later be contextualized through a theoretical analysis. The results reveal that the maximum level of job satisfaction is not achieved from a full transition, but a partial one. This allows employees to reap benefits from increased flexibility, without compromising the social interaction with peers. Overall, the impact of digitalization on job satisfaction found in this study provides deeper insights into other industries that are experiencing similar organizational transformations.

Keywords: Job Satisfaction, Digitalization, E-health, Remote Work, Online Doctor

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# Definitions

### E-health

The use of digital tools and exchange of information to achieve and maintain health support.

### Extrinsic and Intrinsic Motivation

Extrinsic motivation is derived from external influences, while intrinsic motivation is derived from personal interest or enjoyment.

### Job Satisfaction (JS) or Dissatisfaction (JD)

The degree to which people are content and discontent with their job, respectively.

### Medical Professional (MP)

An individual accredited by a professional body upon completing a course of study, and usually licensed by a government agency, to practice a health related profession (Businessdictionary). The health branches represented in this study include the following: nurses, doctors, physiotherapists, midwives and psychologists.

### Digital Medical Consulting (DMC)

The practise where MPs consult patients digitally, via chat or video.

### Digital and Physical MP

A digital MP is defined as someone who works either full-time or part-time with DMC. In contrast, a physical MP works full-time at a physical health center.

### Digital and Physical Platform/Health Center

A digital health center is defined an organization or branch conducting DMC, whereas a digital platform is the general space where DMC is practiced. In contrast, a physical platform and health center refer to organizations and spaces that solely give physical consultations.

### Remote Work

An arrangement in which employees have a flexible work location.

# **1. Introduction**

The last decade has been characterized by a profound technological development, not only revolutionizing the way we live and communicate, but also how we work and perceive our work situation. The current digital reality has, in a wide range of industries, influenced criteria that are commonly associated with JS, including autonomy (Beckmann, Bellmann & Gerten, 2018) and skill variety (Parry & Battista, 2019). Technology has in fact been noted as a strong force in creating JS at work by empowering and motivating employees (Long, 1993).

The health care sector is one of the industries standing before a digital paradigm shift. The push for digitization has enabled the practice of digital medical consulting, affecting the daily operations of many MPs, both in terms of physical location and practical procedures. The shift also comes to question the importance of physical human contact; an element heavily associated with the profession.

Taking into account that the level of satisfaction in the relationship between MPs and their patients is a central reason to join and remain in a specific organization (Goold & Lipkin, 1999), digital MPs' job satisfaction becomes essential for the recruitment, retention and survival of DMC companies in the long run. Important to recognize is also that the well-being of MPs is not only an intrinsic value in itself, but yields other far reaching benefits such as a higher patient satisfaction and quality care delivery (Sanchez-Piedra et al., 2017). Despite this, the MPs' perspective on the changed environment remains largely unexplored in academia.

The reason behind the lack of research is the immaturity of DMC, resulting in a limited amount of studies within the field. Research about DMC from a patient perspective is, however, an exception, which is a natural effect of health care being a patient oriented industry. When, in contrast, investigating the plethora of research about MPs' job satisfaction in general, digital aspects are largely neglected. Thus, there are still unknown effects of medical professionals' JS when transitioning from a physical to a digital health care platform; a gap this study aims to fill.

### **1.1 Prior Research**

Despite the aforementioned lack of digital consideration when researching MPs' working conditions, past studies still yield a basic understanding of general factors affecting MPs' job satisfaction. What becomes clear is the recurrence of certain themes, which are presented below.

Starting from a broader organizational level, good management and leadership strategies are deemed important (Domagala et al., 2018), where the authorization of work autonomy is specifically highlighted (Andersen et al., 2017; Domagala et al., 2018; Spence Laschinger, Finegan & Shamian, 2001; Sanchez-Piedra et al., 2017). Fewer organizational restrictions allow the MPs to utilize their knowledge to a larger extent and handle consultations in the way they deem fit, decreasing JD and strengthening their professional identity (Manan, Azmi, Lim, Neoh, Khan & Ming, 2015; Salvatore, Numerato, & Fattore, 2018). Another study, however, found that MPs had a positive attitude toward guidelines, but experienced that their employer lacked sufficient resources and competence building capabilities to allow them to follow the guideline procedures (Elovainio, Mäkelä, Sinervo, Kivimäki, Eccles & Kahan, 2000). This indicates that less autonomy could be acceptable under the right conditions.

In contrast to the ambiguity surrounding the effect of operational guidelines, there is a consensus in academia regarding the importance of feedback. Different types of feedback nevertheless serve different purposes. Patient feedback allows MPs a better understanding of how to meet patient needs (Schlesinger, Grob & Shaller, 2015), whereas peer feedback provides a social support for physicians and can help manage various stressors (Andersen et al., 2017). Feedback from authoritative sources in general, including both superiors and colleagues, moreover contributes to professional development (Veloski, Boex, Grasberger, Evans & Wolfson, 2006). Nevertheless, what remains consistent throughout the different feedback sources is their common creation of recognition, which is found to be connected to JS (Strömgren, Eriksson, Bergman & Dellve, 2016; Khowaja, Merchant & Hirani, 2005).

Important to keep in mind is that the effects related to patient interaction reaches beyond feedback and recognition. Whilst frequent patient interaction is found to correlate with doctor satisfaction (Domagala et al., 2018), demanding patients create JD (Doan–Wiggins, Zun, Cooper, Meyers, Chen & Force, 1995). Zuger emphasizes this by describing how the

discrepancy between patient expectation and what the doctor can accomplish may cause feelings of guilt or the need to defend oneself (Zuger, 2004).

Expanding on the area of JD, the lack of time and work overload are found to be two of the major sources of work-related stress (Rosta, Nylenna & Aasland, 2009). Long working hours, excessive administrative work or having insufficient time with patients and other tasks are shown to cause JD (Zuger, 2004; Rosta et al., 2009; Doan-Wiggins et al., 1995; Dugdale, Epstein & Pantilat, 1999; Domagala et al., 2018; Woolhandler & Himmelstein, 2014). Considering that time pressure is a clear stress factor, it may not be surprising that one study found that disregarding time limits, despite financial consequences, had a positive impact on physicians' well-being and patient care. This enabled MPs to work in line with their ethical framework, focusing on patients rather than time. The study also found that the overall existence of time limits had a negative impact on JS (Solomon, 2008). The issue of time is in fact so significant that it comes into consideration when doctors choose their speciality, trying to avoid overtime work (Rosta et al., 2009). A good work-life balance is clearly becoming increasingly important for MPs (French, Ikenwilo & Scott, 2007; Laubach & Fischbeck., 2007; Rosta et al., 2009). This is explained as *downshifting*; a process in which people prioritize life quality in terms of expanded free time and less stress at the expense of a lower income (Rosta et al., 2009).

# **1.2 Purpose and Research Question**

The purpose of this study is to evaluate how MPs' job satisfaction has been affected by the introduction of DMC. In order to accomplish this objective and fill the aforementioned research gap, the digital transition will be investigated and analyzed using studies within job satisfaction as a theoretical lens. Therefore, the following research question will be explored:

How does the transition from a physical to a digital health platform impact medical professionals' job satisfaction?

# **1.3 Delimitations**

In order to investigate the research question, this study is geographically delimited to Sweden due to two primary reasons. Firstly, contacting Swedish practitioners entails a facilitation in data collection and communication since we, the researchers, are based in Sweden. Secondly,

it is important to recognize that health care systems in general, and the progress of e-health and DMC specifically, can vary greatly across regions. This may impede the possibility to detect common patterns. The delimitation, thereby, acts as a tool to mitigate the social, cultural and political differences in the data.

# **1.4 Intended Research Contribution**

In terms of theoretical contributions, this study will deepen the insight into the field of JS, especially related to digitalization. With MPs as a distinct occupational scope, the study will sensibly create a larger situational understanding of the profession's JS. The arguably biggest insight will however be the one regarding the impact of a digital transition on JS; a contribution we expect to be applicable even outside of the health care industry.

Perhaps even more relevant than the theoretical contributions are the practical implications, which become visible on multiple levels: for employers, MPs and patients. The findings in this study will provide employers with valuable information of how to improve JS for their MPs. Hopefully, it will create a solid base for the construction of an organizational structure and management practice that systematically supports and engages their employees. The goal is to create shared value, a win-win-win situation, with concrete benefits for the employer (e.g. higher retention), improved satisfaction for MPs and, in turn, higher quality care for patients.

# 2. Literature Review

To understand which factors influence job satisfaction, a thorough literature review is presented below. Firstly, the motivation-hygiene model is introduced as a foundation for the theoretical framework. The extrinsic and intrinsic factors highlighted by the model are, thereafter, developed and complemented by more recent discoveries. The findings are then synthesized through a presentation of a final job satisfaction model. Finally, the concept of remote working and its impact on the presented model is discussed.

# 2.1 Job Satisfaction Groundwork

Today, it is common knowledge that JS among employees is essential to ensure success in organizations. However, this has not always been the case. Operations management has historically been heavily focused on output efficiency and productivity driven by physical capital (Ramawickrama, Opatha & Pushpakumari, 2017). It was not until the 1930s when an early research connection between JS and efficiency was shown (Mayo, 1945), that human capital became a compelling subject for organizational management in academia (Agbozo, Owusu, Hoedoafia & Atakorah, 2017).

As of today, the subject of JS is one of the most investigated areas within the field of organizational research (Savickas & Savickas, 2017). Due to the wide plethora of studies, JS as a term has become somewhat of an essentially contested concept,<sup>1</sup> however with the common denominator that JS is a multidimensional phenomenon (Weiss, 2002; Locke, 1969). Even though researchers have presented different categorizations of JS factors, some variables are more frequently recurring than others. Many of these are presented in the recognized motivation-hygiene model (Herzberg, 1993). Despite the criticism for being too general and shallow (Schneider & Locke, 1971), the transferability of the model has made it one of the most widely used JS models in academia (Malik & Naeem, 2013).

Through a categorization of hygiene factors and motivators, the motivation-hygiene model explains the causal relationship between (de)motivational factors and JS. The determinants of

<sup>&</sup>lt;sup>1</sup> A term referring to hard-to-define, abstract concepts that arise due to widespread discrepancies between interpretations.

JS are motivators, which are intrinsic. The presence of motivators is a prerequisite for enabling JS in employees' daily work. In contrast, hygiene factors are extrinsic and prevent JD. They do not lead to higher motivation, but without them, the individual will be unmotivated and dissatisfied (Herzberg, 1993). Other scholars oppose this view, claiming that extrinsic factors can generate JS, even though intrinsic values remain superior in the creation of JS (Amabile, 1993; Manan et al., 2015).

Hygiene Factors	Definition
Working Conditions	The amount of work, physical facilities and physical conditions.
Co-Worker Relations	Relationships with superiors, peers and subordinates.
Management Policies & Rules	The presence of an appropriate employee policy and management.
Supervisor Quality	The degree of competence or fairness of a supervisor.
Salary	Monetary compensation for work.
Security	Presence or absence of job security.
Status	The relative level of perceived importance from the external environment.

### Table 2.2: Motivators

Motivators	Definition
Achievement	Successfully completing a job and witnessing the job result.
Recognition For Achievement	Positive and negative recognition from people, including supervisors, colleagues and others.
Responsibility For Task & Authority	When employees are allowed responsibility for their own work, the work of others or being given new authority.
Work Itself	The work task themselves.
Personal Growth & Advancement	Moving up in the career ladder and developing core skills.

#### **2.1.1 Extrinsic Factors**

Digging deeper into the area of extrinsic factors, it becomes clear that certain factors are more widely discussed than others. One recurrent finding is the correlation between JS and working conditions (Raziq & Mualabakhsh, 2015; Firth-Cozens, 1987; Agbozo et al., 2017). This especially regards excessive workload, which has been found to be one of the main causes of work-related stress (Firth-Cozens, 1987). The vast significance of appropriate working hours further emphasizes the importance of the managerial task to enable a balanced work-life schedule, as suggested by other scholars (Mas-Machuca, Berbegal-Mirabent & Alegre, 2016).

Beyond working hours, there is a general lack of agreement regarding other quantifiable extrinsic factors for JS, including salary. Even though many studies confirm the significance of salary (Manan et al., 2015), some still question its relative importance to intrinsic variables (Judge, Piccolo, Podsakoff, Shaw & Rich, 2010). JS in terms of salary is to some extent based on the perception of receiving fair pay (Zhang, Tao, Ellenbecker & Liu, 2012), whereas a salary above the status quo is not necessarily a motivational factor alone (Kohn, 1998). Beyond the direct impact of salary on JS, it is further highlighted as a potential determinant for social status, another extrinsic factor. A higher level of positive recognition from society, in turn, increases the sense of importance associated with work (Fung-kam, 1998).

Both within and outside of the organization, the significance of social aspects should not be neglected. Recent research supports the importance of interpersonal relationships with superiors and colleagues, as Herzberg suggests (Cortese, 2007; Manan et al., 2015). Interacting with superiors and other colleagues in a positive atmosphere contributes to employees' commitment and attachment to their workplaces, ultimately increasing their JS and decreasing stress levels (Tran, Ngyen, Dang & Ton, 2018). The significance of social relationships frequently comes to include customers as well (Cortese, 2007). Moreover, all mentioned relationships seemingly share the same reason for its significance, i.e. creating recognition, developing feedback opportunities and professional worth (Cortese, 2007; Manan et al., 2015).

Developing the view on human relations to include customers, the topic of emotional labor comes to the surface. Reaching beyond physical and cognitive labor, the concept is defined as "Labor requiring one to suppress feelings in order to sustain the outward countenance that produces the proper state of mind in others." Professions characterized by high personal identification and standardization are especially at risk (Hoschild, 2012), with exhaustion as well as decreased commitment and JD being the consequences (Pugliesi, 1999; Hofmann & Stokburger-Sauer, 2017). To help employees cope with the stress associated with emotional labor, distancing strategies have been enforced, for instance mitigating the ability to attract excess emotion by removing physical contact (Froggatt, 1998).

### **2.1.2 Intrinsic Factors**

Shifting the attention from extrinsic to intrinsic factors, the importance of employees' personal perception becomes more vivid. It has been argued by several scholars (Smerek & Peterson, 2007; Herzberg, 1993) that work itself is a key determinant for intrinsic JS. However, due to the general nature of the concept, covering a wide range of sub-categories, it can be defined as an umbrella term. Three commonly discussed areas within work itself are: what is performed (task & skill variety), influence over how it is performed (autonomy & flexibility) and the individual attitude towards the tasks (task significance & identity). These aspects will be discussed below.

Regarding task variety, researchers emphasize employees' perceived JS in terms of task range and nature (Hackman & Oldham, 1975). By being given tasks that require utilization of a wide spectrum of skills that have been developed through education or training, employees feel a greater sense of meaningfulness at work (Carrière & Bremner, 2011). As opposed to routine assignments, being challenged in their daily tasks amplifies this benefit, allowing for a continuous development of skills (Manan et al., 2015; Preenen, Vianen & De Pater, 2014). Hence, expanding one's professional skills is fundamental to enable personal development and growth.

Another factor that generates meaning is the sense of responsibility received through authority and autonomy (Herzberg, 1993). This adds to the employee's level of freedom and flexibility concerning work content and time, which in turn allows for a greater sense of ownership (Hackman & Oldham, 1975; Sonnentag, 2017). It provides a source of stimulation, sparking a willingness to fully commit to tasks. A higher degree of control at work contributes to improved emotional stability, motivation, as well as a willingness to perform better (Spector, 1986).

JS, however, reaches beyond variety and control. It also comes to include emotional dimensions; task identity being one of them (Hackman & Oldham, 1975). Completing a job from the beginning until the end, and being able to witness a visible outcome is key for JS, as it gives the employee a sense of accomplishment. Several scholars have shed light on task significance as a related concept, which concerns the degree to which a job has an impact on other individuals in the immediate or external surroundings (Hackman & Oldham, 1975). This is underlined by Cortese (2007), who argues that seeing the impact of one's contributions creates a feeling of truly making a difference.

In contrast to task significance, task illegitimacy poses a threat to individuals' professional identities, as such tasks are perceived as unnecessary or unreasonable (Semmer et al., 2015). Illegitimate tasks have been identified as great stressors for employees, decreasing the perceived importance of their daily work (Munir, Jamil & Ehsan, 2017; Semmer et al., 2015). A general distinction is made between unnecessary tasks and unreasonable ones; the former being seen as a waste of time while the latter is a task which could be completed by someone else. Thus, the general implication of completing illegitimate tasks is that focus is shifted away from core tasks to peripheral ones.

Figure 2.1: Job Satisfaction Framework



In the model, essential factors for JS are presented. Intrinsic factors are in the core of the model, illustrating that they generally are considered to be more significant variables.

# 2.2 The Impact of Remote Work

The digital era with its information highway, allowing one to work from anywhere with an internet connection, has sparked a great interest in remote work among theorists (Morganson, Major, Oborn, Verive & Heelan, 2010). Although there is no consensus regarding the long-term net effect of remote work on JS, the discussion among scholars has culminated in three common patterns (Gajendran & Harrison, 2007).

Firstly, remote workers reap benefits from an increased level of flexibility due to the opportunity to influence location and scheduling (Gajendran & Harrison, 2007; Morganson et al., 2010). Despite potential distractions at home, the flexibility that comes with remote work enables a more efficient allocation of time and, thus, a higher degree of productivity. This further contributes to the alignment of employee objectives with the ones of the organization (Kelliher & Anderson, 2010).

The second identified theme is that remote work can negatively influence interpersonal relations with colleagues. When face-to-face interaction, a natural component in a traditional physical workplace, is restricted, the associated social benefits are as well. To mitigate this, it is suggested that managers should, for instance, arrange social activities for remote co-workers, enabling face-to-face interactions (Golden, 2006). Otherwise, the lack of social interaction culminates in a sense of isolation, to a degree which highly depends on the length and intensity of the remote work (Collins, Hislop & Cartwright, 2016).

Finally, there is a certain level of inconclusiveness regarding the impact on work-life balance. The inability to "switch off" and disconnect one's work related thoughts at home seems to be one of the most prevalent downsides (Felstead & Henseke, 2017). However, the remote work brings other benefits, such as fewer problems managing family time (Fonner & Roloff, 2010). Especially for parents, this entails a higher level of relaxation and decreased stress levels (Duxbury, Higgins & Neufeld, 1998).

# 3. Methodology

This section provides a description of the underlying methodology. It is initiated by an overview of the overall research method, followed by a presentation of specifics related to the data collection and analysis. These segments are later discussed with ethical and reflexive considerations in mind. As concluding thoughts, different dimensions related to the trustworthiness of the method are presented.

# 3.1 Research Method

The relationship between theories and empirics in this study was initially characterized by a deductive approach, meaning that selected literature guided the study and interview questions. Even though past JS theories provided a foundation in the empirical data collection and analysis, the theories were later considered insufficient to explain the findings that arose. The issue is a common critique towards the deductive method, as it is more commonly used in quantitative research when testing hypotheses. The aforementioned drawback of the method was circumvented by this study by later utilizing an inductive, iterative process. This allowed the theoretical framework to be continuously adjusted based on common themes that emerged from the empirical material (Bryman & Bell, 2015). Thus, the final overall approach was abductive, which is appropriate to guide qualitative research (Lipscomb, 2012), specifically exploratory approaches in relatively uninvestigated areas, such as DMC (Dubois & Gadde, 2002).

A qualitative method was, in this study, necessary to fulfill its purpose (Dubois & Gadde, 2002). Rather than testing a specific hypothesis, the aim was to explore a largely uninvestigated research field. Therefore, interviews were conducted to capture nuances and unknown dimensions affecting MPs' job satisfaction. If a fully quantitative method would have been chosen, the subjective dimensions of the interviewees' realities would not have been acknowledged. Nevertheless, qualitative research methods have been questioned due to their subjectivity. By conducting multiple interviews, recurrent patterns were nevertheless distinguished, contributing to a validation of the conclusions (Bryman & Bell, 2015). The aim to acquire generalizable patterns in the data collection suggests that the study is subject to a positivist paradigm (Ryan, 2018).

### **3.2 Primary Data**

#### **3.2.1 Sample Technique and Data Collection**

The first step in the sampling process was establishing selection criteria. As an implication of the geographical delimitation, the interview subjects were all based in Sweden. In regards to the MPs, they would have to have experience working on both a physical and digital health center, either full-time or part-time. This requirement was set in order to ensure that a comparison of JS could be made, prior and post the DMC employment. The interview subjects would, in other words, be able to yield insights into both physical and digital health clinics.

Considering the distinct criteria regarding professional background and geography, LinkedIn was later used to contact the interviewees as it could filter and identify appropriate research subjects. Thus, purposive sampling was used, with an underlying sampling approach that referenced the key objectives of the study (Bryman & Bell, 2015). Other sampling techniques used were e-mailing, using email addresses found on DMC-companies websites, and snowball sampling (Bryman & Bell, 2015). The snowball sampling technique entails that an initially small sample of individuals propose other people as potential interview subjects, who in turn will suggest other individuals and so on. This method was especially effective when initiated by a chief doctor, due to the wide contact net the position entails, adding four new interview subjects. Although very effective, the drawback related to the sampling method is the risk of biased results, especially considering the low likelihood of the sample representing an entire population (Bryman & Bell, 2015).

After reaching out to 82 people via LinkedIn and e-mail, eight chose to partake in the study. The rest were reached through the snowball sampling. Because of the low response rate, no specific medical specialties were excluded. This resulted in a limitation of the definition of an MP, including nurses, doctors, physiotherapists, midwives and psychologists. The imposed risk was that the deviations in characteristics between certain medical specialties could potentially interfere with the ability to infer general commonalities. On the other hand, the patterns that ultimately were created yielded more generalizable results. Beyond MPs, one digitalization expert was added to the interview list, providing insights into employee satisfaction, retention and recruitment. Being well informed about employee issues, e.g.

operative improvement areas and complaints, the digitalization expert provided a holistic perspective of JS in digital health centers.

#### **3.2.2 Interview Design and Process**

The initially constructed interview guide (appendix 8.2) was based on the presented theoretical JS framework. However, due to the exploratory nature of this study, a semistructure approach was used, entailing that the guide was used as an overall guidance rather than a strict manual. This allowed for slight deviations from the posed questions and created room for follow-up questions if deemed necessary. Additionally, the majority of the questions in the guide were open-ended, allowing the interviewees to develop on the reasoning behind their answers.

Although the same interview guide was used in all of the interviews, the semi-structured approach of the study enabled deviations from the guide when necessary (Lewis, Saunders & Thornhill, 2009). Changes were made dependent on the specific research subjects, e.g. how well-developed their answers were. In order to better recall the content of each interview, they were all documented through recordings and transcription. The continuous transcription, in combination with the abductive approach, allowed for modifications of the interview guide between each interview. This enabled us to remove questions which were not deemed relevant and add questions that were missing, consequently improving the interview guide from one interview to the next.

As a consequence of the semi-structured interview design, the length of the interviews ranged between 34 to 84 minutes, a range which largely stemmed from the subjects' varied view on what was considered relevant for their JS. Due to the MPs' hectic schedules, the interviews were primarily held over the phone, but a few were held physically. Telephone interviews are not that common in qualitative research and have been criticized for the risk of misinterpretations and its inability to account for body language (Bryman & Bell, 2012). However, it has been argued by Yin that high-quality studies can be conducted with telephone interviews (Yin, 2003). Additionally, by recording the interviews, we could go back to the original answers if something was perceived as unclear in the transcribed material.

After having conducted 12 interviews, the decision was to not continue to expand the sample size. This was a conscious choice, based on a common agreement among researchers that empirical data should be collected until theoretical saturation is achieved (Bryman & Bell, 2015). Put differently, information was collected until clear common patterns were developed.

# 3.3 Data Analysis

The data analysis process was initiated already from the point of data collection, as the transcription occurred in parallel with the gathering of empirics. Combined with the fact that a theoretical model with distinct group labels was developed from past literature, this allowed for an early identification of what degree the empirics related to these categories. However, a thematic analysis method was also used, as the findings in the empirics influenced the categorization of themes in the analysis (Braun & Clarke, 2006; Given, 2008). Through the iterative process, extensions of the theoretical framework were made in accordance with the discovery of new themes, which in turn were considered in the continued empirical data collection.

# 3.4 Reflexive and Ethical Considerations

In the data collection process, ethical and reflexive considerations were accounted for to ensure high quality research. Nevertheless, some aspects were hard to control. Semistructured designs commonly give rise to follow-up questions, which can become misleading due to the spontaneity of these questions. However, the problem was somewhat mitigated by developing the interview guide after each interview, progressively reducing the necessary amount of follow up questions over time.

Other aspects that were regarded in the data collection process were ethical considerations. Before commencing the interviews, the interviewees were asked for permission to record and to transcribe the conversations. Additionally, they were fully informed about the exclusion of their names, as well as the identity of their organizations. The motivation behind the measure was to remove potential barriers that would prohibit the research subject from being entirely truthful, for instance a fear of jeopardizing one's job. Recordings and transcription materials have only been available to the authors of the thesis, and have been exclusively used to fulfil the objectives of the study.

# **3.5 Quality Considerations**

Although validity and reliability are commonly used as criteria in research (Bryman & Bell, 2012), they have been argued to be better suited for quantitative research (Lincoln & Guba, 1985; Flick, 2009). Considering the qualitative nature of this study, four alternative criteria were used to ensure its trustworthiness. These include credibility, transferability, dependability and confirmability, which will be discussed below.

It is important to remain critical to the theoretical approach and methodology of a study in order to receive an accurate depiction of its relevance. Therefore, credibility is a key aspect to consider when conducting research, as it measures how believable the findings are (Bryman & Bell, 2012; Lincoln & Guba, 1985; Flick, 2009). This might be difficult to ensure in qualitative research, namely due to the co-existence of multiple perceptions of the same social reality. By thoroughly explaining the details regarding the empirical data and the conduction of analysis and data collection, the credibility increases as there is less risk for alternative interpretations. The credibility was also strengthened by the consistently identified overlap between the transcribed material and recordings, mitigating the risk of misinterpretation. One last dimension related to this criterion relates to conducting the study according to good practise (Lincoln & Guba, 1985). The ethical considerations highlighted in the previous subchapter confirm that this was achieved.

Similar to credibility, confirmability addresses whether or not the study has been conducted in good faith (Bryman & Bell, 2012). As a consequence of the researchers' personal perceptions, prejudice and biases, there is a risk of interpreting data incorrectly. Therefore, it should be clearly demonstrated that the personal values of researches do not interfere with the research in question. Even though this problem cannot be fully eliminated, the risk was somewhat mitigated in this study by constantly having two researchers collectively conducting, interpreting and discussing the data collection.

Another dimension which highlights the importance of trustworthiness is transferability, meaning that the findings can be applied to other contexts (Bryman & Bell, 2012; Lincoln & Guba, 1985; Flick, 2009). Using a sample of research subjects sharing similar characteristics poses a threat to the transferability of the results (Lincoln & Guba, 1985). Additionally, the information collected in the empirics was based on MPs particular life experiences in specific

contexts. The fact that these situations can never be recreated poses a threat for fulfilling this criterion. However, by having a broad definition of MPs and aiming to identify general commonalities, the findings that were detected should reach a satisfactory level of transferability.

The last consideration, dependability, aims to test whether or not findings are replicable (Bryman & Bell, 2012; Lincoln & Guba, 1985; Flick, 2009). Achieving the highest level of dependability, thus, requires thorough descriptions of the research process. By including as many details and explanations related to the methodology as possible, the level of dependability was increased. In order to test the dependability of this study, we invite other scholars to investigate the research question in similar environments and circumstances.

# **4.** Empirics

This section gives an insight into the results of the conducted interviews. The interviewees' perceptions of JS in regards to DMC are presented according to external and internal factors.

### **4.1 Extrinsic Factors**

### **4.1.1 Societal Feedback**

The influence of the external environment has been repeatedly recorded throughout the empirical study, especially in terms of the critique from media and the medical profession. The interviewees agree that "The view is generally very negative" (House), and that "Generally, [the MPs] who have not tried [DMC] are a bit afraid and questioning" (Cuddy). Consequently, "Many younger doctors do not dare to say that they work at [a DMC company] openly" (Bailey). Nevertheless, the fact that the interview subjects of this study decided to transition to a digital workplace, either full-time or part-time, indicates that the benefits derived from changing platforms outweighed the external criticism. A general consensus is that "One should not look backwards, but rather forward in time" (Grey) and utilize the technological advancements that have been made.

### 4.1.2 Patient Feedback and Relations

The impact of technology in the daily practice of digital MPs becomes an apparent pattern in the interviews, in which the improved patient feedback system is especially highlighted. Bailey explains her organization's feedback system in the following way, which seems to depict the industry standard: "The patient can voluntarily give feedback, which most of them do. Either in open ended comments or a 1-5 rating of the encounter. This feedback you can see either directly, or once a month presented as an overall statistics from the account manager." Almost all MPs agree that the quality of the feedback is better digitally. This is compared to physical centers, where the awareness of patient satisfaction is scarce due to the lack of systematic evaluation systems. Regardless, there is a clear consensus that "feedback is important, as it equals constant learning" (Bailey). Harare adds: "as long as the feedback is relevant and medical, it is always appreciated."

However, patient feedback is not always of that nature; a point accentuated by Shepherd. "In a [strictly DMC company] you mainly receive feedback from the people compiling the statistics. Depending on the latest patient satisfaction reports and the amount of conducted consultations and work shifts, they create their view of your work" (Shepherd). The issue with this production based evaluation process, Shepherd explains, is that health care quality should not be measured by patient satisfaction as it e.g. will be affected by whether they receive a desired recipe or not. The definition of good health care should not be in the hands of the patients according to Shepherd, concluding that "Good health care is correct health care."

Another aspect multiple MPs touch upon is how emotional labor decreases working with DMC, mainly as a consequence of the reduced human contact. "I would like to say that human contact is the greatest driver in my job, but that is not the case. My energy does not come from constantly smiling [at patients], but rather from knowing that I have helped someone" Harare explains, adding that "Human contact is motivating, but there is only so much human contact one can handle. You are always compassionate, but you also need enough energy to do your job." This may be especially true for psychologists, one admitting that "It is emotionally challenging for me to work face-to-face. You sit for a long time and need to be emotionally in tune with the patient constantly, which puts pressure on you" (Ross). In terms of human contact, DMC also decreases the impact of temperamental patients. "If the patient would be impolite, one can ask them to call up when they have calmed down. In a physical clinic, the patient interaction becomes harder [...] The digital platform simply allows you more power over the meeting with the stressful, moody patients" (Bailey).

### 4.1.3 Peer Feedback and Relations

Another type of feedback comes from peers, which generally has been improved in the digital transition. "The social culture online could be compared to a carbonated drink; an incredible energy bubbling with positivity and lots of ideas. There is always someone to ask" (House). The digital nature of DMC allows MPs to ask for other professional opinions when necessary, e.g. by digitally inviting colleagues to join the consultation or pausing a consultation to acquire other professional opinions in internal chat forums. "In the physical world, you have to knock on doors or make calls, which is inefficient" (House). Nevertheless,

MPs point out that "There is a great social issue related to working full-time digitally, as it would definitely entail a lack of social interaction with colleagues" (Grey). Thus, the loneliness that comes with DMC is a potential disadvantage. As a mitigating factor "[certain] digital employees also offer a physical meeting place for colleagues, which can be utilized if someone wants to increase the level of interaction with their peers" (Grey). Nevertheless, the majority of the MPs agree that the perfect workplace would combine both digital and physical work. Some highlight the importance of being "a part of the social culture" (Yang), while others emphasize its importance to "retain knowledge and competence" (Shepherd).

### 4.1.4 Superior Feedback and Organizational Support

In terms of contact and communication with supervisors, DMC seems to provide a better feedback system. "We have continuous development meetings, which is smoother now compared to how it was on the physical center since it is frequently emphasized that subordinates should also have a say" (Hathaway). Moreover, "There is a certain transparency. On physical centers, they do not get the same insight into one's visits and current errands" (Turk). Romaray expands: "What is clever with the chat consultation is that you can revisit the chats afterwards and see exactly what happened. That is not possible with physical health visits." In physical clinics, this type of guidance occurs seldomly, according to Dorian only "when you have received complaints and made a grave mistake."

Superior feedback moreover plays an essential role in DMC training if the employer has such an introduction, which not yet is an industry standard. In Ramoray's organization, "When doctors and other professionals start working [digitally], the chief doctor looks at the 20 first patients they take care of so they get feedback directly." Dorian and Grey explain that they receive training about what to keep in mind when consulting digitally, while others such as Hathaway received no formal training. What is highlighted is, nevertheless, the importance of this type of feedback. Ross explains that one of the most unmotivating elements at work is "If things do not go well, especially if you do not get feedback of how to improve." Hathaway agrees, saying that "[introductory training] would improve the work situation."

### 4.1.5 Wage

In terms if wage, no pattern can be detected. Some MPs receive a higher wage digitally, explaining it as a consequence of them working in the private health care sector. Others

receive a lower wage, seeing it as a "tradeoff between flexibility and wage" (Grey). In centers which before were exclusively physical, but incorporated DMC, the wage naturally remained the same.

# **4.2 Intrinsic Factors**

#### 4.2.1 Autonomy & Flexibility

An external factor, management procedure, which comes to have explicit internal effects is flexibility in terms of scheduling and remote work options. This is a specifically emphasized benefit with DMC, as it yields the "freedom to work from home, from holiday homes or even another country" (Bailey), which has not been an option for the profession before. Many MPs agree that "Not having to work at a particular workplace is a nice change" (Harare) and that "It is convenient if you have children" (Hathaway). Shepherd explains that "[the flexibility] develops one's private life too", as it allows one to better align the work-life with one's personal needs and wants.

Many organizations also allow the MPs a greater influence over their work hours, picking preferred shifts on an internal digital platform. This benefit is highlighted by most interviewees as "Many [MPs] choose to transition [from physical to digital] due to the control over scheduling" (Dorian). Even though most MPs suggest that "there is a high level of flexibility in changing shifts, both in terms of dates and specific hours" (Ramoray), some also see a successive decrease in flexibility. "Initially, there was a lot of flexibility, but a lot of focus on numbers: number of patients per hour etc. Then, as there was a greater demand for DMC, focus shifted and there were new requirements. There was an increased emphasis on the number of hours one could work" (Shepherd). Doctor Grey agrees saying, "[the flexibility] has changed since there now are so many doctors that work [digitally]. The work shifts I want are always fully booked [...] Before, I could more or less schedule a work shift one hour before it started."

When investigating organizational decentralization and perceived autonomy, some differences have been noted. Although digital MPs follow the same procedures for diagnosis, "routines are more strict online" (Turk). "Guidelines are the same [digitally and physically], but digital centers are under greater observation. [...] It is more restrictive, so they can cope

with the inspections" (House). As for communication, more standardized procedures are utilized. "When consulting [via chat], there is a lot to write, which puts a requirement on variation. Greetings are however automated. Standardization saves time and you afford the dehumanization. More efficient delivery" (Harare).

### 4.2.2 Task Variety

Although the core job when transitioning from physical patient care to DMC remains the same, the change in communication method impacts the scope of the consultations. For one, the digital communication results in certain restrictions regarding illness variety since no physical examination can be executed, which many MPs recognize. There is moreover a demographic age restriction for some digital organizations. It is "Not that many old people, compared to physical centers, primarily kids to 50 year olds" (Turk). From another perspective, Shepherd explains that the larger quantity of consultations per hour with DMC, combined with the narrower illness variety, has increased her professional knowledge and "[made her] become better as a doctor."

The fact that some patients who request DMC actually need physical examinations or no treatment at all are connected to the same type of doctor online is as a great issue. To mitigate this risk, many organizations utilize a forwarding system. "Nurses receive the first contact with the patients. They are generalists, and can forward the patients to doctors or specialists if necessary" (Hathaway). Ramoray explains that if the illness "lands outside of [a recommended chart] you should help the patients with a physical appointment." Some organizations provide even earlier steps, e.g. providing the patients with information about various illnesses and symptoms so they can themselves determine if they need a medical consultation.

The forwarding system affects the MPs in various ways. On one hand, it mitigates redundant consultations of "people who seek help when it is not needed. This makes you feel like you are wasting your time, especially if they call to ask about a sprained pinky" (Hathaway). On the other hand, it can also pose challenges. "In the beginning, most of [the MPs] feel like they should solve as many consultations [digitally] as possible", Ramoray explains. "You always have to cheer them on a bit that scheduling an appointment at a [physical] center is not a failure."

Administration and medical journaling are tedious, yet necessary tasks for many MPs, that generally seem to have improved in the digital transition. "Standardization makes [admin] easier digitally" (Dorian). Grey explains, "The biggest stress factor related to my profession is administration; it takes away from the time one could spend with the patient. The technological aspect on digital platforms is a facilitator in this respect, as you can use the patients' responses regarding their medical situation and incorporate it in the journals. This is an immense time-saver." Even though most MPs agree, some problems do arise online. The medical journaling can, for instance, be hard to coordinate as "You both have to document and answer calls [from patients] simultaneously" (Hathaway). There can also be "technical difficulties, which entails that if the digital admin does not work, you need to do it manually anyways" (Hathaway).

### 4.2.3 Business Development

House describes the opportunity to engage in business development as exciting, which most MPs agree with. "The biggest motivation is working with a new and fun way for the human meeting. The second thing is that you get a sense of responsibility for driving medical knowledge, more experience and influence over the business development" (Ramoray). "It is motivating to work with something revolutionizing within health care" Bailey agrees, "Being a part of developing the health care system is a contributing factor to my [digital] transition."

Even though taking on new tasks is deemed existing in general, a potential long term downside is detected. Hathaway describes the initial interest in organizational development "We developed a new coordinator nurse role, which I acquired. It was fun to be a part of the business developing. It was challenging and interesting." Nevertheless, Hathaway later burned out. "I was supposed to order around more experienced colleagues, which was new for me. [...] It became too much when I just got off my maternity leave." Even though multiple factors are mentioned as reasons to why Hathaway burned out, the coordinator role is a highlighted factor.

#### 4.2.4 Stressors

In general, the overall perception from the MPs is that the stress levels are lower online. "[I have] never been in a more relaxed and manageable workplace [digital]" (Harare). Turk and

Grey agree saying that there are "higher stress levels [on physical platforms]." Nevertheless, certain situations and circumstances give more ambiguous answers, specifically relating to the coordinating tasks, patient flow and queuing system in DMC. Ross explains that "It is not more stressful just because you are treating more patients", whereas Romoray explains that "The main stress factor is that you work with so many patients simultaneously." Yang continues saying that "On a digital platform, there are more errands than there is time" and that "A certain frustration arises from not being done." Another stress factor relates to the queuing system commonly used in many organizations in the initial transition to the digital platform. "It is stressful when you know that there are a lot of clients waiting, as it becomes obvious how many are waiting and how long they have waited" (Dorian). Hathaway agrees that it was stressful initially, but says that "It is not stressful to see people in line" (Shepherd) and that is rather useful as it "provides insight" (Yang).

# 5. Analysis

With the theoretical background in mind, a thorough analysis of the empirical material has been conducted. This is presented below through a categorization of five broad categories for JS.

# **5.1 Organizational Management and Characteristics**

What became apparent in the empirics was that functional, well-incorporated technology as well as the organizational management create basic prerequisites to enable JS in DMC companies, the latter suggested by Hertzberg (1993). However, in contrast to the scholar's ideas, a clear interconnection exists between the extrinsic factors and various intrinsic factors, which is strategically utilized by DMC organizations. Extrinsic factors are not only exploited to decrease JD, but also to create JS; for example by having a work policy which, thanks to strong technological capabilities, allows MPs flexibility in terms of remote work options. To give a proper account for the recurring overlap between extrinsic and intrinsic factors, the analysis below will not be divided based on these dimensions.

# 5.2 Work Itself

### 5.2.1 Autonomy

One intrinsic factor that is directly derived from organizational policies is autonomy, whereas there is a larger emphasis on standardization for DMC. However, this is not deemed as something negative by MPs, which somewhat questions Sonnentag (2017) ideas about autonomy's positive impact on JS. The use of guidelines was in contrast perceived as useful and effective, supporting Elovainio et al. (2000), who found that MPs' attitude towards protocols could be favorable if well-designed.

### 5.2.2 Task Variety

The requirements from the organization also comes to impact the task variety MPs receive in their daily work. Although not connected to the core job of patient treatment, a majority of the MPs have received the "challenging" and "interesting" additional task to actively partake in internal platform development (Manan et al., 2015; Preenen et al., 2014). A majority of the MPs enjoy the participation in platform development, as it naturally improves the daily

working situation for the MPs. Engaging in business development may withal have a negative effect on JS if it to a high degree deviates from the core job or capabilities of the MPs. This is exemplified with the aforementioned coordinator role issued to a MP, requiring new skill development without any related training. Proper support should be implemented in these cases, to ensure reduced stress levels for employees. It can be speculated that these measures are especially important for MPs who, like the one above, are sensitive and less stress resilient due to mental, physical or situational strains.

When redirecting focus from variation derived from additional tasks to variation regarding core tasks, the impact of DMC's technical nature becomes evident. This is primarily in terms of narrower patient demographics, i.e. age range, and illness variety, as not all illnesses can be consulted on digitally. Its impact is, nevertheless, mitigated by two factors. Firstly, the limitation in variation does not impact the MPs' ability to consult patients and deliver health care services, which is associated with high task significance for MPs. Secondly, most of the MPs do not work digitally full-time. As a consequence, they do not perceive the full impact of the somewhat restricted illness variety. It can, thus, be argued that part-time digital employment is superior to full-time. MPs will for one have an accelerated learning curve for the scope of illnesses DMC allows for, gaining experience quicker by consulting more patients. Simultaneously, they still receive practical experience of other illnesses when working physically.

Additionally, one should acknowledge that the lack of variety due to age is a short term problem. Long term, the vision is for all digitally treatable illnesses to be treated digitally. The technological exclusion that currently hinders the older generation from accessing DMC will be reduced when elderly acquire more technical competence. Moreover, the current overrepresentation of younger age groups on digital platforms may to some degree logically entail a lower representation of this demographic on physical platforms, under the premise that not all of the digital consultations concerns additional errands that would not have yielded a physical consultation. Perhaps not to the same extent, but a certain decrease of age variation should prevail on physical platforms as well, possibly making it an industry issue rather than a DMC issue.

#### **5.2.3 Work-Related Stress**

Overall, any work, regardless of task variety, will create some kind of occupational stress; that includes DMC. Although regarded as generally less stressful than physical clinics, due to the net effect of the various benefits noted throughout the analysis, the practice comes with certain stress factors. Somewhat in contrast to previous literature (Zuger, 2004; Rosta et al., 2009; Doan-Wiggins et al., 1995; Dugdale et al., 1999; Domagala et al., 2018; Woolhandler & Himmelstein, 2014), one of the main sources of time related stress was not the lack of time with patients, but rather having to manage several patients simultaneously on chat based DMC. One reason this is perceived as stressful is because it may be an underdeveloped skill for many MPs. Considering that this type of coordination is not practiced in physical clinics, i.e. the previous employers for most digital MPs, it naturally becomes difficult. Nevertheless, increased experience and practice will improve MPs' comfortability within the area.

Another stressor for MPs is the queuing system prevalent on certain DMC platforms, as their inability to consult everyone becomes more tangible. With long queues, a discrepancy arises between what the MPs want to achieve, i.e. treating all patients, and what the MPs realistically can achieve while maintaining high quality patient care. It can therefore, to some extent, also be seen as discrepancy between a production target and the alignment between the MPs' ethical frameworks, i.e. high quality care, and their medical practice. Even though the latter is actively chosen (Solomon, 2008), it causes a feeling of inadequacy not to reach the wished production goal. This stress may, nevertheless, be especially concentrated to the initial time at a DMC company and should decrease when the transitioned MPs become more used to the system. The MPs become more pragmatic in their attitude toward the queues with time, focusing on what is possible rather than what is desirable. The view also seems to shift from what is negative about the system, to what is positive. The display of the queues can then be appreciated as a way to receive a more holistic view over the current work situation.

#### 5.2.4 Emotional Labor

In regards to the effect of personal relations, an interesting finding was how DMC decreases MPs' emotional labor. Multiple MPs agreed that extensive physical patient interaction could be exhausting (Pugliesi, 1999; Hofmann & Stokburger-Sauer, 2017), and that remote work helped them to cope with this aspect of work (Froggatt, 1998). Important to acknowledge is that the decreased emotional labor is not achieved at the expense of less patient interaction,

which is found to be essential for JS (Domagala et al., 2018). It rather creates more patient time, by eliminating inefficiencies, e.g. less administrative burden.

From a critical perspective, not all MPs touched upon the topic, but those who did emphasized its impact. Even though it may not be universally true that DMC yields extensive advantages in terms of decreased emotional labor, it may be significant for a certain personality type or medical specialty. It can be speculated that psychologists, who constantly must be emotionally connected to their patients, experience the biggest emotional relief when turning to DMC.

# **5.3 Feedback**

### **5.3.1 External Feedback**

Beyond MPs' own perceptions and emotions regarding DMC, they are frequently faced with feedback from the outside environment. The constant wall of negative criticism moreover creates an internal contradiction, as the task significance and social benefit the MPs associate with DMC is not recognized externally. Accordingly, the external criticism does not only drain MPs of their professional legitimacy, but also the recognition they receive for the social impact they generate. Nevertheless, as digital MPs are able to directly see the social impact they generate through patient interaction and feedback, they do not allow the criticism to influence their personal judgement regarding the significance of their profession. Thus, external feedback, in general, has a relatively low impact on JS for MPs currently working online.

The significant effect of external criticism rather comes into play in regards to the MPs who are yet to try DMC. The criticism erects barriers to test a digital platform, by making the MPs insecure of the nature of DMC and what others might think of them if they would transition. This occurs at the expense of the physical MPs themselves, restricting their career opportunities and hindering their possibilities to move to a workplace where they may experience a higher JS.

#### **5.3.2 Internal Feedback**

As aforementioned, patient feedback mitigates the impact of negative external criticism, but its importance reaches further than that; the integrated patient feedback system is fact one of the main benefits of DMC. Even though there is a clear consensus within the profession that patient feedback is valuable for professional development (Schlesinger et al., 2015), physical centers have been largely lacking in this area. For many MPs, going from physical to digital care, the difference thus becomes remarkable. There is, however, a balancing act, where the feedback evaluations must be sufficiently easy and quick to ensure that patients choose to fill it out, yet adequately detailed and appropriately focused so that the feedback can become constructive. Currently, this balancing act might be skewed in some organizations, especially where evaluations are primarily based on aggregated patient satisfaction. The measure is problematic as it can be an unjust evaluation for the MPs' performance, for instance being affected negatively by patients who did not receive the treatment they wished for.

The evaluation system can create an unfair situation where the MPs must act against their judgement to receive higher scores or maintain their professional integrity and receive lower scores. A certain situational frustration has been detected, but the risk of malpractice actually occurring seems benign, considering that the medical profession in general is not production (i.e. score) oriented. However, this probability may increase if organizations start promoting or more heavily evaluating MPs based on such statistics. The focus shifts from treating patients to pleasing patients, at the expense of MPs' moral compass and the quality of health care.

To improve the patient feedback situation, organizations should re-evaluate the feedback criterion. Patient satisfaction can be expressed through feedback regarding the satisfaction of A) the personal encounter with the MP, and B) the perceived professionalism. When lower scores are generated, MPs will be better aware of what this depends on and if it is relevant, whereas a comment field could specify this further. Nevertheless, this extension, as mentioned above, might pose a threat to patient's response rate.

Even though patient feedback was emphasized more than any other type of internal feedback, the importance of supervisors was also acknowledged, specifically in terms of introductory support. Through objective materials, i.e. chat records and video consultations, the supervisor can give the MPs constructive feedback when needed. This is key in order to create JS in early stages of transitioning, as it neutralizes the uncertainty related to the shift in communication style. Thus, the importance of superior feedback recognized in past research is confirmed (Veloski et al., 2006), but concentrated to the initial stages of a DMC employment.

In terms of peer feedback and the exchange of professional opinions, its improvement does not stem from a specific stage in the DMC transition, but a technical facilitation in the communication process. The digital nature of the consultations and the internal chat forums enable peer contact and advice to a larger extent. Beyond the professional development of having access to this knowledge exchange, it may also yield a sense of reassurance, knowing that you are only a chat room away from other professional opinions when needed. This stands in contrast to the inconvenience related to physical platforms, knocking on doors or making phone calls. The efficiency gain can be connected to an increase in task significance and decrease in JD, as MPs will spend less time on simply allocating and contacting peers.

### 5.4 Social Atmosphere and Culture

Another dimension related to relationships is the aspect of culture and social interaction, whereof this study provides empirical support for the previously assigned importance of interpersonal relationships at work (Herzberg 1993; Manan et al., 2015). Working with DMC can create a great social issue at work (Golden, 2006); a disadvantage which extent depends on the length and intensity of remote work (Collins et al., 2016). This dimension is nevertheless already recognized by the DMC industry, many implementing internal chat forums and central communal work places. The significance of a social culture and face to face interaction with colleagues is hard to ignore, which is a likely reason why most MPs do not work full-time currently. Given that few MPs work digitally full-time, the issues of loneliness and seclusion within the profession are not currently pressing.

### **5.5 Personal Fulfillment**

### 5.5.1 Task Significance

An essential aspect of DMC for MPs is the extended way to give back to society (Hackman & Oldham, 1975). With an interest in technology and improving patient satisfaction as well

as working conditions through internal platform development, digital MPs enjoy taking an active part in this process. It generates intrinsic value and JS, being seen by MPs as a way to partake in the development of modern medicine. In other words, the feedback development system creates a shared value process by improving the platform and, in turn, benefitting the organization, MPs and patients.

Another factor that comes to influence the MPs is the construction of the technical infrastructure and whether it allows them to focus on work with high task significance. Since time spent treating patients has an overall high task significance (Solomon, 2008), efficient administrative systems and a refined infrastructure improve JS, as it enables more time for medical consulting. Conversely, JD can arise from deficient technical foundations, where the forwarding system takes on a central role. Overall, a well-developed forwarding system mitigates the JD associated with task illegitimacy (Semmer et al., 2015). Partly by redirecting patients who do not need a consultation (reducing unnecessary tasks), and partly by transferring patients to an MP with the appropriate qualifications (reducing unreasonable tasks). Consequently, MPs experience less annoyance and stress (Munir et al., 2017) from misplaced patients and an increased task significance as they can focus on patients that are in need of their specific expertise (Salvatore et al., 2018; Carrière & Bremner, 2011).

The forwarding system, nevertheless, also comes with certain hardships for MPs. Some express a difficulty in forwarding people to physical centers in the beginning, recognising it as a failure. This can be explained by Zuger (2004) who found that the discrepancy between what the doctor can accomplish and the patient's expectations can cause feelings of guilt. This is however a transitional phase, being reduced with time, as the new digital MPs recognize that the goal of DMC is not to treat all patients, but rather the digitally treatable ones.

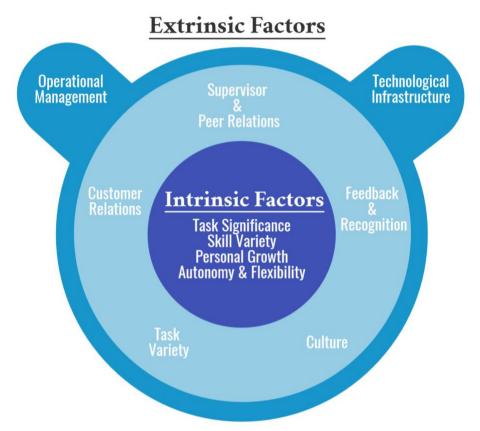
### 5.5.2 Flexibility

Moving from hardships to benefits, one of the main advantages with DMC is the flexibility in the choice of location and scheduling. Even though the benefit has been recorded in past literature (Gajendran & Harrison, 2007; Morganson et al., 2010), it is freedom that has not previously been experienced by the medical profession. Being able to customize their schedule according to their specific life situation allows for a development of the MPs'

personal lives (Duxbury et al., 1998; Fonner & Roloff, 2010). This result is, however, in direct contrast with Felestead & Henseke's (2017) study, which emphasizes remote workers' inability to "switch off" from work at home. Regarding work hours, there is a stronger emphasis on building a work schedule around set aside family time, rather than fitting in family time along work (French et al., 2007; Laubach et al., 2007; Rosta et al., 2009). Thus, flexibility in regards to time is more about the opportunity to control when you do not work, rather when you do work. The importance of flexibility is moreover supported by the acceptance of a lower wage some MPs receive in the profession (Judge et al., 2010). Overall, the finding underpins the concept of "downshifting", as presented by Rosta et al. (2009), as a greater shift in the medical profession.

In the long term, however, the flexibility in work hours may decrease on an industry level, as noted by several MPs. Given the increasing reality of digitalization, DMC will become an integrated part in more health organizations and centers in the near future. In order for them to minimize the risk of staff shortages, flexible schedules will likely be interchanged for more consistent pre-set schedules. Even though there is a clear possibility in the future to have a larger back-up pool when understaffing occurs, sending out notifications when more MPs are needed, it can be speculated that it is not sustainable for the business overall to rely on staff who expect flexible hours.

#### Figure 5.1: Final Model



In the final model, the variables wage and task identity from the initial job satisfaction framework have been removed, whereas technical infrastructure and culture have been included. An additional layer, including two extrinsic variables, has also been added. Even though the variables are placed farther away from the core than other extrinsic variables, they should not be seen as less important. They should rather be viewed as fundamental prerequisites for JS, an overarching dimension, influencing various extrinsic and intrinsic factors.

# 6. Concluding Discussion

In this final section, the conclusion is presented alongside a discussion of the empirical and theoretical relevance of the study's findings. Finally, possible limitations of the study and suggestions for future research are highlighted.

# **6.1 Addressing the Research Question**

With the primary purpose of investigating the impact of digitalization on MPs' job satisfaction, the following question was asked:

How does the transition from a physical to a digital health platform impact medical professionals' job satisfaction?

Based on the results presented in this study, one can conclude that the research question has been answered. More specifically, it was discovered that a transition generally yields a higher degree of JS, provided that it occurs *partially*. The underlying reasoning behind this finding is that a partial transition enables MPs to benefit from increased flexibility and improved work life balance, without having to sacrifice physical, social interactions with peers.

The technical aspect of DMC is the clear catalyzer in this process, being the primary reason for multiple factors of JS and JD. The aforementioned flexibility in DMC relies on the implementation of advanced technical systems, in the same way MPs' satisfaction in the reception of patients depends on a refined furthering system. Technology also becomes an enabler of a higher task significance, allowing MPs to spend more time with patients by streamlining less meaningful tasks. For the same reason, one of the main JD factors related to DMC is when the technology is not developed in a way that supports the MPs.

Other main sources of JD primarily concern challenges stemming from inexperience with certain skills and perspectives required on a digital platform. Nevertheless, this becomes more of a temporal JD, connected to the transitional phase, successively decreasing as more experience is acquired.

## **6.2 Limitations**

When addressing the research question, it is important to keep in mind the limitations of this study. For one, there is a risk of cultural bias given the shortcomings in representing different nations. Taking into account that Sweden has a health care system marked by extensive welfare, aspects such as wage might differ in other countries. Additionally, there is also a limitation related to the personalities of the interviewees. Underlying characteristics may impact their perception of JS, for example whether they prefer multitasking or focusing on one task at a time. With a small number of interviewees, the potential effect of personality traits cannot be neglected.

## **6.3 Theoretical and Practical Implications**

Despite the limitations of this study, its findings and the synthesized final model remain important on both a theoretical and practical level. One main discovery of the study is that *dynamic* scenarios should be considered when evaluating JS, as they can vastly impact employees. The shift from a physical to a digital platform may, for example, require certain skills in areas which the newly transitioned employees have not practiced previously. Nevertheless, this can comprehensively be expected when switching to an employer with an unfamiliar organizational management, regardless of industry. What becomes important in this stage is to properly support the employees to facilitate the dynamic circumstance, for instance with training, a guidebook or mentoring. This will help to accelerate their skill development and, thereby, mitigate the experienced JD.

What also becomes clear in the produced final model is the increasing importance of a welldeveloped technical infrastructure, something that is not currently emphasized in general JS frameworks. Considering that multiple industries are facing digitization processes, the model might encourage a larger range of organizations to consider its technical groundwork in this journey, for employee satisfaction purposes.

In regards to the practical contribution, two main elements have been distinguished. Firstly, by highlighting the impact of organizational management on intrinsic motivation, managers in DMC platforms can more easily recognize its importance in ensuring employee JS. Secondly, other industries facing similar digitization processes can make use of the findings

of how the technical infrastructure of a platform can affect JS for employees. Due to the ongoing intensification of digitalization, the practical implications and contributions of the findings will remain prevalent in the future.

In regards to DMC in specific, the practical implications of the study are far reaching. By highlighting the overshadowed aspect of JS in regards to DMC, it may yield a more balanced standpoint for physical MPs who are considering a digital transition. It moreover provides DMC companies with a better insight into the current issues and stressors related to their business, e.g. a challenging transition process, enabling them to take proactive measures to support their employees.

### **6.3.1 Implications for Future Research**

Since DMC still is young, there are many unexplored areas in the field. Based on this study, four main areas are suggested for future research.

1. *Geographical Validity*: There is a value in testing the thesis' ability to fulfill the transferability criteria by applying our framework in a wider sense across Europe. Naturally, governmental, cultural and societal differences might prevail.

2. *Personality Traits:* The effect of personal characteristics was not accounted for in this study. Nevertheless, an interest in technology was a clear pattern among the interviewed MPs, which may point to that certain traits can impact whether MPs' transition to digital platforms and the JS they experience post-transition.

3. *Emotional Labor*: Considering that it was found that DMC could potentially decrease emotional labor for MPs and that it has been detected as a dissatisfier for MPs in past research, it would be worth exploring further for more conclusive results. Is the impact greater for certain medical specialties?

4. *Consistency Over Time*: Even though digital MPs are increasing in number, their practical expertise with DMC is still restrained by a narrow time frame because of the still immature industry. As digitalization is becoming a more integrative part of health care, changes in the industry can be expected and, with that, MPs' job satisfaction. A possible future scenario may be that MPs later withdraw from digital platforms. In such a case, the reason behind that development would be an appropriate research question.

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# Definitions

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# 8. Appendices

# **Appendix 8.1 Overview: Interview Subjects**

Below is a summary of the anonymized interview subjects along with a description of their professions.

Name	Profession	Part/Full-Time Employment at a DMC Platform	Interview Date
John Michael Dorian	Mental Health Manager	Full-Time	13/2 2019
Meredith Grey	Doctor	Part-Time	15/2 2019
Lisa Cuddy	Head of Digitalization	Full-Time	22/2 2019
Drake Ramoray	Chief Doctor	Full-Time	25/2 2019
Doug Ross	Psychologist	Full-Time	8/3 2019
Carol Hathaway	Nurse	Full-Time	18/3 2019
Gregory House	Physiotherapist	Part-Time	20/3 2019
Cath Harare	Nurse	Full-Time	20/3 2019
Miranda Bailey	Doctor	Part-Time	20/3 2019
Derek Shepherd	Doctor	Part-Time	25/3 2019
Christopher Turk	Doctor	Part-Time	26/3 2019
Christina Yang	Midwife	Part-Time	29/3 2019

# **Appendix 8.2 Interview Guide**

## About the MP

- How long have you been working at a physical health center? Digital health center?
- What is your type of employment? (full or part-time)
- Why did you choose to start working digitally?

### About the Surroundings

- How do you perceive the external view on digital health centers from your general environment (i.e media, friends, family and the medical profession)?

### **Work Process**

- How would you describe a medical professional's working process when meeting a patient at a physical clinic? Online?
- Are there any differences in the types of illnesses that are treated at physical vs. online health care clinics?
- What is your perception of work autonomy when transitioning from a physical to a digital platform?
- How does the flexibility on a digital platform compare to a physical one? Location? Scheduling?
- How does the administration on a digital platform compare to a physical platform?

### Peer, Supervisor and Patient Relations

- What is your view on human contact in regards to the medical profession?
- Do you experience a difference in the relationship created between caregivers and patients during digital medical appointments, compared to physical appointments?
- Have you received any training regarding how to communicate digitally with patients? If no, do you believe this would be appropriate?
- Do you experience any emotional relief working digitally, with less physical patient interaction?
- Which are the main differences between the culture at a health clinic that operates primarily digitally vs physically?
- How does the professional exchange differ on physical vs. digital platforms?

- How is the feedback system constructed on the digital platforms compared to the physical platform?

### Stressors and JD

- What is the stress level like on a digital platform, compared to a physical platform?
- What factors create stress in your work?
- Do you perceive that you have enough time to do everything you want/need to do at work?

### **Closing Questions**

- What motivates you at work?
- What factors are important for you in terms of achieving job satisfaction?
- How does your salary compare to the overall industry standard?
- Are there any other (dis)advantages with a digital platform we have not yet acknowledged?