Taking Care of Those Taking Care of Us

A qualitative study of motivational factors of physicians working in the Swedish public healthcare sector

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Abstract

This is a qualitative study using an inductive approach with the purpose of investigating what motivates physicians working within the Swedish public healthcare sector. The study is based on semi-structured interviews with ten doctors, ranging from Resident Physicians at the lowest hierarchical level to Specialist Consultants, at six different Swedish hospitals, working within six different specialties. In order to understand and analyze the interviewees' motivation a framework based on the Self-determination Theory was used and questions were asked regarding the interviewees' interest in their profession, work tasks, and the organization, culture and leadership of their workplaces. The study found that, in relation to intrinsic motivation, the need for competence and the need for relatedness were of importance for the interviewees' motivation. The study did not find indications of any patterns of what is of importance relating to the interviewees' extrinsic motivation. The results of the study are in line with the general framework that the Self-determination Theory provides.

Keywords: *Motivation, Physicians, Public Healthcare Sector, Self-Determination Theory*

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1. Introduction

1.1 Background

According to the Health and Healthcare Report 2019 published by Swedish Municipalities and Regions (2019), the demographic development in Sweden implies that the population aged 80 years or older will increase by 47 % during the next ten years. At the same time, it is expected that the population within the working-age will increase by 5 % during the same period. This is expected to result in a relative decrease in employment and tax revenues, requiring increased efficiency within for example the healthcare sector.[1] Today, people report lack of availability, continuity, and relational factors within Swedish healthcare resulting in low trust (Socialstyrelsen, 2019). According to The Swedish National Board of Health and Welfare (2019), physicians with specialist knowledge are leaving the public sector and 80 % of the employers are struggling with lack of experienced physicians. Furthermore, 87 % of physicians with specialist knowledge work part-time (Socialstyrelsen, 2019). In contrast to the report by Swedish Municipalities and Regions (2019), The Swedish National Board of Health and Welfare (2019) assesses the supply of physicians to be enough to meet future demand.

Comparing remuneration within the OECD-countries, the average wages of Swedish Specialist Physicians were found in the bottom ten of 31 countries (OECD, 2019). Furthermore, the healthcare sector in Sweden reported the highest rate of sick leaves (Försäkringskassan, 2016). In 2014, the last year with reported data, the highest number of work injuries since 1980 was reported by physicians (Aringer, 2015). Reports state that the work environment within the sector has deteriorated, the employee satisfaction rate and desire to go to work have decreased (Arbetsmiljöverket, 2014). Nearly every third young doctor was thinking about leaving the sector due to limited possibilities to affect their work situation. (Pettersson & Börjesson, 2019).

All things considered, the demand for physicians increases, the reported work environment deteriorates and the possibilities of meeting future demand for physicians is uncertain. Despite this, Sweden has, compared to other OECD-countries, among the highest rate of physicians per 1,000 inhabitants (OECD, 2019). Additionally, employees within the Swedish healthcare sector state that they feel higher meaningfulness with their job compared to an average

[1] Swedish healthcare is mainly financed by tax revenue (Sveriges Riksdag 2017)

employee, and four out of five states that they on average are satisfied with their job (Sveriges kommuner och regioner, 2019).

Considering the above, this study will analyze what factors that motivates physicians working within the Swedish public healthcare sector.

1.2 Previous Research and Research Gaps

The background describes the situation and future demand in Sweden for healthcare and physicians. Several reports regarding the Swedish public healthcare sector indicate that it may have an issue with a deteriorating work environment. What motivates people has been studied extensively. However, what motivates physicians, and especially physicians working within public healthcare has not been studied extensively. Previous research regarding healthcare conducted in other countries shows intrinsic motivation being of high importance (Berdud, Cabasés & Nieto, 2016) and that different types of compensation schemes does not affect performance of physicians (Minor, 2013). In addition, a study from Finland has shown evidence of the public sector being more demanding in terms of work environment than the private health sector (Heponiemi et al., 2013). There is less research conducted in Sweden, however one study suggests that compensation matter in relation to motivation (Kjellström et al., 2017). Kjellström proposes to further investigate work motivation from the perspective of Self-Determination Theory analyzing how particular work tasks contribute as different sources of motivation. To build on previous research, investigating what motivates physicians is of importance.

1.3 Purpose and Research Question

This study aims to investigate what motivates physicians working in the Swedish public healthcare sector. The purpose is to identify what factors motivate physicians working in the Swedish public healthcare sector. The results could be used by hospitals to increase the motivation of physicians, to increase the retention rate of employees and the attractivity of the employer. The purpose of the study is to answer the research question:

"What motivates physicians that work within the Swedish public healthcare sector?"

1.4 Scope

This study includes Specialists and Resident Physicians working in the Swedish public healthcare sector. This group of physicians are reported by the Swedish National Board of Health and Welfare (2019) to be difficult to retain within the public sector and commonly leave for working within the private sector.

Furthermore, the scope is limited to public hospitals, due to them seeming to be mainly affected by the problems described in section 1.1. Physicians working within the private healthcare sector will be out of scope due to the differences that exist regarding compensation schemes, work habits and work environment between the two sectors (Parmsund et al., 2009). The differences would make it difficult to derive factors of motivation that are applicable for both sectors, since the employments offered are fundamentally different regarding salaries and tasks.

2. Literature Review

The introduction reveals facts from several reports conducted by national agencies. However, these reports should not be interpreted as scientific studies regarding the working environment of physicians. Bell, Bryman and Harley (2018) state that the core of business research is to sort out phenomenon that are inadequately understood. In contradiction, the purpose of reports conducted by government agencies are to provide an overview of facts and figures. The gap between findings in scientific research and facts in the reports implies that further research is needed.

Previous research regarding motivation of those working within healthcare have first and foremost been conducted outside Sweden and mainly related to different types of compensation. Berdud, Cabasés and Nieto (2016) conducted a deductive study including 16 doctors in Spain. The study revealed that physicians were (1) intrinsically motivated, (2) intrinsic motivation could increase if incentives were well-designed, and (3) economic incentives may jeopardize intrinsic motivation. Minor (2013) studied motivation and compensation schemes within healthcare in the US. Minor concluded that there was no difference in performance between those receiving a fixed salary compared to those receiving compensation based on output. Existing differences both concerning the level and structure of compensation in Spain and the US compared to Sweden (OECD, 2019) suggest that further research is necessary before drawing conclusions applicable to the Swedish public healthcare.

In 2013, a cross-sectional study conducted in Finland, with 948 male and 1422 female physicians found supporting evidence that working within the public healthcare sector is more strenuous compared to the private healthcare sector (Heponiemi et al., 2013). The study also found that among the physicians within the public sector, reports of physical violence, occupational hazard and presenteeism were more common (Ibid). Another study conducted in Sweden and Italy studied male physicians' work environment and recent suicidal thoughts (Fridner et al., 2011). The results indicated that 12 % of the Swedish participants experienced recent suicidal thoughts, which was due to degrading work experiences (Ibid). Having an occupation that exposes employees to emotional and physical demands puts pressure on individuals. Up to a certain point, individuals can handle external pressure, however, being exposed to these stressors, energy levels will eventually drain (De Jonge & Dormann, 2017). When exposing employees to these factors, the risk of obtaining serious personal health issues

and stress reactions such as sleeping problems, depression and anxiousness increases (Le Blanc, De Jonge & Schaufeli, 2008).

The most recent research regarding motivation within Swedish healthcare is a deductive study conducted by Kjällström et al (2017). The purpose of the study was to explain motivation among healthcare professionals at well-functioning clinics in relation to a national healthcare reform which included financial incentives. According to the authors, work motivation exists when (1) individuals' goals are aligned with the organization's, (2) a non-hierarchical culture prevails, (3) ongoing improvement work exists, and (4) financial incentives are related to quality patient care.

Altogether, the literature review gives insights regarding the importance of intrinsic motivation and that different compensation schemes may affect the motivation of physicians. However, physicians working in the Swedish public healthcare system constitutes a specific sub-category of workers. What motivates them is less known. This makes it interesting to analyze which factors that motivate them.

3. Theoretical Framework

3.1 Previous Research on Motivation

What motivates people has been studied throughout history. Extensive research exists within the field and different perspectives have been developed. One of the older theories is the Reinforcement Theory studied by among others Thorndike (see e.g. Thorndike, 1911) and Skinner (see e.g. Skinner, 1969). Based on behaviorist tradition, the theory focuses on that people are driven by consequences and not on humans' internal state of mind. There are two types of aversive stimuli identified by Skinner; positive and negative punishment. In positive punishment, rewards are used to increase the likelihood of maintaining specific behavior, while negative punishment enforces that unwanted behavior will not occur again (Van den Broeck et al., 2017). However, the Reinforcement Theory has been criticized for being too simple and assuming that all punishments would work in the same way on all humans (Maslow, 1943).

Maslow (1943) stated that to which degree the punishment would work depended on employees' current needs; physiological needs, safety needs, belong needs, esteem needs, and self-actualization. By shifting focus from external factors increasing the likelihood of a wanted behavior, Maslow instead brought attention to employees underlying motivations to act in a certain way (McClelland, 1965; Murray, 1938). Maslow's Hierarchy of Needs has been widely used within motivational research regarding hospitals (see e.g. Keshtkaran, Kharazmi & Yoosefi, 2007). Even though empirical research has shown that satisfying the five different needs leads to overall well-being for individuals (Tay & Diener, 2011) and the theory itself has received some empirical support, the assumptions made in the theory lack empirical evidence in general and will therefore not be used in this study (Van den Broeck et al., 2017).

3.2 Self-Determination Theory

This study uses the Self-Determination Theory (SDT) as theoretical framework, when answering the research question '*What motivates physicians that work within the Swedish public healthcare sector?*'. The SDT is a macro-based theory based on personality, development, and wellbeing in social constructions. The dialectical theory investigates human behavior related to how individuals satisfy their basic psychological needs within a social context (Gagné et al., 2015). The theory uses previous motivational concepts to hypothesize,

organize, and predict phenomenon in the domain of motivation within the working environment (Gagné & Deci, 2005). The theory is based on three central psychological needs that humans obtain; (1) the need for autonomy (2) the need for competence, and (3) the need for relatedness. It aims to provide insight on what drives motivation, both on a personal and a situational influence level (Deci & Ryan, 2000). SDT views humans as interactive and wanting to realize their inherent potential, implying that humans want to learn and grow through their experiences to grow as human beings (Van den Broeck et al., 2017). This positive view of humans is one of the factors differentiating SDT from other motivational theories, including but not limited to the ones mentioned in section 3.1 (Sheldon et al., 2003). SDT believes that humans are active and can be motivated by intrinsic motivation to learn and develop their abilities. Furthermore, it assumes that people are growth oriented. In contrast, the Reinforcement Theory believes that people are only motivated by punishment and rewards, implying that people are re-active. The growth-oriented mindset is something that Maslow's Hierarchy of Needs (1943) and Theory Y (McGregor, 1960), also assumes, however, what differentiates SDT is that the theory does not assume that this happens automatically. For people to realize this positive tendency, people need their basic needs of autonomy, competence, and relatedness to be satisfied (Van den Broeck et al., 2017). When these needs are satisfied, human growth and motivation will occur.

3.2.1 Intrinsic Motivation

Studies of psychological needs, in the context of organizations, have been conducted throughout decades and it has been extensively debated what the term "needs" implies (Salancik & Pfeffer, 1977). SDT adapts the definition of needs provided by Harlow (1958) and White (1959). Ryan et al (1996) concluded that needs, in accordance with Harlow and White, imply the following for SDT; "SDT defines needs as universal necessities, as the nutriments that are essential for optimal human development and integrity" (Gagne & Deci, 2005 p. 337).

SDT distinguishes three basic psychological needs related to employees' intrinsic motivation (1) autonomy, (2) competence, and (3) relatedness (Gagné & Deci, 2005). Intrinsic motivation is defined as engaging in an activity because it is inherently fun and interesting.

The need for autonomy discusses humans' need to feel psychologically free in relation to choices and actions. This is connected to one's locus of control, which discusses the feeling

that one is the author of one's own life and not being pushed into decisions by others. Furthermore, autonomy is related to having a perception of experiencing a choice. The need for autonomy is an underlying factor for intrinsic motivation and by achieving it in combination with relatedness, the internalization of an organization's values, and regulations will happen smoother, since the way one behave will be perceived as more autonomous. The need for autonomy, should not be misinterpreted as independence and they are not necessarily linked (Van den Broeck et al., 2017). According to Van den Broeck, Carpini, Leroy and Diefendorff how to achieve autonomy when not acting in an independent manner is exemplified by the following statement "Employees may execute a task assigned by their supervisors and act in a non-independent manner, but if they see value in that task and volitionally engage in it, they will feel satisfied in their need for autonomy" (Van den Broeck et. al, 2017, p. 361).

The need for competence distinguishes individuals' need to feel in control of their environment and the sense of being able to master what outcomes to expect. It also distinguishes workers' need to feel competent (Gagné & Deci, 2005). This is achieved when individuals seek out and achieve their goals. The need for competence and the need for autonomy combined is of importance when it comes to employees operating effectively. Employees feel competent, when actively exploring and seeking out challenges, to expand their physical and psychological accomplishments (Van den Broeck et al., 2017). Further, by satisfying their goals and seeking out challenges, employees are more prepared adjusting to an ever-changing environment (Ibid).

Lastly, relatedness refers to the need to feel connected to others, which can be achieved at the workplace by maintaining close and intimate relationships with one's colleagues (Van den Broeck et al., 2017). When satisfied, individuals internalize the values provided by the team or organization they are connected to (Gagné & Deci, 2005). According to Baumeister & Leary (1995), the need for relatedness in the SDT model is of highest importance for people to internalize values and behaviors of the group. This is achieved when employees feel a sense of community with the group and experience intimate relationships with their colleagues (Van den Broeck et al., 2017). By achieving this, individuals perceive that they can express their thoughts and emotions and still get support from the group.

Gagné and Deci (2005) discussed by satisfying the three basic psychological needs, workplaces will be able to enhance workers intrinsic motivation and promote internalization of the values and regulations of organization, leading to the following outcomes (1) persistence and

maintained behavioral change, (2) effective performance, (3) job satisfaction, (4) positive work-related attitudes, (5) organizational citizenship behaviors, and (6) psychological adjustment and well-being.

3.2.2 Different Types of Extrinsic Motivation - Continuum from Controlled to Autonomous Depending on Internalization

Not only does SDT state that the need to fulfill the basic psychological needs is essential to feel motivated. It differentiates between different types of motivation that individuals experience (Van den Broek et al., 2017). SDT takes into consideration both intrinsic and extrinsic motivation. Extrinsic motivation is needed for activities that are not interesting to perform. It reflects being engaged in an activity to achieve an outcome which is separable from the activity itself (e.g. reward) (Ibid). SDT takes extrinsic motivation one step further and argues that extrinsic motivation can occur on a continuum from its most controlling form *external regulation,* where one is motivated by achieving rewards or avoiding punishments, to its most autonomous form *integrated regulation* depending to the level of internalization.

The types of external awards mentioned in *external regulation* can be monetary compensation or other benefits, but also have a social nature, where one is motivated by for example getting praised by colleagues. When experiencing a level of extrinsic motivation in accordance with external regulation, individuals act only when needed in order to obtain the outcome, for example when workers only work when the managers are watching them.

The most autonomous form of extrinsic motivation is *integrated regulation.* When this state is achieved, employees see the work tasks as being aligned with who they are as human beings, their values, beliefs and identity. The employees do not only see the value in engaging in finishing tasks for the organization, rather they see it as an important aspect of their personal life. An example of this is nurses who feel that being a nurse is not just a job, but rather a part of their identity and they will act in accordance with this outside of work as well (Gagné & Deci, 2005).

In between those two forms, there are *introjected regulation* and *identified regulation.* Introjected regulation is characterized by being motivated to perform a task to feel proud or avoid feeling ashamed. This type of motivation is usually connected to employees' self-esteem,

making them act in a certain way to feel a sense of worth. This entails that one can be motivated by external factors through internalizing pressure (deCharms, 1968; Ryan, 1982).

In *identified regulation* on the other hand, employees perform tasks because they consider the outcome to be important or valuable (Van den Broek et al., 2017). When experiencing this type of extrinsic motivation, individuals experience a greater sense of freedom and do tasks not only because they have to, but because it reflects an aspect of themselves and the goals are in line with their personal goals and who they perceive themselves to be. This is, for example, achieved when performing a task considered as boring knowing that the bigger picture is more important and in line with what the individual perceive as important.

The two most controlling forms of motivation are *external regulation* and *introjected regulation* (Deci & Ryan, 2000). When experiencing controlled motivation employees usually feel pressured by others to perform (Deci & Ryan, 2000). This type of motivation collides with the three basic psychological needs and is suggested to deteriorate employee's performance and well-being. On the other hand, *identified regulation* and *integrated regulation* are autonomous together with intrinsic motivation (Ibid). This autonomous motivation is characterized by individuals' inherent interest in the task at hand (Deci & Ryan, 2000). To reach autonomous motivation, the basic needs of employees must be satisfied. Autonomous motivation results in (1) job satisfaction, (2) well-being, and (3) increase the ability of employees to put the effort in their work. In contrast, controlled motivation depletes on employees' basic needs, which decreases both employee well-being and performance (Van den Broeck et al., 2017). Furthermore, according to SDT the pursuit of different types of extrinsic factors, such as compensation and other types of rewards, may undermine the possibility of achieving intrinsic motivation (Vansteenkiste et al., 2007).

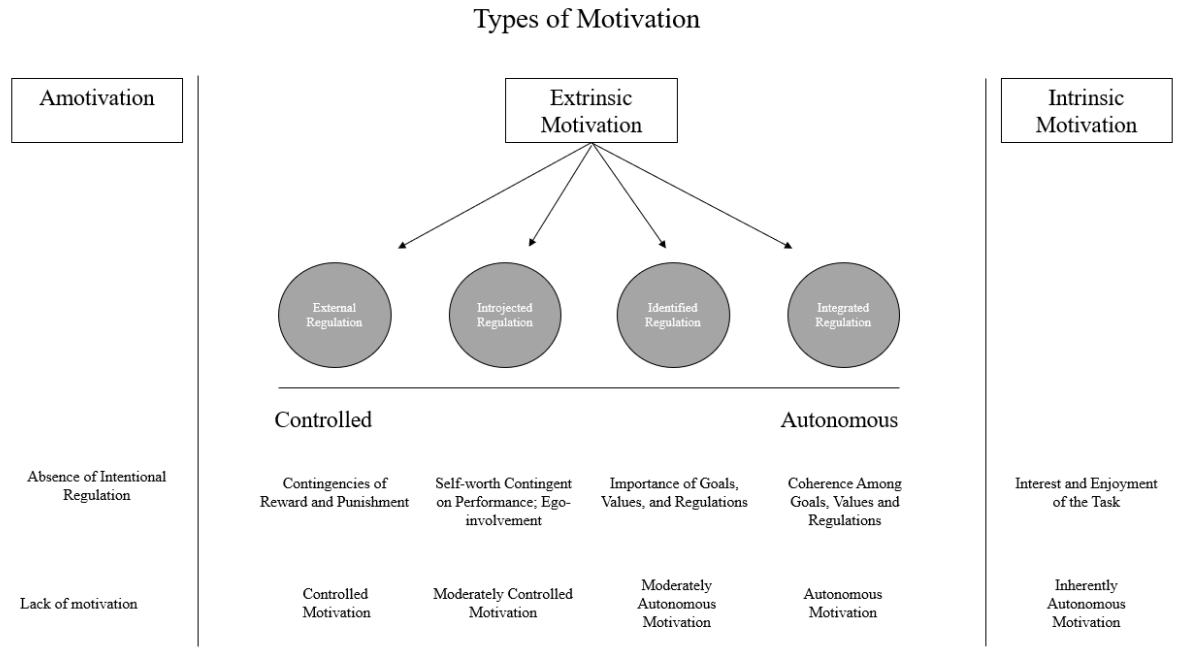

Figure 1. The Self-Determination Theory

3.3 Discussion on Theory Choice

The choice of using the Self-Determination Theory, when analyzing physicians' work motivation is favorable due to its extensive validation through studies within organizations. The authors of this study are aware that limiting the study to using this theory might not give a comprehensive view. SDT only investigates three basic psychological needs, which is part of the criticism against the theory, arguing that humans are more complex than that, which means that the theory does not catch other important factors of needs, such as safety (Pyszczynski, Greenberg, & Soloman, 2000). SDT has also been criticized for using historical data and evolutionary data when analyzing hierarchical relationships within human communities, which has led to a misbelief that these last forever (Tunçgenç, 2010).

Since SDT views humans as social beings and analyzes physiological and societal underlying mechanisms of this, it is worth mentioning that if the choice of theory would have been different the outcomes of this study may have been different as well. This is, due to its influence on questions asked to the interviewees, as well as its influence on the choice of method and perspectives taken. Nonetheless, the authors believe that by using this theory it will enable the study to find the core of what motivates physicians to work within the Swedish public healthcare sector. Despite the critique, SDT has also received frequent support. A meta-analysis, containing approximately 100 studies made in 2016, found supporting evidence that

when satisfying the three basic psychological needs at workplaces employees will have more positive related work attitudes and put more effort into their work (Van den Broeck, Ferris, Chang, & Rosen, 2016).

4. Method

4.1 Choice of Method

4.1.1 Research Approach

The study has departed from an ontological perspective of objectivism, entailing that social phenomena are considered as external facts beyond reach and influence of the authors and that an objective reality exists (Bell, Bryman & Harley, 2018). Having a certain ontological perspective leads to epistemological considerations. Epistemological considerations describe the way we can gain knowledge from the reality (Ibid). This study adopts an epistemological stance of empirical realism meaning that by using appropriate methods, we can gain knowledge of the objective reality (Ibid).

4.1.2 An Inductive Study

The study has been conducted primarily in an inductive manner. The purpose of the study was to research *what* motivates physicians that work within the Swedish public healthcare sector. In order to this, a theoretical lens using SDT was used. According to the SDT, the sources of a person's motivation is subject to individual differences. SDT is a general theory with universal applicability to motivation of, among others, workers. Physicians working within the public healthcare sector in Sweden, on the other hand, is a narrow sub-category of workers. The results of this study therefore add to the SDT by studying what specific factors within the SDT framework that motivates a certain sub-category of workers. Thus, the study draws inductive conclusions on the empirical data to reach conclusions on the importance of the different factors of motivation pursuant to the SDT for the particular sub-category of workers – physicians working within the Swedish public healthcare sector.

4.1.3 Research Design - a Cross-sectional Study

The use of qualitative data is suggested by Bell, Bryman and Harley (2018) when adopting an inductive method to collect data from which to draw inductive conclusions from. The research question aims to detect patterns of motivational factors, which resulted in the use of a cross-sectional research design. A cross-sectional research design is associated with data containing several different cases being conducted at a single point in time resulting in numerous variables for examination. Using a comparative design would result in putting cases against each other,

making it more difficult to answer the question and to serve the purpose of the study, to detect patterns associated with motivation for physicians within the Swedish public healthcare sector.

4.2 Sample

4.2.1 Hospitals, Employments and Clinics

The sample included physicians working in Swedish public hospitals, the sample was chosen to guarantee that everyone included in the study had their medical license and were working within their field of choice. Further, this ensured that the interviewees were working in a clinic, where they were expected continuing working. This would not have been the case if Medical Interns[2] would have been included. There were no requirements regarding length of employment. Everyone included in the sample worked at a public hospital, which provide employment for Resident Physicians, implying that the hospitals in the study offers training and education for physicians to become Specialists. This limitation was made to ensure that all interviewees had been exposed to a similar hierarchical structure. There was no limitation imposed on what type of clinic the interviewees worked at.

4.2.2 Interviewees

When gathering the sample of whom to interview the method used had the characteristics of a so-called snowball sample. This was since interviewees initially were being recommended, and then later new prospects to contact was suggested by physicians already interviewed. In total 20 physicians were contacted, of which ten accepted to be a part of the study. See Appendix A.

The physicians interviewed had, at the time of data collection, worked at their clinic from 6 to 30 years. The interviewees were of mixed gender, different ages, and employed at six different clinics. It was considered that different work tasks are performed in various degrees depending on clinic of employment. Everyone was performing surgical tasks except the Neuroradiologist. However, since this profession is closely linked to the work of Neurosurgeons an assumption was made that it would not affect the study in a major way.

[2]Medical Intern translates to AT-läkare in Swedish.

4.3 Interview Process

4.3.1 Operationalization of the Self-determination Theory

Two main themes were identified based on the theoretical framework, which then branched out to six sub-themes, presented in Table 1. The two main themes, the *Profession* and *Work environment* were identified based on to their connection to SDT.

The sub-theme *Interest in the profession* included what kind of human beings' physicians are and how they identified themselves before deciding on profession giving an a rational for their choice. The decision to discuss the sub-theme C*ompensation* came naturally when discussing what motivates workers. By asking questions regarding compensation, the study may identify how physicians are affected by external factors in terms of motivation. This might then indicate whether these external factors are of importance for the interviewees. The sub-theme W*ork tasks* explore what is included in the tasks of these physicians. In the bigger picture, physicians are employed ensuring the outcome of people getting well. When applying this in the context of SDT, helping others may be identified as being an important factor related to the need to feel competent, which can be achieved by for example feeling that one can master its own environment. Questions concerning how the physicians for example can control their own time will be asked, to see if they feel a locus of control. If that would be the case it may indicate that the work tasks are in line with the physicians experiencing autonomy. Furthermore, by asking about the work tasks, the study may, for example, find out how the physicians develop their competence and when they get to use it. These types of questions could then be connected to the need for competence in the SDT model. Further, we believe that by asking about work tasks we might identify if tasks are in line with the personal values of the physicians. If that is the case internalizing the values of the organization would be easier.

In the theme *Work environment*, the sub-themes relate to, among other things, the need of feeling relatedness at the workplace. The sub-theme *Organization* was identified as an important factor when it comes to interpreting the physicians work situation. By asking about the organization, the study may detect if for example the interviewees work in teams, which might be important for them to feel a sense of communion. This can indicate whether the physicians experience a sense of the relatedness towards the organization and/or the colleagues. Further, indications of hierarchical structures and work methods, will be of relevance for analyzing extrinsic motivational factors in the work life of the interviewees. Further, the sub-

theme C*ulture* was identified. When asking about the culture of the workplace, information regarding the hierarchical order at the clinics may detect how the work is distributed. Other examples information which might be obtained could be division of work among employees of difference in seniority and the allocation of administrative work. This may give insights on the perception of autonomy among the physicians. Furthermore, by asking questions regarding culture the study may identify if the need for relatedness is achieved at the clinics, by for example experiencing a sense of communion. In addition, by looking at the culture, the study may see whether for example an encouraging culture leads to outcomes in terms of perceived competence. For instance, an encouraging culture might lead to physicians wanting to educate themselves more due to the support of colleagues or managers, which then may satisfy the need for competence. It may also give indications of extrinsic motivational factors depending on how controlling the culture is. Lastly, by looking at the sub-theme *Leadership* the study may detect if the attitude of leaders affects the interviewees. This would then be connected to how supported the interviewees feel in their line of work, which then might be connected to their perceived relatedness. Leadership may be looked at from a competence standpoint as well. Having managers that support the interviewees' development and encourage them to reach their goals, the perceived level of competence may increase. Leadership can be closely linked to the organization and culture and may thus affect similar factors as those sub-themes.

Main themes	Profession	Work environment
Sub themes	Interest in the profession Work tasks Compensation	Organization Culture Leadership

Table 1: Themes Identified Based on SDT

The themes in Table 1 built the foundation of the interview guide. In accordance with the nature of semi-structured interviews, the questions were broad, see Appendix B. Furthermore, through the operationalization of the SDT, the questions were formulated to ensure relevance of the empirical data in relation to the research theme.

4.3.2 Collection of Empirical Material

Semi-structured interviews are suggested by Bell, Bryman and Harley (2018), when using a cross-sectional research design. The interviews were conducted over the phone by one of the

authors, except for the pilot interview, in which both authors attended. By having both authors conducting the pilot interview consensus was achieved regarding both the structure and how questions were framed. Possible limitations imposed by telephone interviews were taken into consideration especially those regarding observation and the effectiveness of talking about sensitive issues raised by Bell, Bryman and Harley (2018). Because of this, the structure of the interviews became of high importance to make the interviewees feel as comfortable as possible. By taking these issues into consideration during the interviews it was perceived that interviewing of the phone did not affect the responsiveness. Follow-up questions were asked to make sure that information had been perceived correctly. Furthermore, the advantage of not having the characteristics of the interviewer affecting the interviewees was achieved (Bell, Bryman & Harley, 2018).

The average time length of the interviews was 33 minutes, the shortest lasting 23 minutes and the longest 50 minutes. This shows that the study overcame difficulties with keeping interviewees talking on the phone for more than 20-25 minutes as pointed out by Frey (2004). See Appendix C.

The interviews started with open questions regarding choice of profession and work tasks performed. As the interviewee became more comfortable questions regarding organization, culture and leadership were asked. The interview ended with question on compensation and future career plans. A pilot interview was conducted, giving insights about which questions were more sensitive. Those questions were then placed at the end of the interviews, for the remaining interviews, in accordance with the suggestion made by Bell, Bryman and Harley (2018). Apart from that, only minor modifications were made to the questions to enhance the clarity. The pilot interview is a part of the empirical material since the adjustments made to questions following it were of limited nature. The questions asked were phrased neutrally and with as few emotionally charged words as possible.

4.3.3 Processing of Empirical Material

The interviews were recorded and then transcribed by the author not conducting the interview, facilitating the structuring of data and to ensure that key points were understood by both authors and misinterpretations limited. Quotes presented in section 5 have been translated from Swedish to English. No other changes have been made to the quotes. The transcribed interviews were processed individually using a data rectangle as suggested by Bell, Bryman and Harley

(2018) for cross-sectional research design. Each case corresponds to one interviewee and each observation contains data of their answer. The processing of the empirical material was done in Swedish to ensure that no key points were lost due to linguistic errors.

4.4 Ethical Aspects and Implications

This study has been conducted based on a universalism stance on ethics, meaning that no ethical precepts have been broken. There has been no reason, in relation to answering the research question, not to follow the four ethical principles suggested by Bell, Bryman and Harley (2019) to minimize ethical issues. Actions were taken to fulfill the requirements of (1) not harming the participants, (2) guarantee consent, (3) not invading privacy, and (4) minimize the risk of deception. All the participants were informed of the subject and the purpose of the study when asked to participate, to ensure that they knew what to expect and felt comfortable with contributing to the study. Furthermore, before the interview took place it was ensured that all participants understood that they did not have to answer questions which made them feel uncomfortable with and that they could terminate the interview at any time without giving a reason for doing so. Since the study is based on qualitative data, extra carefulness has been taken to guarantee the anonymity of the participants by using pseudonyms and not disclosing the hospitals, since the number of employees at each clinic was small and by revealing the name of the hospital, anonymity could be jeopardized. All participants have been asked to read and comment on the quotes used, which were of importance to ensure the validity of the data.

4.5 Method Criticism

A snowball sample is an effective way of gathering data when probability sampling is difficult to achieve. However, the likelihood of having a sample representing the population is decreased, which affects the external validity (Bell, Bryman and Harley, 2018). To achieve a sample as similar to the population as possible, the authors searched for variety by interviewing physicians (1) with different specialties and types of employment, (2) of different ages (3), working in hospitals in different parts of Sweden, and (4) recommended by people that did not know each other. The longest network chain of recommendations consisted of three physicians. Furthermore, since the study is based on a qualitative research strategy the effect on the external validity due to the use of a snowball sample is expected to be smaller than if a quantitative research strategy was used (Ibid). Whether theoretical saturation has been achieved or not can be questioned since the sample contains ten interviews and there is a broad variety between the

interviewees. Due to this, difficulties will arise regarding the possibility to generalize the results and a larger sample would have increased the reliability of the study.

Furthermore, the nature of qualitative research imposes difficulties of replication, which affects the reliability of the study. When gathering data at a single point in time, in line with the use of a cross-sectional research design, there is a risk for that the answers provided are affected by the currently prevailing situation of the interviewees and thus affecting the general applicability of the results. In addition, by conducting the interviews over the phone there were no possibility for the interviewers to observe any body language and by that detect signs of discomfort or confusion, which may have an impact on the results. However, the extent of the potential impact is estimated to be small. Moreover, the ecological validity of the study can be questioned since the interviews were held during the pandemic caused by Covid-19, which has affected the interviewees' natural work environment. However, the interviewees have made no signs of answering differently due to the challenging circumstances.

Lastly, two factors were identified regarding the analysis of the data. The translation of the empirical material from Swedish to English could result in misinterpretation of the data. However, as described in section 4.3.3 measures have been taken to decrease any potential effects. Before conducting the study, both authors have spent substantial amount of time with physicians, which might unconsciously have created a bias regarding questions to ask or interpretation of data. The authors have been aware of this risk and tried to mitigate by using feedback from fellow students on the questions asked and how results have been interpreted.

5. Empirical Material

The collected empirical material has been sorted and is presented below based on the two main themes and the six underlying sub-themes that formed the basis of the interview guide, which is an operationalization of the theoretical framework of the study.

5.1 Profession

5.1.1 Interest in the Profession

All except one of the participants have expressed that they had an interest in healthcare or the medical profession when applying to the education. For one outlier, the choice of profession was based on practicalities and circumstances. In Table 3, the most mentioned reasons for interviewees' choice of profession, which were (1) exciting, (2) knowledge heavy, and (3) helping others, are presented. Only one of the interviewees that had a previous interest in the profession expressed different reason, which was input from a family member. Most of the interviewees expressed a combination of the reasons listed. The two oldest interviewees had in common that they both had worked within healthcare before applying to their education.

Interviewee	Exciting	Knowledge heavy	Helping others
Anita	"I thought the profession was very exciting in terms of knowledge, you could get out in the world and help people."		
Bo	"I perceived it as very exciting, that it was a lot to learn, you could work with many different things based on this education, and to work with people. You could work with the knowledge part too, read and learn much, I think that is why."		
Erik	"I studied the nature science base year and my first thought was to become a dentist [...] I made some research online and became more and more excited about studying medicine, more of a challenge and that you do good."		
Anna		"A nature science-based field plus the social, to meet people."	
Bengt		"It was a combination of the technique and healthcare - an interesting mix. I have an interest in healthcare, and I have worked within healthcare since the 80's."	
Christina		"I thought a lot was fun in high school and wanted to do something stimulating, that was my ground take in it [...]. I wanted to do something in which I could dig deep down in medicine and nature science, but also have a lot of contact with people. It was that part, that you could get both that attracted me."	
Anders	"Neurosurgery was cool and exciting [...]. The forefront of medicine and research."		
Fredrik			"I moved to England and worked with healthcare at a hospital and when I came home, after being

			there for a year, I felt that this was my thing. [...] Dedication to providing health care."

Table 2: The Most Common Reasons for Choosing the Profession

Furthermore, all interviewees had an interest in line with their respective specialty. The most common interests were clinical work and surgery within their respective fields. Bengt, who does not perform surgery, mentioned technology, which is one of the most central parts of his specialty. As shown in Table 3, half of the interviewees, all of them men, valued practical benefits apart from interesting work.

Interviewees	Interesting work		Practical benefits	
	Clinical work	Surgery	Time off	Safety
Anders	"The combination of practical and theoretical work."		"One of the most beneficial things is that I am free approximately 15 to 18 weeks per year."	
Anita		"[...] I became more and more interested of surgery and it fitted me very well."		
Anna		"The surgery, I like that type of surgery."		
Bengt			"It is a bit like that, working at a hospital, it provides some safety. Many works extra on the side and have projects like working for other regions and from home [...] since there are so many jobs. We see that as a huge benefit. It is an argument for becoming a radiologist for many."	
Bo		"It was a coincidence, but I knew that I should perform surgery, work with my hands, but it was a bit random. One of the first persons that took care of me worked with vessels and it was nice."		
Diana	"I knew that I wanted to become clinically active."			
Emil				"It is not cyclically sensitive. There are always jobs."

Erik	"The clinical work was my setting. [...] I thought the surgery was very fun, there was some speed, feel and squeeze the patients."			"There is always jobs within medicine and the doctor profession, that is pretty safe."
Fredrik			"Since I am a knife worker, I had extremely much time off. I was off every fifth week and what should I do then? I worked at other public hospitals and took also jobs at a private healthcare provider."	

Table 3: Additional Reasons for Choosing the Profession

5.1.2 Work Tasks

As mentioned above, the interviewees considered surgery as one of the most interesting parts of their jobs. Despite this, four interviewees, all of them Resident Physicians, stated that they did not perform this task as much as they wanted. Common for all interviewees was that they mentioned the administrative work as a burden and not a part of what they were educated for. The aspects of the profession that motivated the physicians the most were (1) emotionally stimulating, (2) patient care, and (3) personal development. An example of emotionally stimulating was that, six interviewees of different demographic backgrounds mentioned on several occasions during the interviews, that they thought their job was fun. The second most common positive aspect of the job mentioned was feeling stimulated. The two most mentioned reasons for feeling motivation was related to patients and personal development. For quotes see Table 4.

Interviewee	Emotionally stimulating	Patient care	Personal development
Bengt	"You learn something new every day and it is very stimulating. It does not matter how old you are, you find new things and new challenges. [...] The most rewarding thing is when you find out what is wrong. You get happy by helping others [...] we feel like a very important function and feel important, we can make everything correct and it is extremely rewarding. [...] Everything is not sunshine, but I have found a profession that suits me very well and I think is very fun, but much can be improved."		
Christina	"I think it is really fun, I think it is extremely stimulating, what I do, and I can really feel that I want to read on for more and learn more and it is really fun to work with this. It is fun both medical stimulating and it gives much that my work has a meaning and that I do something good. [...] you get some input from the patients, when for example a woman gives birth, you get direct feedback about how fantastic that was."		
Diana	"I have the world's most fun job, and I would not want to change. [...] It is as interesting and fun as I thought it should be. [...] I think I have a fun job purely intellectual stimulating, very much practical and that mix is fantastically fun. [...] I like it well within public health care and have greater opportunities for development."		

Bo	"It is still stimulating to make a difference for the patients, but then me and many others get annoyed about not doing the things that we are actually educated to do. [...] You want to work with patients were you can actually make a difference, a matter of life and death, amputations and things like that, you do not get that type of activity within private healthcare.[...] It is about keeping yourself updated and it keeps coming new things and to continue to perform surgery. That is what you do to sustain your competence."	
Anita	"I started quite early with neuroscience [...] and that became my decision very soon and thought that was super fun, so I stayed. [...] I think the job is very fun with the patients and the surgery. And then I have my research and the academic part. I would not have that at a private clinic, only doing clinical work and performing the assembly line approach, I believe would make me very unhappy."	
Emil	"I go to work because I think it is fun, but it is hard to feel that it is too much. [...] I feel motivated, it does not hurt anywhere in my body, the days go fast, it is fun days, it is enough to do."	
Fredrik	"I really like to tell the patients about how the body functions, and I sketch and talk and take my time to do that. I think that is very fun. [...] I am pathetically pleased with most things at my work so I would say that I have a very hard time finding something I do not like. [...] but that is who I am, I am a positive person, I do not notice those stuff. Everything is so fun."	

Table 4: Positive Aspects of the Work Tasks

5.1.3 Compensation

Most of the interviewees considered themselves not being paid enough and all interviewees mentioned some negative aspects in relation to their compensation. The two most common arguments for earning more were (1) responsibility and (2) length of education. However, three interviewees considered themselves to be paid enough. Furthermore, two of those considering themselves to be paid enough and two additional interviewees stated that they did not choose the job because of the money. No demographic similarities could be observed between these interviewees. Anders was the only interviewee stating that money was the primary reason for working as a physician. He was also the only interviewee that mentioned other forms of compensation, in his case time off. Table 5 shows the statements of the interviewees that considered compensation to be adequate or those who had taken a stand regarding the importance of the compensation. The remaining interviewees considered the compensation to be inadequate without taking a stand on its importance.

Interviewee	Consider themselves to be paid enough	Do not consider salary as the primary object	Do not consider themselves to be paid enough	Consider salary as the primary object
Anita		"I do not think it is good. [...] If I had been set on money, I would early on have taken a different path. I believe that we who work with this do not have money as the primary object."		
Anna		"Not enough, but not dissatisfied, that is not why I chose to become a doctor."		
Bengt	"We could say that we would be rude if we complained too much, we have it pretty good, but everything can get better. No one complains about the call allowance amongst my colleagues. I perceive that among my colleagues, we who work with this, are really passionate about it and want to develop."			
Christina	"I perceive that we get a good compensation for the work we perform, but it is not a fantastic compensation. [...] I do not have the perception of that doctor's driving force is money, or maybe I am naive."			
Fredrik	"I am very satisfied with my salary. I feel very privileged as an employee and employed [...]. No, not more money. Something that fascinates me is that you do not compare the wage curve of nurses versus doctors. When you read the paper, you think poor nurses, but that is bullshit."			
Anders				" There are many doctors that say that they are there for the patients, and when they say so I believe them, but I would say that I might not be that. Overtime should be paid through additional salary, but the regions cannot afford it, so we get paid through time off. It is a huge problem, sometimes there is not enough people."

Table 5: The interviewees' View on Compensation for Physicians

5.2 Work Environment

5.2.1 Organization

The interviewees describe that their choice of hospital first and foremost was based on practicalities such as geographical closeness and employment in their respective fields offered. As shown in Table 4, Anita, Bo and Diana expressed that they would not be able to perform the same tasks as they currently do in a private hospital. In addition, Anna, Anders and Fredrik gave statements in line with those. Resulting that all neurosurgeons described that university hospitals were the only type of hospital where they could perform their current work. Anna and Anita both described that the options to their current employment would cause them direct unhappiness, due to the limitations that would be imposed. Bo and Fredrik stated that the possibility to make a difference at private hospitals was perceived as less.

Both interviewees from Hospital E might consider changing to a private hospital after becoming Specialists, to avoid working nights when starting a family. They did, however, together with the other interviewees value the learning and teaching possibilities offered at public hospitals. Five interviewees mentioned the possibility to do research at university hospitals as an alternative career path moving forward.

All the interviewees described the structure of their work as problematic to various degrees. The most common problem was that they had difficulties finishing the tasks of the day and eight of the interviewees brought up that they worked a lot and during uncomfortable hours. However, there were a few interviewees that expressed some well-functioning parts. According to the interviewees what worked well was clarity regarding the work tasks and some flexibility regarding on how to structure them.

Interviewee	Structure imposed by the organization
Bengt	"We have a manager that controls the work at large and how we should handle the big things, but the daily work is actually handled very much without much involvement"
Christina	"I would say that it works very well when you are on call, then most are very helpful since you are alone, and the distribution is pretty clear. If I need help it is their responsibility to help me."
Diana	"When on call, I can choose which tasks to start with. But it is the emergency, so you must handle what is coming in. I cannot affect the inflow, but I can choose how to handle it"
Emil	"To some extent, but everyone has to do the emergency duties, and everyone should do their part, so you cannot do very much about that, but you can wish for when to do them"

Table 6: Examples of well-functioning structures imposed by the organization

5.2.2 Culture

Six out of the ten interviewees described the culture of their clinic as bad. All interviewees from Hospital A and Christina testified to a hierarchical culture where the employees did not trust each other. They described that this made them feel restricted and having difficulties developing professionally. Common for the six interviewees were that they mentioned a workplace where the colleagues were neither supportive nor helpful. This was especially noted regarding the more senior colleagues. However, the remaining four interviewees perceived the culture at their clinics as good, and some of the others expressed some positive features about the culture at their clinic. Common for these interviewees were that the colleagues were mentioned as a positive aspect of the workplace. The interviewees that expressed positive aspects highlighted collaboration and the possibility to have fun together.

Interviewee	Good culture	Perceived positive aspects	Bad culture
Bengt	"We work a lot together and cooperate with each other. It is very good, if you have a more difficult case, we help each other out and think about what it could be. [...] It fits me very well and is one of the most important things for me."		
Diana	"Of all the workplaces, this have been the best, we are an extremely nice group, we have fun together, high ceiling, not judgmental and very accepting. A group that likes their job. The more senior does not think it is problematic to help us younger, they are sharp people so there are fun discussions during the days. "		
Fredrik	"We laugh a lot at work, but it is of course serious, but we have very fun. We have much confidence in each other. They are your friends. Everyone at a football field are equally important. It is fantastically fun, and I love my job."		
Bo	"It works really well; it is a dynamic process throughout the years, and it depends much on the leadership. Their view on resources matters."		
Anna		"To some extent yes, we share many characteristics - neurosurgeons."	
Erik		"We have very fun, the colleagues."	
Emil		"We have a good team spirit."	

Table 7: Perceived Culture

5.2.3 Leadership

A common description of the leaders at the clinics was imbedded in the interviewees' perception of the culture as bad, which was due to the leaders being conservative and preserving a hierarchical and confined culture. Bengt, Diana and Fredrik, who perceived the culture at their workplace as good, described their leaders as being responsive and helpful. They

considered themselves having a good relationship with their managers, which Anita also experienced. The interviewees also expressed support as an important aspect of good leadership, which was the most important leadership characteristic according to those that perceived the culture as bad. Table 8 illustrates the interviewees perceived positive leadership aspects in relation to the perceived culture.

Interviewee	Good culture	Perceived positive aspects of the leadership	Bad culture
Bengt	"We get support very much, our closest manager is very clear in commenting that we should not feel for having too much do, we should do a good job. "		
Bo	"It is pretty good right now, in that way that we have good management, which is responsive and want to work towards the same goal as most of us that works with the patients, that is important. "		
Fredrik	"I am very pleased with the leadership and it is one of my old friends that is the current chief. I was there when she was hired 15 years ago. She listens to her surroundings."		
Diana	"The leadership is very important, we are involved in decisions that affect us, we are not overrun and there is a drive within our chief to drive the clinic forward with our help. He is open for new ideas and engaged"		
Emil		"We get support in hospitalizing patients. "	
Anna		"I appreciate that we can make quick decisions and get comments and advice when in a hurry. But it would be nice if not everyone was on their way somewhere. [...] Our new managers feel very different, more pragmatic, more transparent. I have not been able to judge them yet; it is not only the manager that makes the decisions."	
Anita		"I have a good relationship with my managers. [...] I think they are good people and I believe that they can change things. "	

Table 8: The Interviewees Experiencing Positive Aspects of Leadership in Relation to Perceived Culture

6. Analysis of Empirics

The Self-Determination Theory states that workers can be both intrinsically and extrinsically motivated. In this section, we will analyze the empirical data collected based on the different forms of motivation and their respective motivational factors, i.e. autonomy, competence and relatedness for intrinsic motivation and external regulation, introjected regulation, identified regulation and integrated regulation for extrinsic motivation.

6.1 Intrinsic Motivation

6.1.1 Autonomy

Regarding *Interest in the Profession*, none of the interviewees indicated that their choice of profession was related to a wish of working in an autonomous profession. However, appreciation for autonomous characteristics of the profession was identified for Fredrik, who indicated that his profession offered flexibility. Concerning *Work tasks* one interviewee, Anita, explicitly emphasized that autonomy was of importance; consisting of being able to alternate between conducting academic research and performing surgery. Also, four interviewees, all of them Resident Physicians, complained that administrative work was forced on them and took time from their surgical tasks, which they enjoyed performing. This restriction of their autonomy seems to have affected their motivation adversely. Lastly, in *Compensation*, none of the interviewees indicated that autonomy was important.

Regarding *Organization*, Anna and Anita expressed that they were motivated by the freedom of choice existing in the public sector and explicitly expressed that this would not be the case in the private sector. For the interviewees at Hospital E, concerns of the lack of autonomy were expressed regarding not being able to choose working hours, which affected their motivation negatively and was stated as a factor that may affect their choice of continuing to work in the public sector. Concerning *Culture*, the hierarchical structure that persisted limited the levels of autonomy experienced by the interviewees from Hospital A and Christina, which negatively impacted their motivation. Lastly, regarding *Leadership* a common view was that the leaders who enforced the hierarchical structure and the confined culture took away the autonomy, which affected the motivation. However, Diana, who expressed that the managers at her clinics were involving, experienced a greater sense of autonomy.

To conclude this section, autonomy in relation to working hours and working tasks seem to be of importance for the motivations of the interviewees. Perceived higher levels of autonomy when the physicians were able to choose when to perform certain work tasks and which organization to work at, and being involved in the decision making appears to have been particularly important factors for their need of autonomy to be fulfilled, which also appears to have affected motivation positively.

6.1.2 Competence

Regarding *Interest in the Profession* half of the interviewees' answers indicated that they wanted to study medicine to have an occupation where they would be challenged and be in an environment of continuous learning. This indicates that the people choosing the profession may be inclined to value competence and the development of their skills as important motivational factors. Regarding the *Work tasks* the interviewees' answered that the constant development within their respective fields make sure that there are always new things to learn, which most of them considered stimulating. Having a stimulating occupation, makes Bengt, Bo, Christina and Diana seek more learning opportunities, which indicates that the requirement of the work tasks to be of continuous learning character affects their motivation positively. However, the administrative work tasks were considered a burden and decreased the level of motivation. Four Resident Physicians felt that they performed tasks of scope of their education, which hindered them to make use of their competence, affecting their motivation negatively. Regarding *Compensation*, it did not appear to affect the level of competence that the physicians experienced. Some felt that in relation to their level of responsibility they should be compensated more, however, there was no indication that this decreased their perceived competence and motivation.

Regarding *Organization*, six of the interviewees expressed that for them to be able to perform their work task they needed to work at a public hospital due to their specialization and developed competence only being of offered there. Furthermore, eight interviewees valued the learning and teaching opportunities at public hospitals, which indicates that for them this need must be fulfilled to feel competent, which in turn motivates them to stay within the public sector. However, the level of motivation decreased due to structural issues that resulted in them not being able to finish their tasks during work hours. Concerning *Culture*, four physicians stated that the hierarchical structure made it difficult for them to develop professionally, which

decreased their ability to continuous learning, thus affecting the fulfillment of their need for competence. This in turn decreased their level of motivation. However, two interviewees, Bengt and Diana expressed that when experiencing issues to solve cases, the colleagues at Diana's clinic help and in Bengt's case, the more senior physicians help the youngers to learn. This increases the availability to achieve one's goals and learn, stimulating the need for competence. The *Leadership* seem to affect how hospitals fulfill the need of competence of their physicians. At Bengt, Diana and Fredrik's clinics the leaders were helpful and supported them in their respective fields, which developed their clinics for the future. By being supportive of the continuous learning of the physicians, the stimulation of the need for competence was perceived greater, which motivated them.

To conclude, regarding the basic psychological need for competence the physicians felt competent when initially starting off in the field, when they got to perform the work tasks that they enjoyed and were offered learning opportunities. Secondly, they felt competent when they exhibited support from their leaders and experienced a culture that were prone to develop and learning. In general, the physicians appeared to put a significant weight on their personal development and were stimulated when performing advanced tasks. When they work on such task and felt that they were developing they appeared to be more motivated. The opposite also applied, making them perform tasks they did not feel to be relevant for their level of education affected their motivation negatively. The public sector also appears to offer unique opportunities to practice within certain specializations and appears to foster an environment of continuous learning – affecting motivation positively.

6.1.3 Relatedness

Concerning *Interest in the profession* half of the interviewees answered that they initially became interested in medicine because they wanted to work, help and socialize with people, indicating that the psychological need for relatedness was a driving factor of motivation. Furthermore, regarding *Work tasks*, almost all the interviewees enjoyed helping others, which indicates that they felt a connection to their patients and cared for them. This sense of relatedness motivated them to perform their work tasks. None of the interviewees indicated that *Compensation* influenced their need for relatedness or affected motivation in relation to this.

Regarding *Organization*, neither choice of organization nor structure of the clinic showed indication of affecting the need for relatedness. However, *Culture* appeared to affect the perceived relatedness. For the interviewees in Hospital A and Christina, the hierarchical structures that were imposed made them experience lack of trust, which negatively affected the experienced relatedness and consequently negatively affected motivation. Furthermore, six interviewees stated their colleagues were not supportive or helpful, indicating lack of social support, which negatively impacted motivation. Four interviewees perceived the culture at their clinics to be good. They had fun with colleagues, cooperation worked well and a psychologically safe work climate prevailed, indicating that their need for relatedness was stimulated. Concerning *Leadership*, the interviewees working in a good culture plus Anita experienced a good relationship with their manager. They believed the manager to be helpful and responsive, which created a sense of belonging. Diana stated that her managers involved employees in decision making. This behavior increased relatedness.

Concluding, relatedness appears to be an essential factor of motivation for physicians. Both relatedness with patients and colleagues seem to be of importance. The relation to patients appears to be a relatively stable factor since it is an essential part of the profession. Regarding colleagues, culture, organization and leadership it seem to be of importance to provide an environment where need for relatedness can be stimulated.

6.1.4. Conclusion Regarding Intrinsic Motivational Factors

According to the analysis, the interviewees accomplished a higher level of intrinsic motivation when (1) performing the work tasks they were educated for, (2) having fun with colleagues, (3) feeling supported by superiors, and (4) working closely with patients. Nevertheless, there are certain factors such as climate among colleagues and administrative workload that eradicate this. Regarding which factors that motivated the interviewees, competence and relatedness seem to be of high importance, while the need for autonomy does not appear to be as emphasized.

6.2 Extrinsic Motivational Factors

By assessing the different interviewees on the continuum of being motivated by factors subsumed under the concepts of controlled to autonomous motivation, the study identified some patterns. First and foremost, the study found no indication of amotivation among the

physicians.

Secondly, Anders and Emil answers' indicated that their motivation was of a more controlled form on the continuum. For Anders, this assessment is related to answers regarding compensation, which indicated that he acts to obtain a certain outcome. Further, this was enhanced by the statement that others might be there for the value of doing good but not him. Furthermore, he valued the benefit of extensive vacation. Concluding, he was assessed as being regulated externally motivated. For Emil, the internalization of the values and regulation of his behavior seemed to have taken place to a further extent. He described that he initially chose the profession due to it not being cyclical, indicating a more externally regulated motivation. However, he was also motivated by good collaboration with colleagues, which indicates some internalization of the values. This places his motivation as introjected regulation.

When assessing the more autonomous forms of extrinsic motivation, Bengt was placed in the identified regulation part of the continuum. This was due to the alignment of his profession to his personal goals and identity. He perceived himself as a technical person, which was his main work task and this behavior was reflected as an aspect of himself. Furthermore, five interviewees were categorized having their motivation as integrated regulation. This assessment was based on the interviewees integrating the behaviors as a part of who they were, as well as, being able to see past the administrative burden. This type of motivation is characterized by the activities being important for personal goals and having a coherence towards the values and regulations in the workplace.

Lastly, Diana and Fredrik were classified as being fully intrinsically motivated. Being a caregiver was an essential part of who they were, and the need of patients was of importance. None of them had a will to switch to the private sector, even though they could perform their specialty there and earn higher compensation, which confirmed that compensation was of less importance. Furthermore, they provided information that they were fully internalizing the values and regulations of the clinic, such as positive work-related attitudes and organizational citizenship behavior, as well as describing an overall job satisfaction.

In conclusion, the interviewees' answers allow us to draw no conclusion regarding if there is a certain pattern among physicians working in the Swedish public healthcare sector regarding what form of extrinsic motivation that motivate them.

7. Discussion

The overall results of this study are in line with general framework of the SDT and the framework has been adequate for analyzing motivational factors of the physicians. Overall the interviewees appear to be motivated in a similar fashion as the SDT suggests. However, the results of the study indicate that some motivational factors are more important than others when it comes to the sub-category of workers that physicians in the Swedish public healthcare constitutes. As discussed in the analysis competence and relatedness appear to be superior factors of motivation compared to autonomy.

The results of the study are, however, limited due to the method chosen. The decision to do ten interviews resulted in theoretical saturation not being achieved, leading to the following conclusion that these results cannot necessarily be generalized to other settings. The authors suggest that the study should be performed in a larger setting, with a higher number of interviewees and over a longer period. This would then shed light upon what motivates physicians in the public healthcare sector in Sweden, as well as investigate what affects their motivation further. Once the motivational factors have been explored further, deductive quantitative studies can be used to study and verify what motivates the physicians in the Swedish public healthcare sector.

Based on the interviewees' answers and the SDT, the authors propose that the following actions could be taken to structure a more motivating work environment for physicians:

(1) Relieve physicians from the administrative burden by restructuring the workplace, so that they can focus on what they are educated for and allow them to further specialize. This would stimulate the need for competence.

(2) Recruit inclusive and supportive leaders, who are attentive to the work climate, ensuring that everyone can prosper within the setting. This could lead to an environment where physicians not only feel intimately connected to each other but also internalize the values and goals of the clinic.

8. Conclusion

The work environment for physicians in the Swedish public healthcare sector has been characterized as strenuous. This study investigated the following research question using the Self-Determination Theory and a qualitative method with semi-structured interviews in a cross-sectional study design:

"W*hat motivates physicians that work within Swedish public healthcare sector?"*

The results of the study are in line with the general propositions of the Self-Determination Theory. Self-Determination Theory states that individuals are exactly that, individuals; they are motivated by different factors. In the study, the particular sub-category studied have shown some common characteristics of what motivates physicians that indicates that they share some common attributes regarding what motivates them.

The empirical evidence suggests that there were different aspects that motivated the ten interviewed doctors. However, the vast majority had an inherent mission of wanting to do good and described a sense of satisfaction when being able to do so. Further they enjoyed working close with patients and in a collaborative work environment. Additionally, the interviewees stated that the work tasks satisfied them on an intellectual level, providing them with learning and development opportunities. Limitations of the time they were able to spend doing core tasks of physicians and doing administrative tasks instead affected their need for competence and motivation negatively, by limiting their use of acquired knowledge and skills. Furthermore, organizational, cultural and leadership aspects affecting the work environment of the clinics, appears to have a significant effect on the motivation experienced by the interviewees. Workplaces with a culture of continuous learning and development with a leadership providing opportunities for all physicians to participate in decision-making affected motivation through competence and relatedness positively. The inverse also appeared in the study, causing the affected interviewees to feel less motivated.

In general, the interviewees' appeared to favor competence and relatedness over autonomy when deriving their intrinsic motivation. This is the essential finding of this study and should be investigated further, as suggested in the discussion section. If this is true for the whole sub-category, physicians working in the Swedish public healthcare sector, concrete measures can

be focused on these needs to increase the likeliness that they stay in the public sectors. Furthermore, based on the interviewees' answers, the study could not draw any conclusions regarding if there is a certain pattern among physicians working in the Swedish public healthcare sector regarding what form of extrinsic motivation that motivate them. Though the finding needs to be further studied, it suggests that there may be no "one-size-fits-all" solution to extrinsically motivate physicians to increase the likelihood of them staying in the sector.

To conclude, the authors of this study suggests that further research is conducted to investigate the findings that (1) competence and relatedness are more important motivational factors for intrinsic motivation among physicians working in the Swedish public healthcare sector than autonomy, and (2) the mentioned group of physicians display no general pattern of what extrinsic factors that motivate them.

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Appendix

Appendix A – Interviewed Physicians

Pseudonym	**Hospital**	**Gender**	**Age**	**Employment**	**Clinic/Specialty**
Anders	Hospital A	Male	33	Resident Physician	Neurosurgery
Anna	Hospital A	Female	31	Resident Physician	Neurosurgery
Anita	Hospital A	Female	40	Specialist	Neurosurgery
Bengt	Hospital B	Male	55	Specialist	Neuroradiologist
Bo	Hospital B	Male	54	Specialist	Cardiologist
Christina	Hospital C	Female	30	Resident Physician	Intensive Care
Diana	Hospital D	Female	33	Specialist	Anesthesiology
Erik	Hospital E	Male	41	Resident Physician	Orthopedical
Emil	Hospital E	Male	35	Resident Physician	Orthopedical
Fredrik	Hospital F	Male	66	Specialist Consultant	Orthopedical

Appendix B - Interview Guide

Information Provided Before Starting the Interview Including Ethical Considerations

1. This study is conducted only for research purpose and is part of a bachelor thesis project
   (Studien är gjord endast i forskningssyfte och är en del av en kandidatuppsats)
2. Your participation is completely voluntary
   (Ditt deltagande är frivilligt)
3. The study is completely anonymous regarding your participation and the hospital
   (Studien är till fullo anonym gällande ditt deltagande och sjukhuset)
4. Your employer or others will not be informed of your participation
   (Varken din arbetsgivare eller andra kommer informeras angående ditt deltagande)
5. You can at any point terminate the interview or decline to answer any question without reason
   (Du kan närsomhelst avsluta intervjun eller avböja att svara på någon fråga utan anledning)
6. Do you allow the interview to be recorded with the purpose of transcription by the other author?
   (Tillåter du att intervjun spelas i syfte att transkribera den av den andra författaren?)
7. Do you have any question before we start?
   (Har du några frågor innan vi börjar?)

Introduction

- How old are you?
  (Hur gammal är du?)
- Why did you choose to become a doctor?
  (Varför valde du att bli läkare?)
  If not answered, ask following questions:
  - Did you have any pre-interest that drove you towards the education?
    (Hade du några särskilda intressen som ledde dig till att välja denna utbildning?)
  - Was it something in particular that interested you with the profession?
    (Var det något särskilt som intresserade dig med yrket?)
- Why did you choose your current areas as specialty?
  (Varför valde du att specialisera dig inom ditt område?)
- What led you to choose your current hospital and clinic?
  (Vad ledde till att du arbetar på ditt nuvarande sjukhus och klinik?)

The Profession

If not answered in the introduction, ask following:

- What is your title?
  (Vad är din titel?)
- For how long have you been employed within your specialty?
  (Hur länge har du arbetat inom din specialitet?)
- Can you tell a bit about your profession and what you do?
  (Kan du berätta lite om ditt yrke och vad du gör?)
- What do you consider is more and less rewarding with what you do and your profession? Follow up question: How does this affect you?
  (Vad anser du är mer och mindre givande med vad du gör och ditt yrke? Följdfråga: Hur påverkar det dig?)

If not answered, ask the following questions:

- Is it something you wish to do more or less of?
  (Är det något du önskade att du gjorde mer eller mindre?)
- How is the work structured?
  (Hur är arbetet strukturerat?)
- Do you perceive that you are able to affect your work?
  (Upplever du att du kan påverka ditt arbete?)

The Organization

If not answered in the introduction, ask following questions:

- How many are working at your clinic?
  (Hur många arbetar på kliniken?)
- What do you perceive as more and less beneficial with your current workplace?
  (Vad upplever du som mer och mindre fördelaktigt med din nuvarande arbetsplats?)

- How do you perceive the culture at your clinic? Do you have any examples of situations where it becomes clear
  (Hur upplever du kulturen på kliniken? Har du några exempel på situationer där den blir tydlig)

  If not answered, ask following questions:
  - How do you perceive the interaction with your colleagues?
    (Hur upplever att samspelet mellan dina kollegor?)

The Leadership

- How do you perceive the leadership at your clinic?
  (Hur upplever du ledarskapet på kliniken?)

  If not answered, ask following question:
  - Do you perceive that you get the amount of help and support you need?
    (Upplever du att du får den hjälp och stöd du behöver?)

Ending

If not answered, ask following questions:

- Do you consider the compensation to correspond to your work tasks?
  (Upplever du att din kompensation motsvarar dina arbetsuppgifter?)
- Will you continue to work within healthcare? Follow up question: At your current clinic?
  (Kommer du att fortsätta arbeta inom sjukvård? Följdfråga: På din nuvarande klinik?)
- What is your view of the future?
  (Vad är din syn på framtiden?)

Do you have something you would like to add before we end the interview?
(Finns det något du skulle vilja tillägga innan vi avslutar intervjun?)

Thank you very much for your contribution! You will have the possibility to review any used quotes before the publication of the thesis.
(Stort tack för ditt medverkande! Du kommer ha möjligheten att se över de citat som används före publiceringen av uppsatsen)

Appendix C - Interviews Conducted

Pseudonym	**Time**	**Date**	**Place**
Anders	49:51	11-02-2020	Telephone
Anna	43:07	16-03-2020	Telephone
Anita	25:18	16-04-2020	Telephone
Bengt	34:27	05-04-2020	Telephone
Bo	22:52	15-04-2020	Telephone
Christina	24:21	07-04-2020	Telephone
Diana	27:01	14-04-2020	Telephone
Erik	37:06	11-04-2020	Telephone
Emil	25:45	15-04-2020	Telephone
Fredrik	40:12	20-04-2020	Telephone