Master Thesis Strategic Human Resource Management

The Relationship between Organizational Context and Public Service Motivation of German Nursing Staff

Carina Schott (3380106)

Docent:

Dr. W. Vandenabeele

Utrecht, August, 2010

Contents

Preface

This master thesis about the relationship between the organizational context and public service motivation is the product of my fundamental interest in the fields of human resource management, public administration, the relatedness of these two academic disciplines, and excellent supervision by Wouter Vandenabeele, my supervisor at the Utrecht School of Governance, University of Utrecht. Without his support throughout the process of literature research, data analysis, and writing process, this thesis would not have been possible in this form. Therefore, I want to thank him for giving advice and feedback. Next to this, I want to thank my parents for supporting me over the last 24 years without any constrictions. In addition, I want to thank Marten for listening to me when I was complaining or talking enthusiastically over the progress of this piece of work and his effort to try to understand the essence of it and giving constructive advice. Moreover, I want to thank the management team of the hospitals, especially the heads of nursing service, for making it possible to collect the data used in this study. Last but not least, I want to thank all employees who participated in this study by completing and returning the questionnaire. Without their contribution, this study could not have been done.

Abstract

Over the last two decades, public service motivation (PSM) has received a considerable amount of attention, because it is thought to result in a range of desirable work related attitudes and behaviors. However, empirical research on PSM's antecedents, specifically the organizational context, which is claimed to influence PSM strongly, is limited. In this study, the transmission from organizational context (referred to as HPWS) to an individual level of (public service) motivated behavior is explained by the self-determination. Next to limited research addressing the organizational context as antecedent of PSM, there is no empirical research investigating the question whether the wildly spread claim 'the level of PSM in public organizations is higher than in private ones' can be generalized to organizations operating in one single sector. This empirical survey study aims to shed light on this lack of knowledge by using the data of 251 nurses working in four different hospitals (two private and two public ones), both located in Germany, gained by means of questionnaires. Based upon the data presented in this study, one can conclude that HPWS basic psychological needs and PSM are interrelated. Training', 'job characteristics', 'teamwork', and 'say in decision making' play a crucial role in fostering PSM. In addition, the three psychological basic needs 'competence', 'relatedness', and 'autonomy' are significant antecedents of PSM as well, since they have correlated strongly with PSM and the organizational context. However, based upon the data, it cannot be concluded that the basic needs mediate the relationship between PSM and organizational context completely. Consequentially, even though the self-determination provides a good explanation for the transmission of institutional variables to an individual level of analysis, it cannot explain the whole process exclusively. For this reason, more research needs to be done, which investigates this relationship in combination with other relevant variables, such as organizational commitment and job satisfactions, to clarify this complex interrelatedness. Finally, as hypothesized, there was no significant difference between the nurses' level of PSM working in private, compared to public hospitals.

Tables

Figures

Abbreviations

CFA	Confirmatory Factor Analysis
HPWS	High Performance Work Systems
HR	Human Resources
HRM	Human Resource Management
IfSG	Infektionsschutzgesetz
KFG	Krankenhausfinanzierungsgesetz
NPM	New Public Management
PSM	Public Service Motivation
RWI	Rheinisch-Westfälische Institut für Wirtschaftsforschung
SDT	Self-Determination Theory

1.0 Introduction

We live in a time of considerable and universal shortage of nurses (Tourangeau & Cranly, 2006; Coomber & Barriall, 2007; Escury & Alma, 2008). This has led to increased concern, both in the professional and the governmental world, about the question whether the present stock of nurses can meet the future health service needs of a society which is characterized by social changes. More specifically, we can think of demographic changes (Shields & Ward, 2001, Nationaal Kompas Volksgezondheid, 2009), an increased demand for health care due to the advantages in medical technology, longer life expectancies and the resulting increase in the number of people living with serious illness and chronic disease (Buchan & Seccombe, 2003), and individualization (Bovens, Hart & van Twist, 2007).

In addition, we are confronted with sector specific problems. The turnover rate among nursing staff is extremely high. Many employees working in the health sector seem to be extremely unsatisfied with the current working conditions and leave their organizations within few years (Coomber & Barriall, 2007). Next to this, national healthcare systems are short of several milliard Euros (RWI, 2009). One way to compensate the future deficit of nurses is to maximize the motivation, and in turn, the performance of the present nursing staff by being aware of their personal needs.

This is an attempt to contribute to the issue of nursing shortage by addressing the problem from a motivational point of view.

One type of motivation which has received a considerable amount of attention over the last two decades is called *public service motivation* (PSM) (Perry & Hondeghem, 2008). PSM is of interest for both, academics and practitioners as it can help to identify predictable linkages between what drives employees and organizational outcomes. Practitioners are concerned about this relationship, because PSM is thought to result in a range of desirable work related attitudes and behaviours (Perry & Wise, 1990). Contemporary, in the field of public administration, PSM is defined as ‘the belief, the values and attitudes that go beyond self-interest and organizational interest, that concern the interest of a larger political entity and that motivate individuals to act accordingly

whenever appropriate' (Vandenabeele, 2007, p.547). In other words, PSM can be regarded as the motives and actions, grounded in public institutions, which are intended to do others good, and shape their well-being (Perry & Hondeghem, 2008).

This study aims to generate more insight in the role of PSM in private and public hospitals, where it might be a help in the fight against nursing shortage. This leads to the first research question:

1) What is the role of PSM in German hospitals, especially among nurses?

There is some evidence that organizations might play an important role in fostering and sustaining PSM (Perry, 1997; Mayonihan & Pandey, 2007; Camilleri, 2007). Pandey and Hondeghem (2008) contend that organizations should play a more active role in reinforcing and sustaining PSM. This assumption is supported by Leisink (2004) who claims that personnel politics may assist the creation of conditions at work that help to regenerate PSM. Unfortunately the research focusing on the effect of organizational institutions on PSM is limited (Pandey & Stazyk, 2008). More knowledge about the relationship between organizational institution and PSM is needed, because it might help to identify to the most effective organizational activities that facilitate PSM, and in turn, address the issue of nursing shortage.

In this study, organizational institutions will be examined by the concept of *high performance work systems* (HPWS) which imply the systematic use of mutually reinforcing human resource (HR) policies emphasizing on selecting, developing an organizing work so that employees commitment to and involve with the organizational goals and that their behaviour is self-regulated rather than controlled by pressure and sanctions (Wood & Albanese, 1995).

The question remains how the values of organizational institutions are transmitted to an individual level of behaviour. Gagne's et al (2005) *self-determination theory* (SDT), a highly developed self-regulation framework, provides a plausible and detailed explanation for the phenomenon of PSM at an individual level of analysis. According to the theory, the transmission of the values is based on a continuum of motivation, ranking from autonomous to controlled, which in turn, depends on the satisfaction of three basic

psychological needs (*need for autonomy*, *need for competence*, and *need for relatedness;* Gagne & Deci, 2005). This idea is supported by Perry and Hondegehem (2008) who contend that no public service motivated behaviour will occur unless these needs are satisfied.

Therefore, the second objective of this study is to close the lack of knowledge about the relationship between organizational institutions and PSM through providing a universal theoretical model (see Figure 1) which helps to identify correlations between HPWS en PSM. This theoretical model can be used by professionals to rethink their current HR politics in order to improve PSM and, in turn, the issue of nursing shortage. This leads to following research question:

2) What is the relationship between high performance work systems and public service motivation, and which role do basic psychological needs play in this relationship?

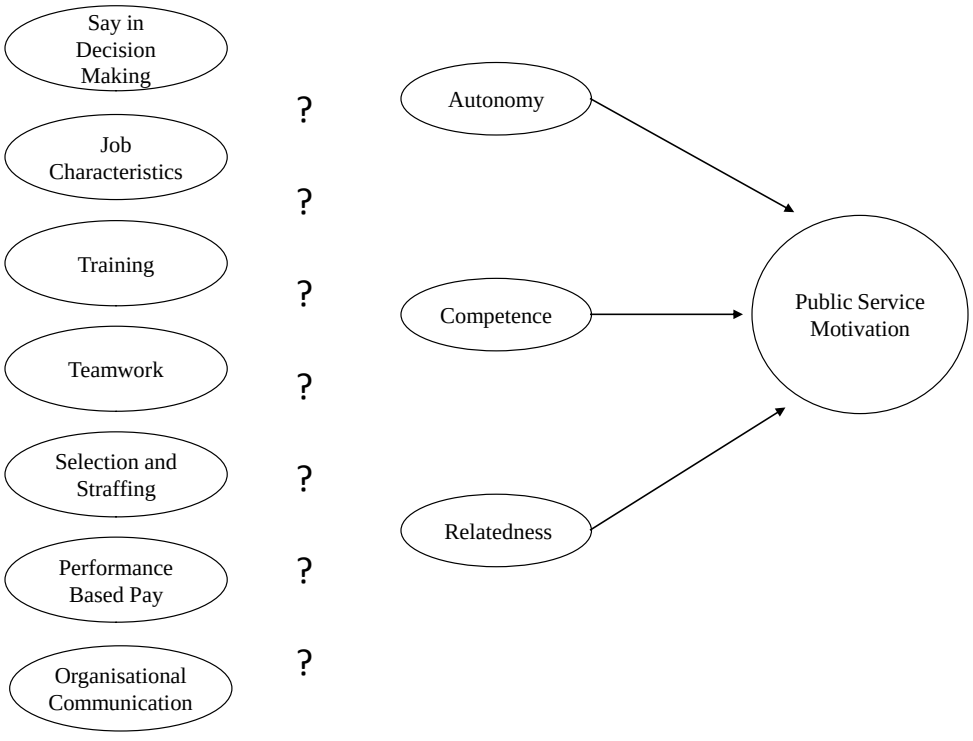

Figure 1 Schematic Review of the Relationship between HPWS and PSM

A bulk literature claims the existence of a higher level of PSM in public organisations compared to private organizations (Rainy, 1982; Wittmer, 1991; Houston, 2000; Mayonihan & Pandey, 2007). However, only little research exists which investigates this assumption empirically (Mann, 2006). Moreover, no research can be found that compares the level of PSM in private and public organizations in one single sector where influencing factors, such as the tasks of individual employees, the degree of publicness of the organizations, and the sociohistorical context, are the same. Comparing the level of PSM in a private and a public organization in one single sector empirically has the advantage that the number of possibly influencing factors of PSM is reduced.

This study investigates whether the common claim 'PSM is higher in private than in public organizations' holds for organizations, too which operate in the same sector. Empirical information on this subject can be used to verify the widely excepted belief that PSM is predominantly a 'public thing'. Therefore, the third research question is as followed: (For a schematic review of this question see Figure 2)

3) What are the differences in the level of PSM in private organisations compared to public organizations operating in one sector?

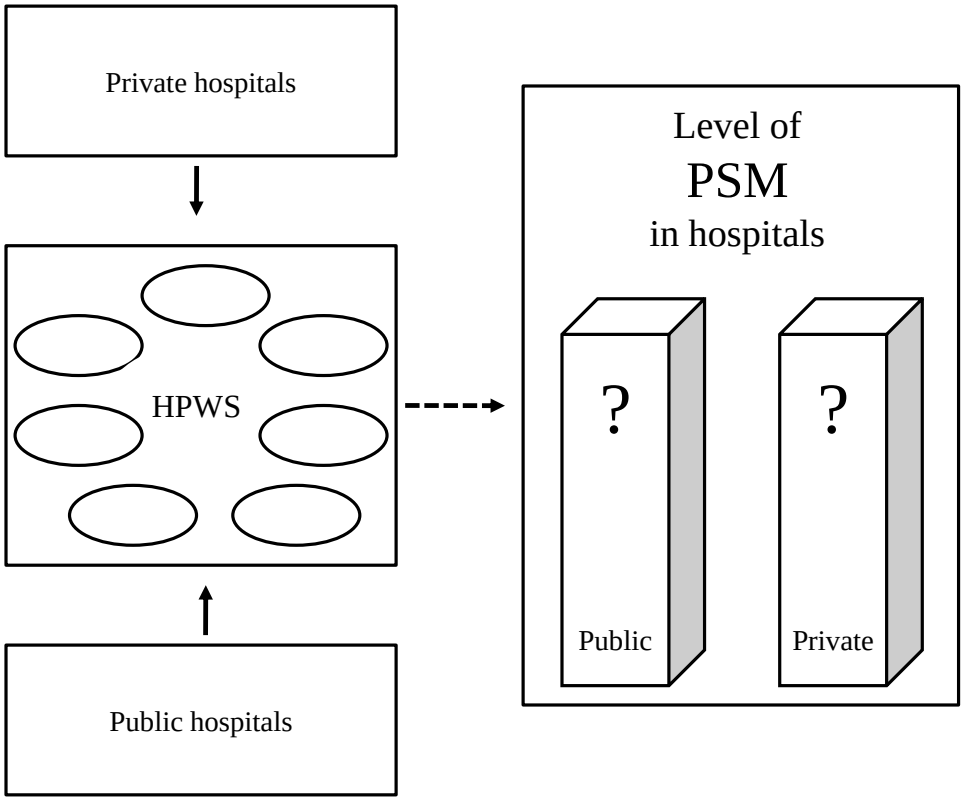

Figure 2 Schematic Review of Research Question 3

In order to answer the first research question, relevant literature concerning the theoretical framework of PSM is reviewed (section 2.1). In section 4, descriptive statistics of PSM, which were obtained via questionnaires in two private and two public German hospitals, are analysed.

The second research question is answered by the same literature review of PSM mentioned above. Next to this, the seven dimensions of organizational institutions are summarized (section 2.2). Thirdly, PSM, the basic psychological needs, and the dimensions of HPWS are linked (section 2.3) and their relations are tested by the means of hypothesises in order to verify the theoretical model (section 4).

In order to answer the third research question, relevant literature concerning the distinctive level of PSM in private versus public organisations, is reviewed (section 2.4.1). Secondly, formal criteria of distinctions between public and private organizations are summarized (section 2.4.2) and applied to the hospitals under study (section 2.4.3.). In the next step, the level of PSM is tested in both types of hospitals by means of a hypothesis (section 4).

Finally, the findings of all analyses are discusses, conclusions are drawn, and practical implications are given (section 4).

2.0 Theoretical Framework

In the following sections, the theoretical framework upon which the research questions are based will be given. Section 2.1 focuses PSM. Section 2.2 addresses HPWS. In section 2.3, the concepts are linked and the theoretical model is developed. Finally, in section 2.4 differences between public and private organizations, specifically the differences between private and public hospitals, are discussed.

2.1.0 Public Service Motivation

In this section, the concept of 'Public Service Motivation' (PSM) is introduced. First, a short summary of the history of PSM will be given. In the next step, the motivational basis and the theory behind the concept will be discussed in more detail.

2.1.1 The History of PSM

The study of the public motivation is among the largest in the science of public administration (Perry & Vandenabeele, 2008). As early as in the ancient world, works by Aristotle and Plato are evidence for the interest in the nature and origin of political societies (Vanadenabeele, 2008b).

However the research of motivation in public organisational settings is limited (Perry & Vandenabeele, 2008). Several explanations might explain this phenomenon.

Most of the empirical literature about motivation is based upon research in private organizations (Perry & Porter, 1982, Porter, 2000). In 2000, Porter identified five themes as missing in motivational research. Among them were motivation theory's individualistic bias, goals-clarity, individual –organizational match, and the measurability of individual performance. More recently, Kelman (2005) contends that there is a lack of knowledge concerning several issues of organizational behaviour research which can be found predominately in public institutions.

According to Vandenabeele (2008b), shortage of motivational research in public settings might be explained by the rise of new public management (NPM) since the

1980s (Hood, 1995) which is characterized by the attempt to transfer private sector techniques to the public sector and the dominance of rational choice theory (Pollitt & Bouckaert, 2004). In line with the author (2008b), this development has replaced a balanced outlook on motivation with a much narrower conceptual perspective which treats self-interest as the primary force of motivation. Unfortunately, this perspective on motivation entails some problems which will be discussed more in detail in section 2.1.3.

Next to the rise of NPM, research on PSM has also been confronted with methodological problems and disunity concerning the terminology (Vandenabeele, 2008b). Not until 1990, the first attempt to construct PSM formally has been published (Perry, 1990). This date marks the beginning of empirical research on PSM. In 1996, Perry devised series of scales to measure PSM. In 1997, he was able to provide empirical evidence on the causes of PSM. Around the same time, scholars of public administration became interested in the utility of PSM (Crewson, 1995a; 1995b; Lewis & Alsonso, 1999; Brewer & Selden, 1998).

Over the last decade, the number of the empirical studies about PSM and its relationship with desirable work behaviours continue to grow (Perry & Hondeghem, 2008). Among these studies, PSM is most of time treated as an independent variable (Vandenabeele, 2008b). Scholars link PSM to various desirable outcomes such as job satisfaction (Bright, 2008; Stijn, 2008), organizational commitment (Taylor, 2008), intentions to leave (Bright, 2008; Steijn, 2008), social capital (Brewer, 2003; Houston 2006) and ultimately higher performance (Brewer, 2008; Lewis & Alonso, 2001; Bright, 2007). In contrast, only a few studies tried to address the origin of the concept (Vandenabeele, 2008b). Among those, two lines of research can be distinguished: one which explicitly tests antecedents of PSM and one which is primarily concerned with the components of PSM.

The latter is initiated by Perry (1992) who is a pioneer in addressing PSM from an institutional point of view. In 2008, Perry and Hondeghem elaborated this line of research and Vandenabeele (2008a) extended it to the European context. Examples of research exploring the antecedents of PSM are studies of Camilleri (2007) and DeHart-Davis et al. (2006) who focused on PSM ‘demographic antecedents. Bright (2005) and Stijn (2006) concentrated on the socio-historical antecedents of PSM. Perry’s (1997) research is

directed towards institutional effects of PSM, and Moynihan and Pandey (2007) place organizational antecedents in the centre of attention. Finally, Pandey and Stazyk (2008) summarize all categories mentioned above in one recent literature review. For an overview of PSM's history, see Table 1.

Table 1 Overview of the History of PSM

• Ancient world (~ 400 b.c.)	Interest in the nature of political societies	Methodological and terminological problems
• 1980s	Rise of NPM	
• 1990	First attempt of formal construct of PSM	
• 1997	Empirical evidence of PSM	Interest in the utility of PSM grows
• Since 2000	PSM is treated as independent variable	
• Since 2005	- PSM is treated as dependent variable - Elaborations on the construct of PSM	

2.1.2 PSM: a Concept with three Multiple Motivational Bases and Several Dimensions

Back in the early 90's, Perry and Wise define PSM 'as an individuals' predisposition to respond to motives grounded primarily or uniquely in public institutions and organizations'. This older definition of PSM places psychological motives in the centre of attention (Perry & Wise, 1990). Knoke and Wright- Isak (1982) differentiate three manifold categories of motivations: rational, norm-based and affective motivations. Those are used by Perry (1996) in order to identify distinct dimensions of PSM as will be discussed later in this section. Consequentially, it can be concluded that PSM has a multiple motivational basis.

In this context, *rational motives* are concerned with the maximization of utilities. Academic literature claims that working in the public sector can be a way to satisfy one's personal needs and one's image of self importance while serving public interests (Rawels, 1971; Kelman, 1987). *Norm-based motives* involve actions generated to please recognized norms (Perry & Wise, 1990). They can be described as a desire to serve the public interest driven by altruism (Downs, 1967). *Affective motives* refer to the

commitment to a program because of personal identification with it (Perry & Wise 1990). In this sense, employees commit to a public organization because they are convinced that the public organization serves the public good and that one's work is socially important (Perry & Wise, 1990).

Initially, Perry (1996) empirically distinguishes six dimensions of PSM (attraction to public policy making, commitment to public interest, social justice, civic duty, compassion, and self-sacrifice). In 2000, he reduces the number of PSM-dimensions based upon the theory, that humans are motivated by pluralistic dispositions, namely rational, norm-based, and affective motivations. The remaining subscales of PSM are: 'attraction to public policy making', 'compassion', 'commitment to civic duty/public interest', and 'self-sacrifice'. According to Perry (2000), three of the fours scales are directly related to the motivational foundations of PSM identified by Knoke and Wright-Isak (1982). 'Attraction to policy making' maps with rational choice processes (Perry, 2000). 'Commitment to civic duty/public interest' is related to normative motivation, and finally, a link exists between 'compassion' and affective motivation (Perry, 2000).

However, Perry (2000) fails to link the last dimension (self-sacrifice) to PSM. In addition, neither Perry and Vandenabeele (2008) in their theoretical approach of the PSM- concept, nor Moynihan and Pandey (2007) in their empirical one, emphasize this one-to-one relationship between the dimensions of PSM and the three motivational foundations. Therefore this relationship might be taken with caution.

Through specification research, Vandenabeele (2008a), who initially supposed that PSM is a seven-dimension-construct, was able to demonstrate empirically that the dimension 'service delivery' could be removed from the scale and that the dimensions 'bureaucratic values' and 'equity' collapsed into one single factor, namely 'democratic governance'. What remains is a five dimensional construct of PSM.

The dimension *attraction to public policy making* can be addressed as the desire to work in the public sector based on the given opportunity of making public policy (Perry, 1996). Nurses are not in the position to participate in the formulation of public

policy at any point of their carrier. For this reason, it can be assumed that PSM' dimension 'attraction to policy making' does not play a crucial role among nursing stuff.

Commitment to public interest is the desire to serve the public interest grounded in altruism (Perry, 1996). This dimension might be found in the fact that nursing staff is working night-shifts for relatively low earning and prestige.

Compassion can be regarded as a sense of patriotism and benevolence, which is described by Frederickson and Hart (1985) as an extensive love for all people within the community the imperative to protect them (Perry, 1996). Nurses who go beyond their formal tasks by consoling needy patients affectionately are examples of the dimension 'compassionated' bahaviour.

The dimension s*elf-sacrifice* regards to willingness to substitute services to others for tangible personal rewards (Perry, 1996). In the praxis, we can think of nursing staff who uses own financial researches to cheer patients up.

Finally, *democratic governance* refers to a set of values, such as equality, permanence and accountability, which can be considered typical for public services in democratic regimes (Vandenabeele, 2008b). In the case of hospital management we can think equal treatment of all employees and the fact that policies do not change from one moment to the other.

2.1.3 PSM: a Contextual Approach

In this study, PSM is addressed by Perry and Vandenabeelen's (2008) contextual approach of PSM, because it has been argued persuasively in the past that motivation cannot be addressed without taking the context into account (Camilleri, 2007; Mayonihan & Pandey, 2007; Perry &Porter, 1982; Rainey, 1983). This contextual approach provides an alternative to the recognized rational choice model (Perry & Vandenabeelen, 2008) which argues that peoples' actions are based upon their utility maximization (Herrenstein, 1990). However, this model fails to explain behaviours we are familiar with from the public sector (Perry & Vandenabeele, 2008), such as protecting public money and striving for public and organizational goals (DiIulio, 1994). According to Perry (2000), behaviour knows many causes. The author (2000) contends that we cannot just focus on Knoke and Wright-Isak's multiple categories of behavioural motivations (discussed

above, section 2.1.2), but we also have to pay attention to the context which is thought to shape individual preferences and motives (Perry, 2000). Perry and Vandenabeelen (2008) argue that a PSM-theory must involve three components: 'institutions', 'self-concept' and its constituting 'identities' (mediator), and 'self-regulation'. For a schematic overview see Figure 3. All three components will be discussed in more detail in the following sections.

Institutions can be understood as social structures infused with values and rules which are embedded across societies (Perry & Vandenabeele, 2008). In particular, we can think of institutions as schools, families and churches and all kinds of organizational institution (Moynihan & Pendey, 2007), like as hospitals. They play a crucial role in public service motivated behaviour, as will be explained in the next section. Through the process of internalization, they guide, identify, and force behaviour in several ways (Perry & Vandenabeele, 2008). (For more information about this process, see section 2.1.4). In addition, institutions have an impact on individual preferences, too (March & Olsen, 1989). In other words, institutions can be understood as social structures that shape peoples' values and guide them about appropriate behaviour (Perry & Vandenabeele, 2008). Even shorter, they form identities.

Next to institutions, the *self-concept* plays a major and mediating role in the theory of PSM. The self-concept can be defined as an overreaching empirical sense people have about themselves (Perry & Vandenabeele, 2008). Even though research by Piliavin et al. (2002) suggests that variations in the self-concept have motivational consequences concerning public services, the 'self' remains a complex and a fluid concept which is hard to measure (Perry & Vandenabeele, 2008). For this reason, the concept *identities* is used which can be considered as the building blocks of the 'self' with the advantage that an identity is 'a typified self at a stage in the life course situated in a context of organizational relationships' (Stone & Farberman, 1970) as cited in Weigert at al. (1986, p.53). (In contrast, the self is a general sense the 'self'). According to Ryan and Deci (2003), each individual has multiple identities which are more or less well assimilated to the self. Depending on a fit or misfit between institutional values and identities, institutional values are conveyed (or internalized) to individual identities

which, in turn, are the basis for self-regulated behaviour (Perry & Vandenabeele, 2008). Therefore, identities can be considered as a key concept, mediating the relationship between institutions and individual behaviour (Perry & Vandenabeele, 2008).

The last component of PSM is a *behavioural* component. Self-regulation is thought to be the general framework in which individuals develop public service motivated behaviour (Perry & Vandenabeele, 2008). This implies that people make self-generated choices which are not necessarily triggered by a prior event (Locke, 1991).

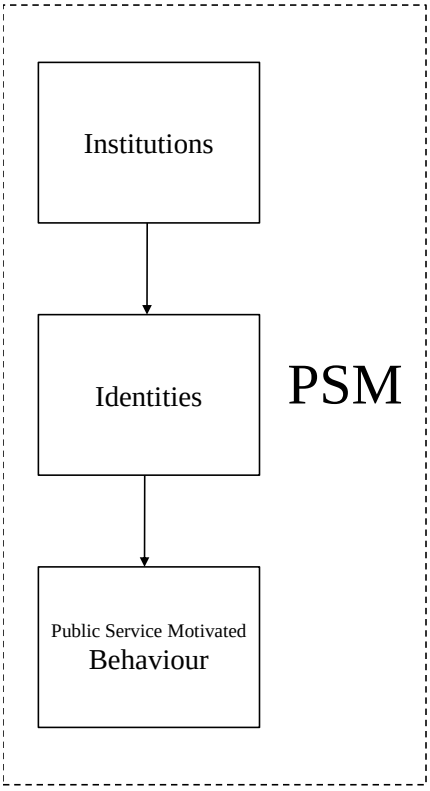

Figure 3 Model of the Concept PSM

In summary, PSM is a very complex concept. It has a multiple motivational basis, five different dimensions and is influenced by three components. Therefore, the likelihood that PSM will occur depends on: the presence institutional values, the

publicness of individual identities and its alignment with institutional values, and finally, the degree of self-regulation.

2.1.4 The Construct PSM Explained: Self-Determination Theory

The question remains how the components of PSM (institutions, identities and behaviour) are interrelated. Put it differently, how are the organizational influences (or institutions) transmitted to identities and public service motivated behaviour?

Gagne and Deci's (2005) *self-determination theory* (SDT), a highly developed self-regulation framework, which is supported by a growing body of evidence (Deci & Ryan, 2000), provides a plausible and detailed explanation for the phenomenon of PSM at an individual level of analysis.

According to Gagne and Deci (2005), institutional values are transmitted to individuals by the process of internalization which depends on the satisfaction of three basic psychological needs (autonomy, competence, and relatedness).

More in detail, internalization can be defined as taking in values and attitudes, to varying degrees, in such a way that the external regulation of behaviour is transferred into an internal regulation and therefore does not longer require the presence of external contingency (Gagne & Deci, 2005). According to Ryan and Deci (2005), identities are formed through the process of internalization of values, which in turn, are the origin of motivation. (Notice, socialization is the same process as internalization from a social environmental point of view (Deci & Ryan, 2005)).

In short, identities, the source of our motivation, are formed through internalization of institutional values, a process depending on the satisfaction of three psychological basic needs.

Gagne and Deci (2005) distinguish four types of extrinsic motivation on a controlled-to-autonomous continuum to describe the degree to which external regulations can be internalized (external regulation, introjected regulation, identified regulation, and intergraded regulation). In other words, the enactment of identities can be of different origin (Ryan and Deci, 2005).

Autonomous motivation involves acting with a sense of volition and having the freedom of choice (Gagne & Deci, 2005). Intrinsic motivation is prototypically autonomous motivation, because it is characterized by doing an activity wholly volitionally while finding it interesting (Ryan & Deci, 2000). Integrated regulation is the most autonomous and self-regulated type of extrinsic motivation.

However, it is important to keep in mind that integrated motivation and intrinsic motivation are not the same. While intrinsic motivation stems from an activity's own interest value, integrated motivation is still a type of extrinsic motivation, because it stems from its instrumental values or utility (Ryan & Deci, 2005). However, what they do have in common is that both are the origin of fully autonomous and self-regulated behaviour (Ryan & Deci, 2005).

In contrast to autonomous motivation, there is controlled motivation. This type of motivation involves some kind of pressure and the sense of being forced to engage in certain activity (Gagne & Deci, 2005). The use of extrinsic rewards (or regulations) is one example of controlled motivation (Deci, 1971). External regulated motivation is the least self-determined and most controlled version of extrinsic motivation. Extrinsic motivation is less desirable because strong control and contingencies impair the process of internalization (Ryan & Deci, 2005). Consequentially, the incentives to stay motivated are unlikely to be maintained and transferred.

Relating this elaboration to the institutional context of a hospital, we can conclude that nurses who have wholly integrated regulations are more likely to provide unrestricted health care. Next to this, they might appreciate the importance of doing uninteresting activities, even without supervision and lack of external contingency, because they have developed a sense that their profession and behaviours are integrated parts of who they are (Gagne & Deci, 2005). These are kinds of behaviours we are familiar with from intrinsically motivated individuals.

There is some evidence that PSM might be addressed as an integrated type of motivation.

Koestner et al. (1996) found that integrated ways of embracing political concerns yield not only different experiences, but also different qualities of political involvement.

In detail, they found (1996) that identification with political issues was associated with seeking more actively out information regarding relevant political decisions and having a more complex, and more differentiated viewpoint of politics in general (Ryan & Deci, 2005). In contrast, people whose political involvement was based on intojected forms of internalization was characterised by vulnerability to persuasion and reliance on other's opinions (Ryan & Deci, 2008).

Next to this, Vandenabeelen (2008b) was able to demonstrate a positive relationship between PSM and the relative autonomy index (RAI), an indicator of the degree to which an employee feels self-determined and autonomous. Remember, identified motivation is the most autonomous form of motivation. Therefore, in turn, a relationship between identified- and public service motivation might be suspected. Put it differently, PSM might be a form of identified motivation.

As mentioned above, the SDT contends that both; intrinsic motivation and the internalization of integrated- and identified regulation require the satisfaction of three basic psychological needs autonomy, competence, and relatedness (Gagne & Deci, 2005).

According to Ryan and Deci (2006), the need for *autonomy* can be defined as the desire of individuals to be the origin and source of their own behaviour. The need for *relatedness* refers to the feeling of being connected with significant others, cared for, or that one belongs in a given milieu (Vloachopoulos & Michailidou, 2006). The need for *competence* refers to one's tendency to interact effectively with ones environment and to look for opportunities to exercise and express one's capabilities (Ryan & La Guardia, 2000).

Being aware of the basic psychological needs is very important because they provide a basis for predicting which aspects of the organization will support intrinsic motivation and enhance the internationalization of extrinsic motivation (Gange & Deci, 2005). As a logical consequence, organizations which provide an organisational context

which enhance the employees' feeling of relatedness, autonomy and competence might increase the level of PSM within the organisation. For this reason, HR policies, in order to facilitate PSM, need to be arranged so that employees feel a sense of autonomy, competence and relatedness. This idea is supported by Perry et al. (2008) who contents that an environment, which fosters the basic needs of employees, enhances the internalization of organizational values. Put it differently, unless their needs are not satisfied, no public service motivated behaviour will occur autonomously.

Next to the satisfaction of basic psychological needs, public values must be present in and propagated by institutions, because they are thought to influence the presence of PSM by the process of internalization (Vandenableelen 2008a, Perry & Vandenableelen, 2008). Remember, PSM is defined as 'the beliefs, values, and attitudes that go beyond self interest (...) and that motivate individuals to act accordingly whenever appropriate' (Vandenabeelen, 2007, p.547). Logically, when no public values are present in organization, no values can be internalized. Consequentially no public service motivated behaviour is likely to occur.

In summary, SDT provides a plausible explanation for the interrelatedness of the three components of PSM (institutions, identities, and self-regulated behaviour). Identities, which are the source of motivation, are formed by internalization, a process which varies with regard to a controlled-to-autonomous continuum, and which depends on the satisfaction of the three basic psychological needs and the presence of public values in organizations.

2.2.0 Organizational Institutions: High Performance Work Systems

In this study, organizational institutions will be examined by the concept of *high performance work systems* (HPWS) which can be regarded as a set of HR practices that help to translate organizational goals to employees needs through eliciting employees' commitment and involvement with organization goals so that peoples' behaviours is self-regulated rather than controlled by pressure and sanctions (Walton, 1985; Wood & Albanese, 1995).

Although no consensus has yet been reached regarding these practices (Guest, 1997; Wright & Gardener, 2003), in this study it is considered that HPWS consist out of seven dimensions: 1) selection , 2) training, 3) performance-based pay , 4) say in decision-making process, 5) teamwork, 6) organizational communication, and 7) job characteristics. In line with several scholars (Beltrán-Martín, Roca-Puig, Escring-Tena & Bou-Llusar, 200; Guthrie, Flood, Lieu, MacCurtain, 2009, Pfeffer, 1998, Snell, & Dean, 1992; Wright, Moynihan & Gardener, 2003), Harley et al. (2007) consider these dimensions to represent the major areas of HPWS. They can be found in a large body of empirical research. For a schematic overview see Table 2. In the next section, each dimension will be discussed separately.

Table 2 Comparison of Different HPWS Constructs

Snell & Dean, 1992	Pfeffer, 1998	Wright, Gardner & Moynihan, 2003	Harley, Allen & Sargent, 2007	Beltrán-Martín, Roca-Puig, Escrig-Tena, & Bou-Llusar, 2008
Selective staffing	Selective hiring of new personnel	Selection	Selection en staffing	Selective staffing
Comprehensive training	Extensive training	Training	Training	Comprehensive training
Equitable reward systems , Developmental performance appraisal	Comparatively high compensation contingent on organizational performance	Pay for performance	Performance based pay	Performance-based pay, Equitable reward systems, Developmental performance appraisal
	Decentralization of decision making	Participation	Say in decisions	
	Self managing teams		Teamwork	
	Extensive sharing of financial and performance information throughout the organization		Organizational Communication	
			Job characteristics	
	Reduced status distinctions and barriers			
	Employment security			

2.2.1 Dimensions of High Performance Work Systems

The dimension *say in decision making* is a process in which influence is shared among individuals who are otherwise hierarchically unequal (Wagner, 1994). Through participatory management practices the involvement of managers and their subordinates in information-processing decision-making or problem-solving endeavors is balanced (Wagner, 1994). In the case of nursing staff, for instance, you can think of linking the introduction of new nursing methods to the opinion of a commonly elected group of

employees. Because of the nurses' practical insight and expertise, coupling new nursing methods to employee's opinions might come along with a benefit for the hospitals.

The dimension *job characteristics* can be described effectively by the use of five task dimensions, namely: 'skill variety', 'task identity', 'task significance', 'feedback significance' and employee's 'autonomy' with which he or she is able to perform the job (Martel & Dupuis, 2006). In other words, if employees are autonomous to chose among different tasks, if they can identify with the tasks they are doing and experience their work as meaningful, and if they receive feedback concerning performed efforts their score on the dimension 'job characteristics' is expected to be high. As Hulin (1971) put it, non-routine, non-repetitive jobs are likely to serve as positive motivators of behaviour. In the case of hospitals, we can think of organizing work in such a way that nurses are able to accompany the whole recovery process of patients. By doing so, employees are likely to experience their work as meaningful (task significance) since their efforts easily can be seen in the health of a patient.

In conformity with Beardwell and Claydon (2007), *training* can be addressed as a set of activities which reacts to the present needs and is focused on the instructor. In other words, under the guidance of an instructor, skills, competencies, know-how and tacit knowledge are developed that are necessary to be able to handle challenging situations at the workplace. Most common types of training methods are on-the-job trainings, external conferences, workshops and events, formal education courses and instructor-led training delivered off-the –job (Beardwell & Claydon, 2007). Through the process of training, the employee is able to increase his or her performance which, in turn, benefits the employer.

Katzenbach and Smith (1993) define *teams* as a small number of people with complementary skills who are committed to a common purpose, performance goals, and approach for which they hold themselves mutually accountable' (p.45). According to the authors (1993), a team's performance includes both, individual results and what they call 'collective' effort. The sum of both outperforms achievements of individuals. For this reason, teams are a benefit for organizations.

In line with Beardwell and Claydon (2007), the *selection and staffing* process is concerned with identifying, attracting and choosing suitable people to meet an organisation's human resource requirements. In detail, recruitment is the process of

identifying that the organization needs to employ someone up to the point that applications have arrived at the organizations. Selection concerns the next step; choosing from the applicants the best person to fill the position. Organizations can choose from a wide variety of selection methods, such as informal personal contacts, formal contacts, advertising, and external existence including job centres, careers devices and employment agencies (Beardwell & Claydon, 2007), which aim to attract to 'right' candidates. Examples of selection techniques are assessment centres, (un-) structured interviews, work samples, ability test, personality en intelligence test, etc. (Beardwell & Claydon, 2007). These techniques aim to predict the skills, competencies and attitudes of job candidates. No single technique is perfect; however choosing the right set of techniques increases the probability that the 'right' employee is selected which will benefit the organization the most (Beardwell & Claydon, 2007).

The dimension *performance based pay* refers to a payment system, usually based on a developed appraisal system, which in some way relates rewards either to organizational or individual performance in order to motivate (most of the time) white collar-workers (Beardwell & Claydon, 2007). Performance based pay is based on the principles of the relative price effects, a traditional economic idea, which holds that individuals who are confronted with changed relative prices for available opportunities will quickly adjust to them (Frey, 2000). Practically this means, performance based pay will increase the effort of workers. In case of hospital settings, bonuses for nursing staff could be based on patients' feedback concerning the quality of the performed job during the stay at the hospital. Coupling performance to qualitative values increases the risk that the patients' health is not in the centre of attention anymore. Instead, employees might try to outperform the value, no matter the costs.

Organizational communication can be addressed as the degree to which employees are kept up-to-date about changes in their organisation (Myers & Myers, 1982). An example of organizational communication in hospitals setting (which can easily applied to any other institutions) is the in time information of employees about what happens if a worker in a higher position leaves the organization, so that employees know whom to turn to. Otherwise, the organization runs the risk of disorder. Employees

are likely to feel ignored and become unmotivated, which in turn, might have a negative impact on performance.

2.3.0 Integrating HPWS, Basic Psychological Needs, and PSM

In this section, all variables under study (HPWS, basic psychological needs, and PSM) will be integrated. Moreover, it will be demonstrated how the self-determination theory can be used to explain the link between the organizational institutions.

In the first place, all dimensions of HPWS and PSM are related. Secondly HPWS and the basic psychological needs are linked. Thirdly, the needs are related to PSM. Finally, all variables are integrated within one theoretical model.

2.3.1 Relating HPWS to PSM

Already in 1997, Perry explicitly calls for a study which investigates the impact of organizations on PSM. According to Perry and Vandenabeelen (2008), organizations can be regarded as value loaded institutions, which form identities through the process of internalization, which are in turn the origin of motivation (Ryan & Deci, 2005). Theat means, without organizations, nothing can be internalized and PSM is unlikely to occur. There are few authors who tested organizational influences on PSM empirically. Mayonihan and Pandey (2007) were able to demonstrate that ‘hierarchical authority’, ‘red tape’, and ‘reform orientation’ are related to PSM. Camilleri (2007) was able to proof a positive relationship between PSM and ‘employee-leader-relationship’ and ‘job characteristics’ and Vandenableelen (2008b) focused on the impact of ‘leadership’ and ‘peer-worker’s values’ on PSM. Moreover, these empirical findings are supported by the theoretical work of Leisink (2004), who claims that personnel politics may assist the creation of conditions at work that help to regenerate PSM.

This study extends the understanding of institutions that shape PSM by included organizational institutions, addressed as HPWS, in the analysis. Remember, HPWS can be regarded as HR practices that align employees’ commitment and involvement to organizational goals. Hence a positive correlation between commitment and motivation can be assumed (Meyer, Becker & Vandenberghe, 2004), the first hypothesis is:

H1a: 'Say in decision making' is positively related to PSM.

H1b: 'Job characteristics' is positively related to PSM.

H1c: 'Training' is positively related to PSM.

H1d: 'Teamwork' is positively related to PSM.

H1e: 'Selection and staffing' is positively related to PSM.

H1f: 'Performance based pay' is positively related to PSM.

H1g: 'Organizational commitment' is positively related to PSM.

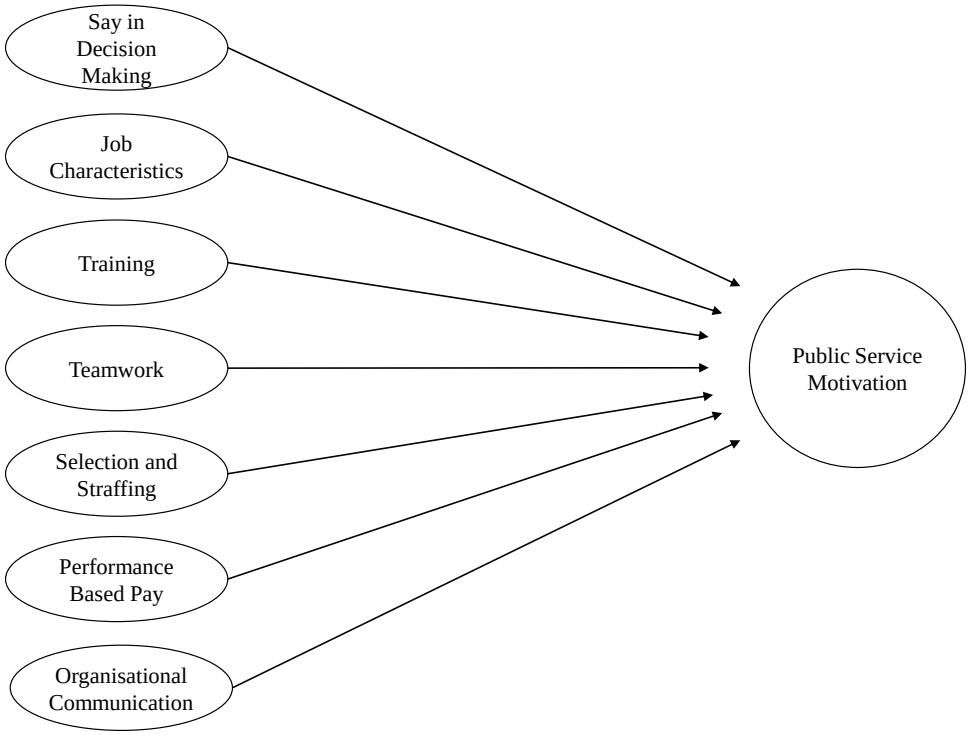

Figure 4 Relationship between HPWS and PSM

2.3.2 Relating Dimensions of HPWS to the three Basic Psychological Needs

In conformity with Latham et al. (1994), 'say in of decision-making' is positively related to the concept self- efficacy, which can be described as the belief that one is capable to realize a certain goal. As mentioned earlier, the basic psychological need 'competence' refers to one's tendency to look for opportunities to exercise and express one's capabilities (Ryan & La Guardia, 2000). The belief that one is capable of realizing a goal is a crucial aspect of competence. Without this trust, the need for competence cannot be fulfilled. For this reason, next to self-efficacy, participation in decision-making is also related to competence because it stimulates the feelings of employees that their opinions matter and that others believes in their capability of accomplishing certain goals (Ray, Turkel & Marino, 2002). In other words, employees who have the possibility to participate in the process of decision-making are more likely to feel competent and empowered.

Next to this, a relationship between decision making and the psychological need 'autonomy' can be expected, too. When individuals are engaged in 'decision- making', they have more control over work processes and policies. This makes it easier for them to live up to the desire to be the source of their own behavior. This findings lead to the second hypotheses:

H2a: The dimension 'say in decision-making' is positively related to the basic psychological need 'competence'.

H2b: The dimension 'say in decision-making' is positively related to the basic psychological need 'autonomy'.

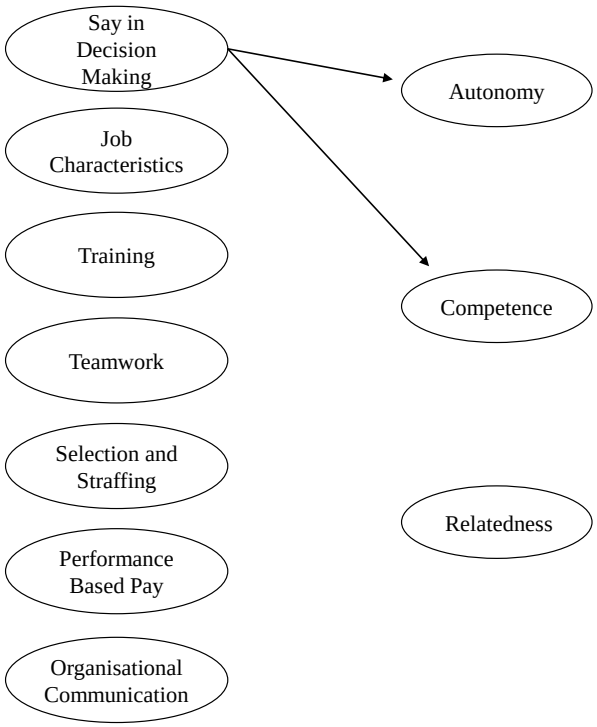

Figure 5a Relationship between HPWS and Basic Psychological Needs

The dimension ‘job characteristics’ is thought to be related to two basic psychological needs. A high score on the dimension ‘job characteristic’ implies that workers experience a high level of task significance and feedback on their job (Martel & Dupuis, 2006). The need for ‘competence’ refers to individuals’ desire to manage their job successfully and to look for opportunities to exercise and demonstrate their capabilities (Vloachopoulos & Michailidou, 2006). Therefore, a relationship between ‘job characteristics’ and ‘competence’ can be expected.

In addition, a high score on job characteristics also implies that the employee’s job contents a high degree of autonomy (Martel & Dupuis, 2006). This leads us to the next hypotheses:

H3a: The dimension 'job characteristics' is positively related to the basic psychological need 'autonomy'.

H3b: The dimension 'job characteristics' is positively related to the basic psychological need 'competence.

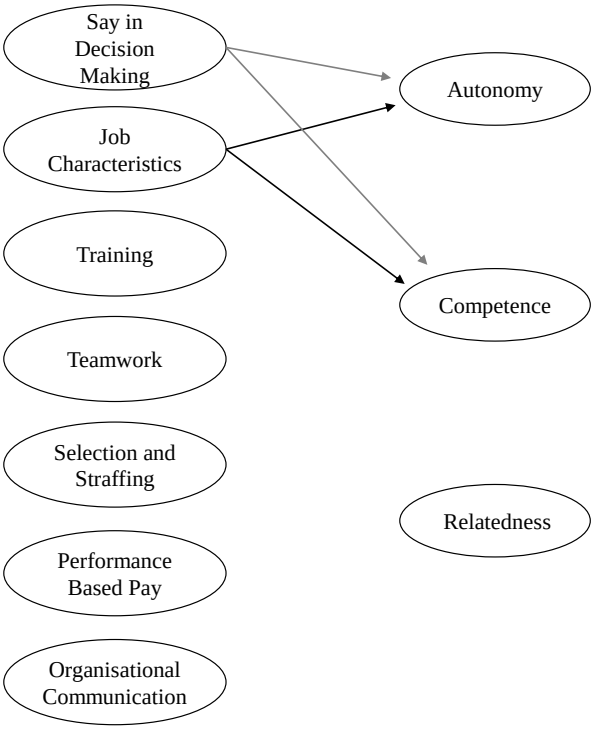

Figure 5b Relationship between HPWS and Basic Psychological Needs

The HPWS' dimension 'training' presents a set of activities which react to the present needs of the work setting by developing skills, competencies, know-how and tacit knowledge (Beardwell & Claydon, 2007). Through the positive effects of training, employees are more likely to handle the demands of challenging situations successfully. In turn, their need for 'competence' is more likely to be fulfilled. Consequently the fifth hypothesis is as followed:

H4: The dimension 'training' is positively related to the basic psychological need 'competence'.

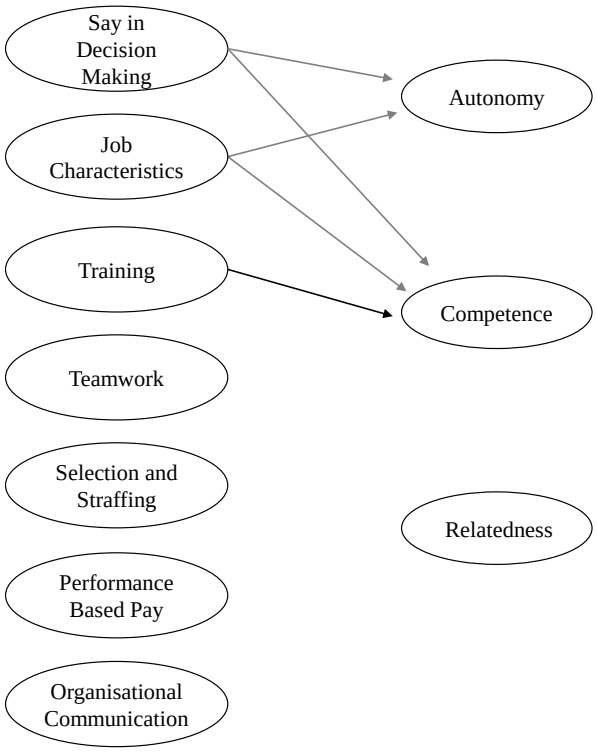

Figure 5c Relationship between HPWS and Basic Psychological Needs

According to Gillian (2009) 'teamwork' can be seen as providing employees with a sense of autonomy, empowerment, and sense of relatedness to one another (Gillian, 2009). More in detail, teams are characterized by a flat structure and shared responsibilities. Therefore, teamwork stimulates 'autonomy' by empowering employees through increased control over their work (Gillian, 2009). Teamwork and 'competence' are related because there is some evidence that teamwork results in employees being able to make better use of their skills and developing commitment and positive feelings towards their work (Gillian, 2009).

Finally, in conformity with Gillian (2009), teamwork has also been viewed as providing the potential for the development of positive peer relations as teamwork stimulates interdependency. Colleagues are more likely to care for one another and to make commitments. These findings lead to the following hypotheses.

H5a: The dimension 'teamwork' is positively related to the basic psychological need 'relatedness'.

H5b: The dimension 'teamwork' is positively related to the basic psychological need 'autonomy'.

H5c: The dimension 'teamwork' is positively related to the basic psychological need 'competence'.

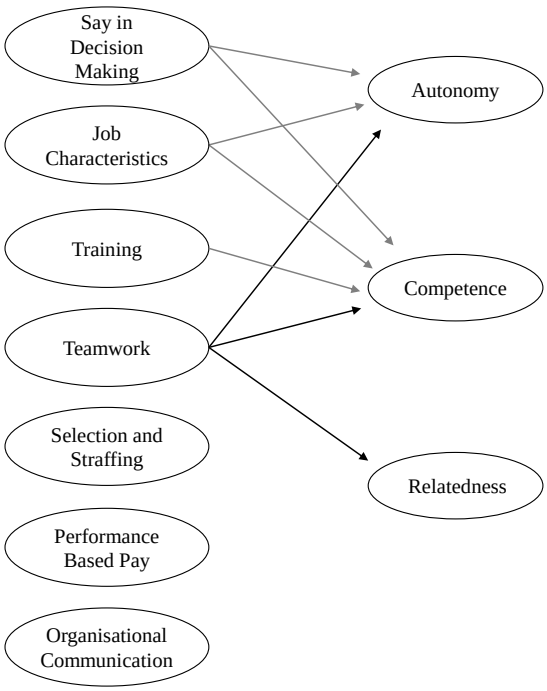

Figure 5d Relationship between HPWS and Basic Psychological Needs

As mentioned above (section 2.2.1), choosing the 'right' set of selection and staffing techniques and methods helps to realize an optimal match between job candidate and open position. Appropriate selection methods help to predict the skills, attitudes and competencies which are needed to do a job successfully (Beardwell & Claydon, 2007). In other words, it becomes more likely that capable individuals are selected for open positions. In turn, employees' need for 'competence' is more likely to be satisfied, because they are able to handle the new position successfully.

Next to this, recruitment tools also help to determine if a potential employee will fit into an organization from a more social point of view. For instance, work samples, personality tests, and interviews can give a good overall impression of the characteristics of the job candidate and make it easier to decide whether he or she will fit into the organizational culture and climate Beardwell & Claydon, 2007). Consequentially, the employee is more likely to develop a sense of 'relatedness'. This leads to the following hypotheses:

H6a: The dimension 'selection and staffing' is positively related to the basic psychological need 'competences'.

H6b: The dimension 'selection and staffing' is positively related to the basic psychological need 'relatedness'

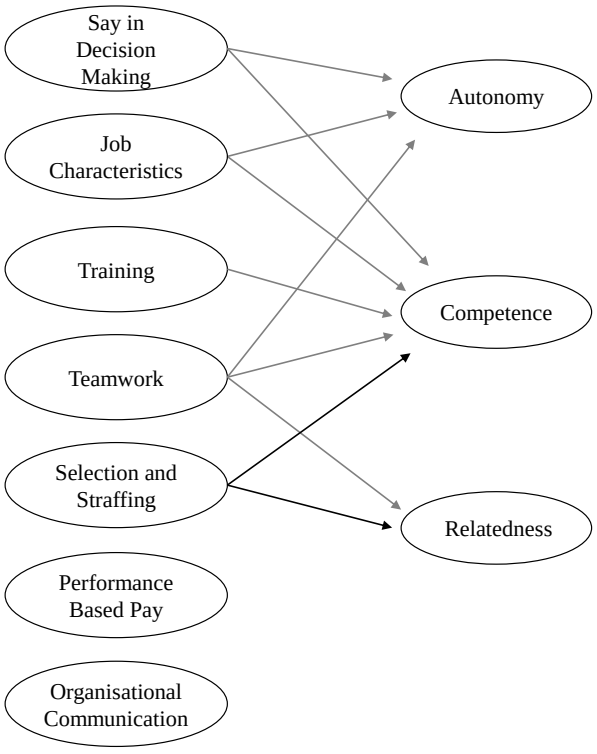

Figure 5e Relationship between HPWS and Basic Psychological Needs

As mentioned above (section 2.2.1), 'performance based pay' is based on the economic idea of 'relative price effects', which holds that individuals adjust their efforts to the relative prices for available opportunities (Frey, 2000). According to Frey (2000), there are certain conditions, which facilitate the positive effect of external interventions on intrinsic motivation (crowding in) (Frey, 2000). In detail, we can think of situations, where team-based structures are provided, that support the acknowledgement of one's own obligations and responsibilities as being valued by friends; where employees have the possibility to be part of the decision-making process, because co-determination facilitates the adoption of decisions as their own; and where workers are able to see their personal efforts back in the 'final product or service' (Frey, 2002). In other words, if HPWS' dimensions 'say in decision- making', 'teamwork', 'job characteristics', and 'performance based pay' are combined, the greatest benefit for the organization can be expected. Remember, the basic psychological need 'competence' refers to one's tendency to look for opportunities to express one's capabilities (Ryan & La Guardia, 2000). If employees receive extra pay for showing their capabilities, they are more likely to feel competent. This leads to the following hypothesis:

H7: The dimension 'performance based-pay' is related to the three basic psychological 'competence'.

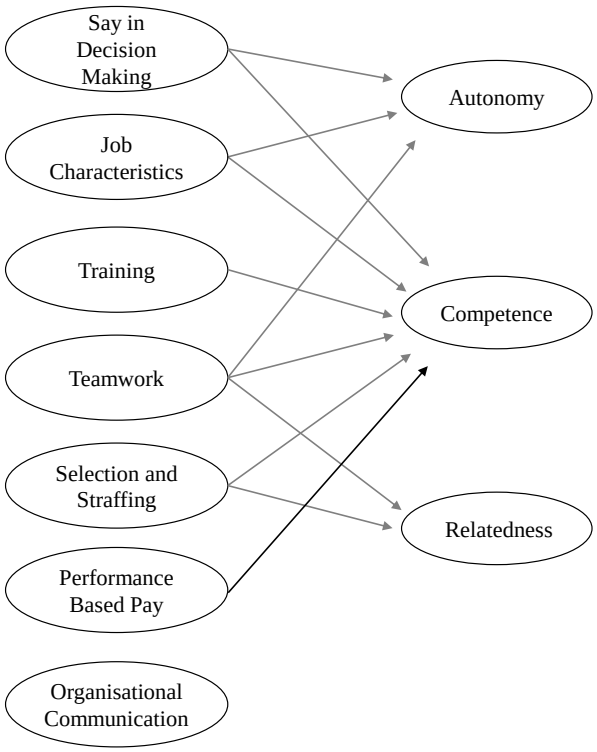

Figure 5f Relationship between HPWS and Basic Psychological Needs

Finally, 'organizational communication', as discussed, can be addressed as the degree to which employees are kept up-to-date about changes in the organisation (Myers & Myers, 1982). According to Visser (2000), communication strengthens employees' organizational identification by giving workers the feeling that they have been include in the development of shared meanings through interaction and participation. Other research has supported this argument by suggesting that the frequency with which individuals communicate with each other leads to intensified identification, because organizational communication stimulates the sense of active participation within an organization (Huff, Sproull & Kiesler, 1989). In turn, identification implies some degree of belongingness, loyalty, and shared characteristics (Lee, 1971; Bhattacharya, Rao & Glynn, 1995). For this reason, a positive relationship between 'organizational communication', and 'relatedness' is expected. This leads to the following hypothesis.

H8: The dimension 'organizational communication' is positively related to the basic psychological need 'relatedness'.

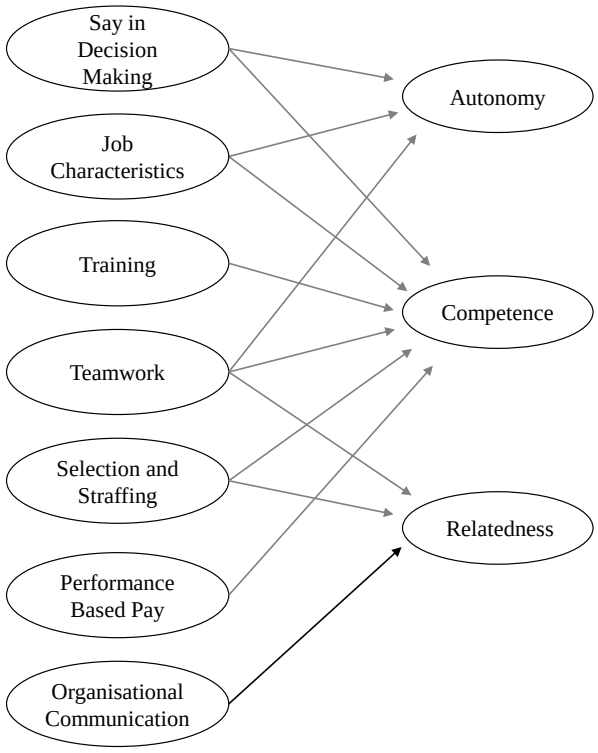

Figure 5g Relationship between HPWS and Basic Psychological Needs

In summary, it is expected that: 'say in decision making' is linked to 'autonomy' and 'competence'; 'job characteristics' are positively related to 'autonomy' and 'competence'; 'training' is positively related to 'competence'; 'teamwork' is positively related to 'autonomy', 'competence', and 'relatedness'; 'selecting and staffing' is positively related to 'competence' and 'relatedness'; 'performance based pay' is related to 'competence'; and finally, 'organizational communication' is positively related to 'relatedness'.

2.3.3 Integrating Basic Psychological Needs in the Relationship between HPWS and PSM

Gagne's et al. (2005) self-determination theory is used to explain the relationship between the three psychological basic needs (autonomy, relatedness, and competence) and PSM (for detailed descriptions go back to section 2.4.1). According to Vandenabeele (2008b), the three basic psychological needs are presented within each individual and they can be considered as the base of the internalization process of values. This means, the degree to which organizational values are internalized successfully depends on the organisation's responsiveness to employee's needs. Put it differently, if an environment does not foster the basic needs of individuals, no values can be internalized, no identities are formed, and in turn, no public service motivated behaviour is likely to occur.

According to Vlachopoulos and Michailidou (2006), the three basic psychological needs vary with respect to the relative importance in their prediction of motivated work behaviour. The origin of these differences can be found in the nature of work (Vlachopoulos & Michailidou, 2006). In conformity with the authors (2006), in cases where physical and athletic work elements dominate, competence is expected to correlate the most with motivational consequences, because progress, with respect to the end result, can be identified directly. If work has to be done in isolation, relatedness is expected to correlate the least (Vlachopoulos & Michailidou, 2006). In this study, teamwork is required and physical work elements do not dominate. For this reason, it is assumed that the relative importance in the prediction of PSM does not vary significantly among the three basic psychological needs. This leads to the following hypothesises:

H9a: The basic psychological need 'relatedness' and PSM are positively related.

H9b: The basic psychological need 'autonomy' and PSM are positively related.

H9c: The basic psychological need 'competence' and PSM are positively related.

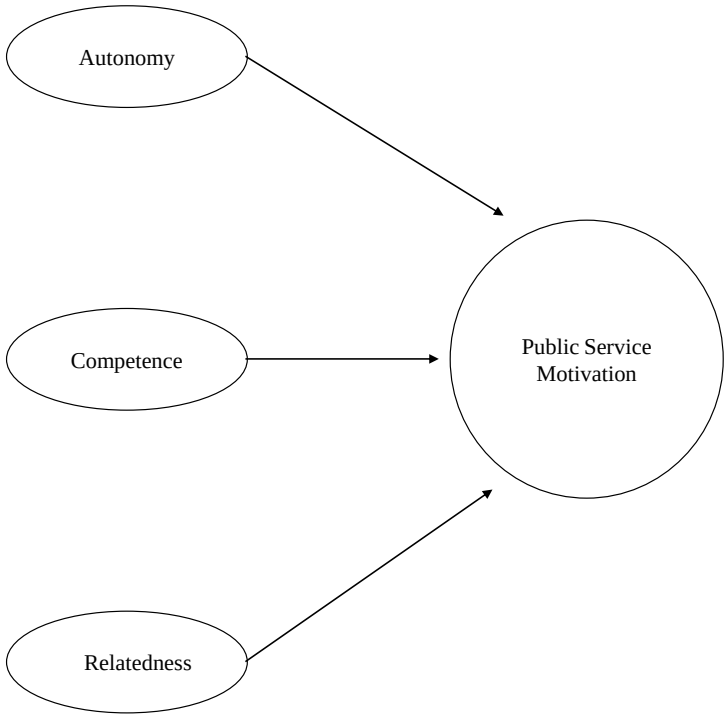

Figure 6 Relationship between Basic Psychological Needs and PSM

As theorized above, different dimensions of the HPWS are related to different basic psychological needs of employees (for further information, go back to section 2.3.2) and the psychological basic needs are the foundation of motivated work behaviour (Gagne & Deci, 2005). To the degree that organisations respond to employee's basic needs, the public service values will be better internalized within individuals' public service identity (Vandenabeele, 2008b). Consequentially, the three psychological basic needs are expected to become a mediator between certain dimensions of HPWS and PSM. Put it in statistical terms, there might be no causal relationship between HPWS (independent variable) and PSM (depended variable), but HPWS is the foundation of the three psychological basic needs, which in turn, causes PSM. In order to investigate the

mediating effect of autonomy, relatedness and competence, the following hypothesizes are tested:

H10a: The relation between 'say in decision making' and PSM is mediated by 'autonomy' and 'competence'.

H10b: The relation between 'job characteristics' and PSM is mediated by 'autonomy' and 'competence'.

H10c: The relation between 'training' PSM is mediated by 'competence'.

H10d: The relation between 'teamwork' PSM is mediated by 'competence' 'autonomy', and relatedness'.

H10e: The relation between 'selective staffing' and PSM is mediated by 'competence', and relatedness'.

H10f: The relation between 'performance based pay' and PSM is mediated by 'competence

H10g: The relation between 'organizational communication' and PSM is mediated by relatedness'

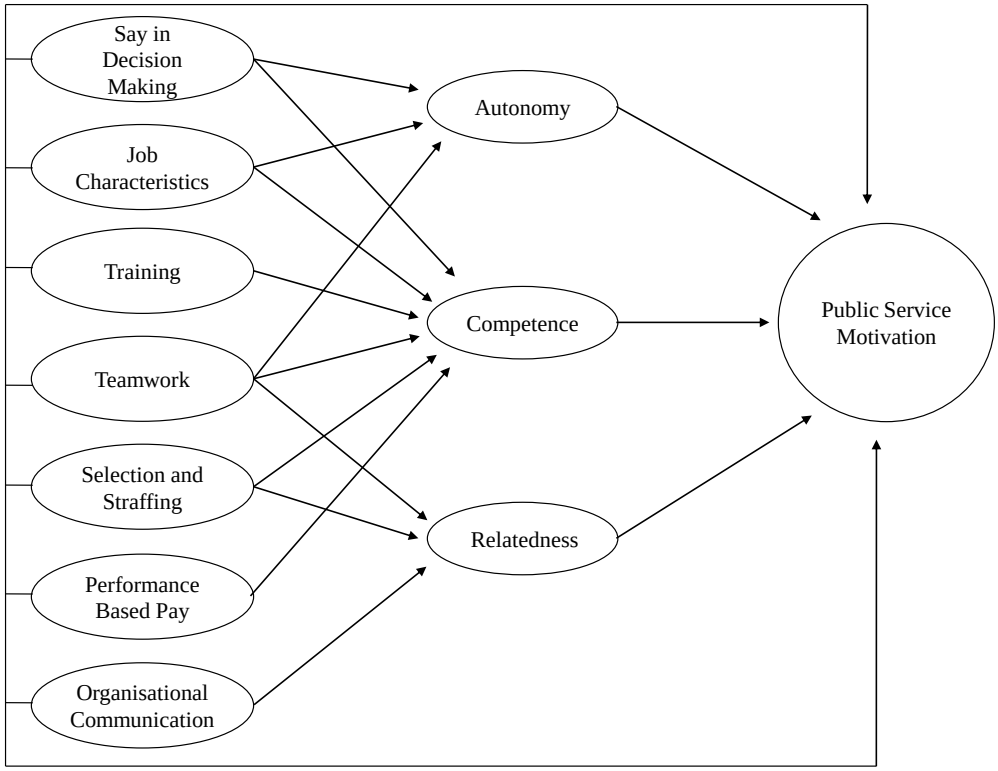

Figure 7 HPWS, Basic Psychological Needs and PSM Integrated

2.4.0 PSM in Public and Private Organizations

In this section, the predisposition: 'the level of PSM is higher in private than in public organizations' is addressed. First, relevant literature concerning this topic in general is reviewed. Secondly, formal criteria of distinctions between public and private organizations are summarized. In the third place, these criteria are applied to the hospitals under study.

2.4.1 Literature Review of PSM in Public and Private Organizations

A bulk of empirical evidence supports the existence of different levels of PSM in public compared to private organizations (Rainey, 1982, Wittmer, 1991, Houston, 2000, Mayonihan & Pandey, 2007). Three possible explanations for this phenomenon will be summarized.

One frequently discussed cause for this finding is 'self selection' (Mann, 2006; Lewis & Frank 2002). According to Perry and Wise (1990), individuals who experience a high sense of public interest are more likely to posses and prefer public service carriers over private ones. In line with this, there is a large body of research that claims that individuals working in the public sector value intrinsic incentives more than individuals employed in the private market where financial rewards and performance based pay is more common. (Boyne, 2002; Mayonihan & Pandey, 2007; Rainy, 1982; Wittmer 1991; Leisink, 2004).

In contrast, you could think of 'internalization' as a reason for the unbalanced level of PSM in the different types of organizations. Once entered a public organization, public values, which are more present in public organizations (Noordengraaf & Teeuw, 2003), are internalized. In this case, not employees scoring high on PSM are attracted to public organizations, but the level of PSM increases after the individuals have entered the organization.

Finally, 'retention' might explain the different levels of PSM in private and public hospitals. Naff and Crum (1999) found some evidence that employees with low scores on

PSM are more likely to consider leaving the public institution they are working for within a few years. This idea is supported by Mann (2006) who refers to a study which demonstrates an indirect relationship between PSM and retention.

However, only one study can be found which compares the levels of PSM in public, private and non-profit organizations empirically (Mann, 2006). Following the author (2006), the level of PSM is highest in the non-profit sector. Next to this, there is no literature which investigates the distinctive level of PSM in private and public organization in one single sector where potentially influencing variables, such as the sociohistorical context (which can be regarded as the level and kind of education and the membership of a certain professional society (Moynihan & Pandey, 2007)), are the same.

2.4.2 Criteria of Distinctions between Public and Private Organizations

Boyne (2002) contends that the main conventional distinction between public and private organizations can be addressed by an organization's degree of publicness on the three dimensions 'ownership', 'funding' and 'control'. This idea is supported by Bozeman (1987) and Rainey (2003). Antonsen and Jorgensen (1997) add a fourth dimension to the construct publicness, namely 'public values'.

Examples of *public values* are due process, democratic accountability, production of public goods, and social welfare (Antonsen and Jorgensen, 1997). According to Antonsen and Jorgensen (1997), it is not the tasks performed by the organization which determine whether an organization is public, but the values the organization feels obligated to that matter. The criterion 'identity', given by Noordengraaf and Teeuw (2003), knows similarities with Antonsens' 'public values'. According to Noordegraaf and Teeuw (2003), 'identity' refers to the pursuit of sustainable objectives. While private organizations are primarily interested in short-term profit maximizing, public organizations focus on long-term strategies and the contribution to the public good (Noordegraaf & Teeuw, 2003).

The dimension *ownership* holds that private firms are owned by entrepreneurs or stakeholder. In contrast, public organizations are owned collectively by members of political communities (Boyne, 2002).

As the name suggests, *funding* concerns the financing of firms. Public firms are largely funded by taxation, whereas private organizations draw their liquidities directly from customers (Boyne, 2002).

Finally, public organizations typically are subject to political, rather than economic *control* (Boyne, 2002). Consequentially, public firms face multiple sources of authorities that are potentially conflicting (Boyne, 2002). This issue plays a minor role in private organizations, which are controlled by economic authority managed by one (team of) CEO.

However, no organization is wholly public or private (Bozeman, 1987, Antonsen & Jorgensen, 1997; Rainey, 2003). Instead, the distinction between public and private organization needs to be arrayed around the four dimensions of publicness. In other words, the distinction between public and private is not that clear, but needs to be addressed as a continuum on the dimension ownership, funding, control and public values. That means, when public authority is absent, public funding and common ownership counts for nothing (Boyne, 2002). In fact, privately owned and funded organizations may be even more public than organizations of the governmental sector, when they comply with state policies, such as health and safety regulations, rather than public agencies that ignore the public values (Boyne, 2002).

For instance, a growing number of private organizations can be recognized which integrate public value into their business plan, just as their public counter partners do. However, in contrast to public organizations, private organizations often use public values for instrumental reasons (Garria & Mele, 2004). Examples from the business world are: the Krombacher's rainforest project in central Africa which aims to reduce wildlife crime and illegal timber trade. In addition, it supports the equipment and schooling of rangers and the set up of an ecological forestry (Krombacher, 2010); the Pampers' project which focuses on the expatriation of tetanus among newborn (Pampers,

2010); and Shell's voluntarily published developmental goals which commit them (among others) to support the eradication of extreme hunger and poverty, the achievement of universal primary education, and the promotion of gender equity (Shell, 2010).

2.4.3 Criteria of Publicness Applied to Public and Private Hospitals

In this section, the criteria of publicness are applied to the two types of hospital under study in order to determine whether they are really that different on their degree of publicness.

Ownership: In Germany, the total number of hospitals shrinks while the number of private hospitals increases (RWI, 2009). Public hospitals are owned commonly by the federal states (Bundesländer) of Germany and the federal government. In contrast, private hospitals are wholly or partly owned by private shareholders or shareholder's cooperations (RWI, 2009).

Funding: In Germany, the federal states are responsible for the provision of adequate, economic and highly productive health care for all inhabitants of their governmental district (RWI, 2009). In order to be able to guarantee comprehensive healthcare, each federal state has an official plan of hospital management (Krankenhausplan). Since the introduction of the hospital funding law (Krankenhausfinanzierungsgesetz, KFG) in June 29th 1972, the funding of German hospitals is based on a dual system. This system is characterized by separating large investments costs from running expenses. The latter is covered by healthcare insurances; the former by the federal states of Germany (Figure. 8) (§ 4 KHG).

The fees for work performed are pegged by the federal government (RWI, 2009). As a logical consequence, the German healthcare system is highly regulated. Through the dictation of the tax level, the government is able to regulate the flow of investments in the medical sector. The reason for the KFG was the protection of the liquidity (RWI, 2009). Only hospitals which are included in the plan of hospital management and which can prove contracts of collaboration with medical insurance providers receive federal

funding. Those hospitals are called ‘Plankrankenhäuser’. The largest percentages of the total number of hospitals are Plankrankenhäuser. In 2006, 1 549 out of 1817 (85 %) were Plankrankenhäuser. According to a study by the Rheinisch-Westfälische Institut für Wirtschaftsforschung (RWI, 2009), private hospital receive less governmental funding than public hospitals do. Next to this, private hospitals are required to pay taxes. In contrast, public hospitals are most of the time exempted from tax (RWI, 2009).

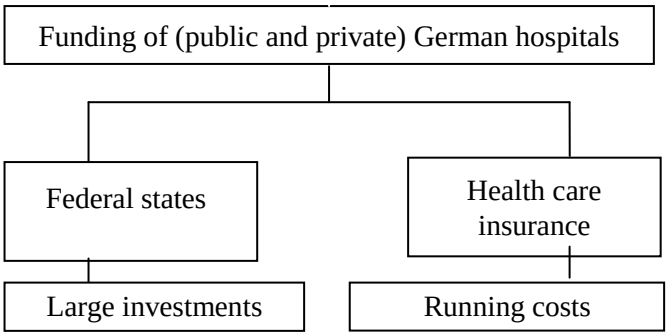

Figure 8 The Dual Funding System of German Hospitals

C*ontrol:* In Germany, both types of hospitals are controlled by the public healthcare department. The legal basis of the control is the infection protection act (*Infektionsschutzgesetz*, IfSG), the legal act of hospitals (Krankenhaugesetz), and the legal act of the public health department (Gesundheitsamt). It is the task of the public health department to inspect both types of hospital regarding their compliance with legal regulations. Next to this, the public health department is responsible for checking complaints and making arrangements if necessary.

As mentioned above, fees for work performed are regulated by the federal government for both types of hospital (RWI, 2009). That means, fees cannot be raised by individual hospitals and economic authority of both types of hospitals is limited to cost-reduction.

Public values: in order to determine whether both types of hospitals adhere to public sector values, the recent annual reports of the hospitals under study are analysed and compared. Based upon this study, it can be concluded that both types of hospitals primarily aim to satisfy patients by providing high quality healthcare services and high standard safety regulations. Secondly, both, public and private hospitals are concerned about their employees. All hospitals under study carry out employee attitude surveys on a regular basis and guarantee good working conditions. In addition, they commit themselves to advance our current level of medical knowledge by investing in research and teaching. Next to this, both types of hospitals engage in projects which support economic efficiency, innovation and sustainable usage of common resources. Finally, only the private hospitals under study explicitly names selective growth and the strengthening of its market position as a strategic objective. (For a schematic overview see Figure 9).

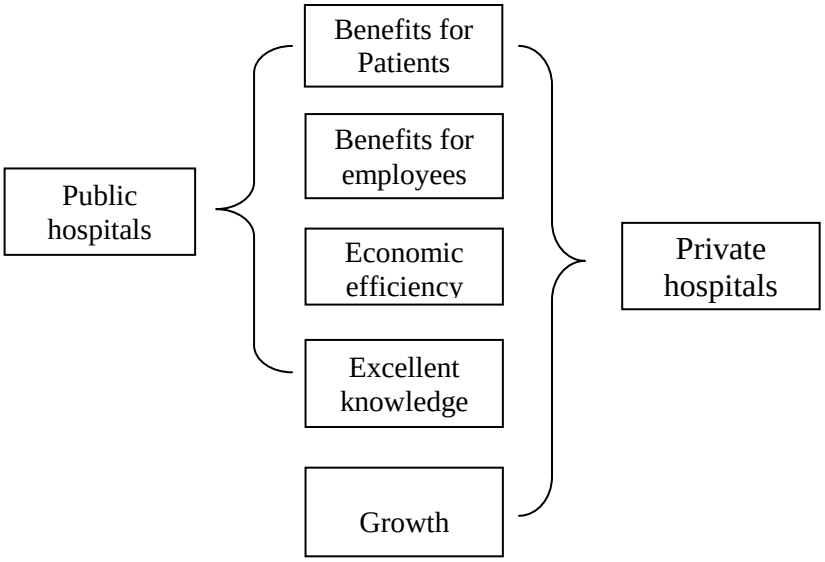

Figure 9 Objectives of Private and Public Hospitals under Study

Summing up, private and public hospitals just differ on one of four dimensions of publicness. Both types of hospitals are strictly controlled by the public healthcare department and they do not differ with regard to their political and economic authority. Moreover, the funding systems of both types of hospitals are similar. Both agencies receive funds from the federal states for investments while the operating costs are covered by healthcare insurances. (The only exception, private hospital possess a certain amount of own capital, too.) Concerning public values, no fundamental difference can be obtained from the annual reports either. Both types of hospitals focus on the provision of high quality healthcare for everyone, good working conditions, investments in research and teaching and sustainable usage of rare resources. For this reason, the difference between private and public hospital regarding their degree of publicness is limited to the dimension ownership. Private hospitals are (to a varying degree) in private hand, whereas public hospitals are commonly owned. According to me, the discrepancies between private and public hospitals are so subtle that no differences in the level of PSM can be expected. These findings lead to the following hypothesis:

H11: The level of PSM in public hospitals is not significantly higher than the level of PSM in private counter partners.

3.0 Methods

In this section, a short description of the quantitative data's gathering-process and the sample will be given. Next to this the sample's representativeness will be analysed and a discussion of the measurement instruments and the statistical techniques are provided.

3.1.0 Procedure and Sample

Throughout the whole study, the data was collected by the standardized paper – pen questionnaires which were adopted from literature (for further information see section 3.2). Throughout the whole study, all questionnaires were given to nursing staff only and not to HR executives or managers. This is because the construct to be measured should be the HR practices actually implemented in the hospitals rather than the HR policies written down formally but not carried out necessarily (Gerhard, Wright & McMahn, 2000). Reports by nurses are more likely to be reliable, because for HR executive reports to be accurate, the person in charge must have much more detailed information available (Gerhard, Wright & McMahan, 2000). In contrast to the stated policy, practices are much more variable (across work groups, individuals, supervisors etc.) and less observable (unless the executive engages in monitoring on a regular basis) (Gerhard,Wright & McMahan, 2000). For this reason, using nursing staff as a sample is a valid and efficient way to figure out the HR practices.

Seven private and three public hospitals were addressed in order to ask for their participation in this study (first via formal letters and one week later via phone call and personal contacts). Notable was that public institutions were much more likely to participate. Two out of three public hospitals took part in this study (60%). In contrast, only two out of seven private agencies were willing to participate (29 %). This leaves us

with two privately and two publicly owned hospitals were more than 2000 nurse were employed. This implies a total response rate of 40 % on an organizational basis.

The public hospitals will be referred to as A1 and A2; the private counter partners as B1 and B2. The four hospitals differed regarding their size and function. Hospital A1 was a medium sized hospital which offered primary and secondary healthcare. A2 was by far the largest hospital under observation. It offered specialized consultative care in many different areas of medical expertise. The private hospitals B1and B2 were the smallest ones. B1 offered (acute) primary health care and B2 was a private hospital specialized in internal medicine, specifically, cardiology. (For further information see Appendix Table A3a.)

In hospitals A1, B1 and B2 the data's gathering process was similar. The questionnaires were personally handed out to every nurse who attended the daily shift that day. Ten days later, the questionnaires were recollected.

For hospital B2, the process of data collection was slightly different due to its enormous size and large number of areas of medical expertise. 600 questionnaires were personally given to the head of wards with the request to disperse them among the staff. Moreover, the data was not collected by the researcher, but the participating nursing staff was asked to send the filled in questionnaires back by mail.

The percentage of addressed nurses per hospital varied from 40% to 80% due to logistical reasons. In total, more than 850 nurses were addressed (see Appendix Table A3a).

The rate of returned questionnaires was about the same for hospital A1 and B1 (approximately 50%). For hospital B2 it was 35 %. The response rate for hospital A2 was lowest (22%) (This phenomenon might be explained by the different processes of data collection). Overall, the response rate of the returned questionnaire was 35 %. That means, 251 nurses participated in this study. (Again see Appendix Table A3a for more information).

Summing up, the data has been collected in two publicly and two privately owned hospitals where more than 2000 nurses were employed. In total, 850 nurses received a

paper-pen-based questionnaire. The rate of response varied from 22% to 52%. This yielded a total response of 251 respondents.

3.1.1 Representativeness of the sample

Results of the χ^2 test, which are based on the comparison of information obtained from Germany's Federal Statistical Office and the sample's actual control variables, demonstrated that the sample's gender ratio was representative for the German nursing sector in general. In this sample, the male- female ratio was 22:78 compared to 18:82 in the rest of Germany ($P(\chi^2 > X^2) = 6,63 > 0.95$). (For more information see appendix Table A3b.) The same is applicable for the type of working contract (full-time vs. part-time employed). In this sample, 64.4 % of the nursing staff was full-time employed compared to 28. 2 % part-timers ($P(\chi^2 > X^2) = 6.63 > 1,01$). (For more information see appendix Table A3c.) Unfortunately, no information regarding the question whether the sample's average age, working positions and education is representative as well could be obtained from Germany's Federal Statistical Office. On average, most participants were between 25 and 55 years old (73.7 %). They had a degree in nursing schooling (79. 3 %) and they were employed as 'regular' nurses (65. 4 %). This means, they had specialization or management tasks. (For more information see appendix Table A3c)

3.2.0 Measurements

Three standardized instruments were used to measure the variables included in this empirical survey research. Composite reliability, a measurement that indicates the overall reliability of a collection of heterogeneous but similar items, is applied to the PSM scale and the scale of the basic psychological needs because it is known for its robustness. In contrast to Cronbach's alphas, composite reliability is based on standardized factor loadings and error variances.

3.2.1 Measuring Public Service Motivation: Original Scale by Perry (1996)

In this study an extended version of Perry's measurement scale (1996) is used which is shorter (18 items) and more suitable for the European market (for further

information go back to section 2.1.2). Each dimension is measured by a number of different items using a 5-point Likert-scale (ranging from agree to disagree). The composite reliability was good acceptable. Only 'democratic governance' was on the low boundary with .50. For more information see Table 3. (In addition the full correlation matrix of this measurement instrument can be found in Appendix Table A2b.)

3.2.2 Measuring Autonomy, Competence and Relatedness

In order to measure the three basic psychological needs, a measurement adopted form of Vlachopoulos and Michailidoi (2006)' scale is used, which assess the perception of the degree to which the innate needs for autonomy, competence and relatedness are satisfied among nursing stuff. The instrument originally consists out of 12 items which are subdivided into the three dimensions autonomy, relatedness, and belongingness. Because the pilot test of the translated measurement scale showed very low reliability on two of the 12 original items, they were excluded. Consequentially each dimension is measured by four or three different items using a 5-point Likert-scale (ranging from agree to disagree). After deleting item 2 of the dimension 'competence', the composite reliability was very good acceptable for all dimensions: autonomy .53; competence .75; relatedness .84. For more information about this measurement instrument, see Appendix Table A1a. (In addition, the full correlation matrix of this measurement instrument can be found in Appendix Table A2a.)

3.2.3 Measuring High Performance Work Systems

In this study, the 17 item measurement instrument of Harley et al. (2007) is used, because this questionnaire is especially designed to assess the perception of staff working in hospitals concerning the presence of HPWS. Nevertheless, small changes had to be made in the German translation in order to satisfy the requests of the participating hospital's management teams. The scale is made of seven dimensions: 1) selection, 2) training, 3) performance-based pay, 4) say in decision-making process, 5) teamwork, 6) organizational communication, and 7) job characteristics. Each dimension is measured by a number of items (varying from 1 items to 5 items) which are addressed by a 5-point Likert-scale (ranging from agree to disagree). The Cornbach's alphas have proved good

reliability of the dimensions. Selection and staffing (2 items), α = .61; training (1 items), performance-based pay (5 items), α = .66; say in decision-making process (1 items); teamwork (5 items), α = .74; organizational communication (1 items); job characteristics (2 items), α = .85. More information about this scale is provided in the Appendix (Table A1b)

3.3.0 Analyses

In this section a number of statistical techniques are discussed which are used throughout this study.

Firstly, *Pearson's product-moment correlation coefficient* assesses the degree of linear relationship between two variables ranking from -1 to +1 (Kutner, Nachtsheimer, Netter & William, 2005). This correlation coefficient is used because its bias has proofed to be small when n is large (Kutner, Nachtsheimer, Netter & William, 2005). For a complete overview of the correlations of all variables under study, see Table 4.

Secondly, *confirmatory factor Analysis (CFA),* a special form of factor analysis which is used to assess whether an applied measurement instrument has a good fit with its underlying theoretical model (Bryant & Yarnold, 1994), is also applied in this study.

In this study, a CFA was performed with LISREL 8.71 in order to analyze whether the observed variables load on the theoretical dimensions of the concepts 'PSM' and 'basic needs' as described in the theoretical framework.

Factor analysis models involving ordinal variables (as it was the case in this study) are often estimated by using a 3-stage procedure where the last two stages try to obtain parameter estimates by the least square from the sample's polychromic correlations (Forero, Maydeu-Olivares, Gallardo-Pujol, 2009). For this reason, a polychromic correlation matrix and an asymptotic covariance weight matrix were calculated. These tests are the basis for a diagonally weighted least square estimation (DWLS), which is particularly appropriate for the estimation of ordinal variables because of its distribution

free character (Vandenabeele, 2008a). In addition, it works for relatively small samples (Vandenabeele, 2008a).

In line with Vandenableele (2008a), χ^2 was not used to employ the measurement model because the statistic is known to inflate for samples N > 200. In other words, the χ^2 index is a too powerful statistical tool which exaggerates very small effect sizes. Another index which must be treated with caution is the 'root mean squared error of approximation' (RMSEA) because of its tendency to overreject true- population models at small sample size (Hu & Bentler, 1999). (Keeping in mind, the sample is N = 251. That means, it is larger than N > 200, but not for a long time jet, a large sample of a couple of thousand participants.)

For this reason, the model's fit was estimated by three different fit indices, namely: the goodness of fit index (GFI), the comparative fit index (CFI) and the normed fit indicator (NFI). The GFI is an example of an absolute fit indicator which asses how well a priori model reproduces the sample date (Hu & Bentler, 1999). In contrast, the NFI belongs to the group of incremental fit indicators which measure the proportionate improvement in a fit by comparing a target model with a more restricted baseline model (Hu & Bentler, 1999).

Linear regression analysis, a statistical tool which answers questions about the dependence of a response variable on one or more predictors was used to test the model under study. More specifically, regression analysis helps to understand how the value of the depended variable changes due to variations in one of the independent variable while the other independent variables are held constant. This made it possible to discover which predictors are important and estimate the impact of the changing predictor or treatment on the value of the response (Weisberg, 2005).

The mediating effect of the three basic psychological needs was addressed by applying a hierarchical linear regression analysis to the rules of Baron and Kennedy (1986).This rules state that mediation is shown when: a) there are significant correlations between the independent variable (HPWS) and the presumed mediator (basic needs) (*path a);* b) the presumed mediator (basic needs) affects the dependent variable (PSM) (*path b)*; c) differences in the independent variable (HPWS) are significantly related to

differences in the dependent variable (PSM) *(path c)*; and finally, when path a) and b) are controlled, the previously significant relation between independent (HPWS) and dependent variable (PSM) vanishes.

However, according to Vandenabeele (2009), it is unlikely to achieve complete mediation, because of the complexity of the social reality. He (2009) suggests that the last condition (condition d) can be relaxed to a significant reduction instead of complete elimination of the effect size. In this case we can speak of 'partial mediation' (Vandenabeele, 2009). In order to test partial mediation the Sobel test applied. This test calculates partial mediation by multiplying the β of a mediator (path a) with the β of the dependent variable (path b) and dividing them by their SD. A z-score <1.95 can be considered as partial mediation (Vandenabeele, 2009).

In the fourth place, the *Chi² test*, a wildly used test which determines whether there is a significant difference between the expected frequencies and the observed frequencies in one or more categories (Moore & McCabe, 2005), is used in this study to investigate whether the control variables of the sample (demographical and sociohistorical background) are representative for the German nursing sector in general. Data, obtained from Germany's Federal Statistical Office, is used as reference point or stated differently, as expected frequencies.

Finally, the *t-test* is applied which compares the actual differences between the means of two variables in relation to the variation in the dataset (Kutner, Nachtsheimer, Netter & William, 2005). In this context, the t-test was used in order to investigate whether the level of PSM was significantly higher in one of the two types of hospitals under study. One of the advantages of the t-test is its robustness and reliability even when applied to a relatively small number of cases (Kutner, Nachtsheimer, Netter & William, 2005).

4.0 Results

In this section, the results are discussed based on statistical techniques. In the first place, the validity of the measurement instruments is tested by applying a confirmatory factor analysis. In order to answer research question 1, the descriptive statistics of the variables were analysed. In the second place the viability of the measurement instruments are tested by applying a confirmatory factor analyse. Thirdly, results of the regression analyses are given which provide answer to research question 2. Finally, results of the t-test answer research question 3.

4.1.0 Test of Measurements: Confirmatory Factor Analysis

According to Hu and Bentler (1999), CFI and GFI indicators above .95 and a NFT indicator above .90 might be interpreted as a demonstrating a good model fit. This was the case for theoretical model of PSM (see Table 3). However, the fit indicator CFI of the basic needs is below the excepted threshold of, 95. For this reason, item 5, which a rendered non-significant factor loading, was excluded from further analysis. As a result, all fit-indices increased (see Table 3). Put it differently, the measurements for PSM and basic needs seem to have a good fit with their underlying theoretical models. This fact is a crucial factor for the following up analysis, because it is demonstrates that the measurements are highly valid.

Table 3 Fit Statistics Calibration Models

	CFI	GFI	NFI
PSM (full model)	.950	.960	.911
Basic needs (full model)	.948	.959	.911
Basic needs (item 5 excluded)	.971	.975	.941
Cut off criteria	< .95	<. 95	<. 90

4.2.0 Descriptive Statistics

The analysis of Table 4 demonstrates that the average score of the PSM items is rather high. Only 7 items score below 3, the scale's centre, and the average score on the items is 3.25. All items are good well distributed varying from .80 up to 1.15. The average standard division is .83.

From Table 4, it can be obtained that the different dimensions of PSM vary regarding their average score. The dimensions 'self-sacrifice' (3.99), 'public interest' (3.94), and 'compassion' (3.64) score highest; in contrast, the dimensions 'attraction to politics' and 'democratic governance' score below the average of 3.25.

The scores on the basic psychological needs measurement instruments are even higher than the average PSM score varying from 3.29 up to 3.96 ('autonomy' 3.29, 'competence' 3.59, and 'relatedness' 3.96 relatedness).

Regarding HPWS, Table 5 presents a different picture, with is characterised by great differences between the average scores of the dimensions. 'Training' scores as low as 2.60, while 'job characteristics' reach a score of 4.01. Noticeable is also the high standard deviation of the dimension 'selection and staffing' which reaches a score of 2.01.

Table 4 Items and Composite Reliability, SD and Means of Self-Reported PSM Scale

Vandenabeelen, 2008b		Composite Reliability	SD	Mean
	Public Interest	.65		
PSM1	I voluntarily and unselfishly contribute to my community		.975	3.57
PSM2	Serving the public interest is an important drive in my daily like (at work or outside work)		.870	3.65
PSM3	Te me, serving the public interest is more important than helping individual persons		.907	3.21
PSM4	To me, before anything, goes civilians should think of society		.893	2.88
	Compassion	.75		
PSM5	To me, patriotism includes seeing to the welfare of others		1.038	2.70
PSM6	Fighting poverty is an important duty of the government		1.008	3.61
PSM7	I seldom think about the welfare of other people whom I do not know personally (l)		.890	1.94
PSM8	Without solidarity, our society is doomed to fall apart		.929	3.90
PSM9	To me, helping other people who are in trouble is very important		.806	3.86
	Attraction to politics	.69		
PSM10	Politics' is a dirty word (l)		1.006	3.06
PSM11	I do not care much about politicians (l)		1.140	2.86
	Self-Sacrifice	.68		
PSM12	Much of what I do is for a cause bigger than myself		1.065	3.31
PSM13	Making a difference in society means more to me than personal achievements		.989	3.08
PSM14	I feel people should give back to society more than that they get from it		.855	2.96
PSM15	I am prepared to make enormous sacrifices for the good of society		.933	2.61
	Democratic governance	.50		
PSM16	Everybody is entitled to a good service, even if costs a lot of money		.886	2.91
PSM17	Even in case of major disaster, public servants account for all cost they make		.886	3.30
PSM18	It is important that public servants account for all costs they make		1.105	3.11

(l) Reversed coding

Table 5 Means, Standard Deviations, and Pearson's Correlation Coefficients for all Variables under Study

Variable	Mean	(SD)	Correlations															
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Basic needs																		
1. Autonomy	3.29	.63	1															
2. Competence °	3.59	.60	.244**	1														
3. Relatedness	3.96	.83	.035	.109	1													
High performance work systems																		
4. Job characteristics	4.01	.85	.167**	.175**	.171**	1												
5. Organizational communication	3.49	.98	.058	.019	.167**	.178**	1											
6. Performance based pay	2.70	.74	.051	.006	.197**	-.018	.155*	1										
7. Say in Decision making	2.74		.130*	.059	.118	.020	.277**	.159*	1									
8. Selection and staffing	3.45	2.08	.060	.094	.120	.105	.052	.101	.027	1								
9. Teamwork	3.78	1.04	-.025	.143*	.418**	.222**	189**	.106	.118	.108	1							
10. Training	2.69	1.18	.175**	.069	.272**	.155*	.235**	.266**	188**	.142	.130	1						
11. Public Service Motivation	3.25	.83	.235**	.250**	.309**	.213**	.120	.150*	170**	.034	.152*	.206**	1					
12. Attraction to politics	3.04	.88	.045	.084	.061	.71	.070	-.021	.029	.007	.046	117	.376**	1				
13. Compassion	3.62	.74	.191**	.344**	.307**	.220**	.104	.095	.123	-.006	.167*	.146*	.792**	.105	1			
14. Democratic governance	3.18	.70	.137*	.161*	.224**	.071	.060	.120	.085	.014	.110	.201**	.702**	.125	.490**	1		
15. Public Interest	3.94	.90	.195**	.246**	.208**	.126*	.097	.087	.115	.046	.124	.124	.754**	256**	.447**	.419**	1	
16. Self-Sacrifice	3.99	.93	.209**	.105*	.217**	.162*	.138	.163**	.204**	.014	.088	.132*	.781**	.070	.507**	.417**	.551**	1

° item 2 deleted
* Correlation is significant at the 0.05 level (2-tailed)
** Correlation is significant at the 0.01 level (2-tailed)

4.3.0 Test of Hypothesises

In the following section, all hypothesises will be tested by the use of statistical techniques described in section 3.3.0.

4.3.1 Test of Correlations: Hypothesis 1 to 9

Table 5, provides evidence for *H1a, H1b, H1c, and H1d.* In other words, PSM is related to the four dimensions of HPWS: 'say in decision making', 'job characteristics', 'training', and 'teamwork'.

Next to this, the Table 5 supports *H2a* ('say in decision making' is related to 'autonomy'), *H3a/b* ('job characteristics' are related to 'autonomy' and 'competence'), *H5b/c* ('teamwork' is related to 'competence' and 'relatedness), and *H8* ('organizational communication' is related to 'relatedness'), Furthermore, four unexpected correlations were found, namely 'job characteristics' are related to 'relatedness'; 'training' is related to 'autonomy and relatedness'; and finally, 'performance based pay is related to 'relatedness'.

In addition, Table 5 provides evidence for *H9a/b/c*. That means, there is some evidence that all three basic psychological needs correlate with PSM. For a schematic overview of this correlations, see Figure 10 in the end of this section.

Additionally to the correlation analyses, regression analyses are carried out because of their predictive capabilities. Moreover, regressions analyses have the advantages that they help to demined which of the independent variables influence the dependent the most.

Table 6 provides evidence that 9 % (adj. R^2 .087) of the variation of PSM can be explained by variation in the independent variables (HPWS). In this relationship, the dimension 'job characteristics' plays the most important role (β .187).

Next to this, Table 6 shows that 21 % of 'relatedness's' variation can be explained by the HPWS dimensions 'training', 'teamwork', and 'performance based pay' (adj. R^2 .213'). In this case, 'training' and 'teamwork' have the most significant effect on 'relatedness' (teamwork's β. 344, training's β .183). In the case of two remaining basic psychological needs 'autonomy' and 'competence', 'job characteristics' predict variation

in the dependent variables best. ('Job characteristics' β for autonomy .196; 'job characteristics' β for competence .150)

Regarding the relationship between the basic psychological needs and PSM *(H9),* Table 6 provides adequate explanation for variation of PSM with an adjusted R^2 of .179. All three basic needs are have a significant impact on PSM (autonomy's β.189, competence's β.175, relatedness's β.283)**.**

Table 6 Regression Statistics for all Variables under Study

	PSM (path c)		PSM (path b)		Autonomy		Competence (path a)		Relatedness	
	β (B)	SE	β (B)	SE	β (B)	SE	β (B)	SE	β (B)	SE
Say in decision making	.118* (.824)	.453			120* (.193)	.104	.049 (.075)	.101	.017 (.036)	.126
Job Characteristics	.187*** (.880)	.305			196*** (.217)	.072	.150** (.158)	.069	.059 (.087)	.087
Training	.123* (.844)	.455			.139** (.221)	.106	.074 (.048)	.089	.183*** (.385)	.128
Teamwork	.071 (.187)	.169			-.100 (-.061)	.040	.111* .065	.038	.364*** (.296)	.048
Selection and staffing	-.108 (.247)	-.028			.038 (.034)	.058	.059 (.051)	.056	.029 (.035)	.070
Organizational Communication	-.049 (.006)	.550			-.020 (-.039)	.127	-.046 (-.084)	.124	.022 (.055)	.155
Performance based pay	.004 (.033)	.547			.023 (.012)	.033	032 (-.009)	-.019	.102* (.068)	.040
Autonomy			.189*** (.804)	.260						
Competence			.175** (.786)	.275						
Relatedness			.283*** (.920)	.193						
	F-model 4.214 R² .114 Adj. R² .087		F-model 17.116 R² .179 Adj. R² .168		F-model 3.086 R² .083 Adj. R² .056		F-model 1.846 R² .052 Adj. R² .023		F-model 10.470 R² .235 Adj. R² .213	

* Significant at the 0.1 level (2-tailed)
** Significant at the 0.05 level (2-tailed)
** Significant at the 0.01 level (2-tailed)

4.3.2 Test of Mediation Effect: Hypothesis 10

As recommended by Baron and Kenny (1986), next to the three regression analyses already performed in section 4.3.1 (go back to Table 6), a fourth regression analysis was carried out, which integrates the mediator variable in the relationship between independent (HPWS) and dependent Variable (PSM) in order to test for possible mediation effects.

Remember, from Table 6 can be obtained that 'job characteristics', 'say in decision making', and 'training' influence PSM significantly (path c). The other dimensions of HPWS do not have a significant effect on PSM. Therefore, they are excluded from any further mediation analysis. Moreover, Table 6 provides evidence that all three basic psychological are significantly related to PSM (path b). Thirdly, it can be observed that 'training' has a significant effect on 'relatedness' and 'autonomy'; 'say in decision making' on 'autonomy'; and finally, 'job characteristics' on 'autonomy ' and 'relatedness' (path a).

In step four of the mediation analysis, the effect of the independent variable ('job characteristics', 'say in decision making' and 'training') on the dependent variable (PSM) was tested again, but this time the mediators (the three basic psychological needs) are held constant in order to test the model sequentially (Table 7). It can be observed that the initially significant dimension 'training' is completely mediated by the psychological basic need relatedness. In other words, after including the basic need relatedness in the model, the relationship between training and PSM (path c) is no longer significant (see Table 7). Next to this, it can be observed that the initially strongly significant effects of the independent variables are reduced. For this reason, the Sobel test was applied to test for partial mediation.

Table 7 Regression Statistics for HPWS and PSM While the Mediator is Fixed

	PSM 1		PSM 2		PSM 3		PSM 4	
	β (B)	SE	β (B)	SE	β (B)	SE	β (B)	SE
Job Characteristics	.113** (.790)	.457	.163*** (.766)	.293	.141** (.662)	.291	.121** (.781)	.283
Training	. 192*** (.909)	.308	.129*** (.884)	.438	.130** (.890)	.430	.061 (.421)	.429
Say in decision making	.125** (.866)	.463	.119* (.834)	.483	.114** (.793)	.432	.112* (.567)	.283
Autonomy			.169 *** (.716)	.267	.126** (.556)	.271	.150** (.638)	.263
Competence					.178*** .801	.283	.160*** (.716)	.274
Relatedness							.239*** (.776)	.199
	F-model 8.349 R^2 .095 Adj. R^2 .083		F-model 8,145 R^2 .121 Adj. R^2 .106		F-model 8.318 R^2 .150 Adj. R^2 .132		F-model 10.359 R^2 .211 Adj. R^2 .191	

* Significant at the 0.1 level (2-tailed)
** Significant at the 0.05 level (2-tailed)
** Significant at the 0.01 level (2-tailed)

Beyond that, the analysis of Table 7 provides evidence that the model is truly hierarchical. The F-ratios for each step show that the model becomes better each time another dimension of HPWS and another basic psychological needs is included in the regression analysis. In the final model, 21 % of PSM can be explained by the variables mentioned above (adj. R^2 .191).

The results of the Sobel test are summarized in Table 8. From this table, it can be obtained that the relationship between 'job characteristics' and PSM is partially mediated by 'relatedness' ($z = 2.55$) and 'autonomy' ($z = 1.95$).

4.3.3 Testing Differences in Group's Mean Level of PSM: Hypothesis 11

In order to test *H11*, which claims that there is no significant difference in the level of PSM in public compared to private hospitals, in situations where the difference in degree of publicness are small and no risk of an influencing sociohistorical and demographical context exists, a T-test was processed.

But first, it needed to be tested whether the same sociohistorical and demographical context was presented in the two types of organizations. The results of the t-test supported the idea sciohisorical and demographical context in private hospitals do not differ significantly from the sciohisorical and demographical context in public ones (age: ((t (249) = .883, p < .378); gender: ((t (249) = -.208, p < .836); education: ((t (226) = .990, p < .323); position: (((t (238) = -.67, p < .947)). For more descriptive information about the sociohisotical and demographical context of private and public hospitals, see Appendix Table A3d)

In the second step, the t-test is used to compare the mean levels of PSM in public and private hospitals. The data found supports *H11* (t (239) = -.203, p < .855). In other words, there is no significant difference between the average levels of PSM in public hospitals compared to private counter partners. (The average score of PSM in public hospitals (N210) is 58.45; in private hospitals (N31), it is 58.10).

Table 8 Testing Mediation effects of the three Basic Needs (Sobel test)

	Autonomy					Competence					Relatedness				
	βa (B)	βb (B)	Sea	SEb	Z	βa (B)	βb (B)	SEa	SEb	Z	βa (B)	βb (B)	SEa	SEb	Z
Job characteristics	.173** (.156)	.804*** (.189)	.069	.260	1.95	.172** (.165)	.920*** (.283)	.165	.193	1.08	.504** (.239)	.786*** (.275)	.090	.275	2.55
Say in Decision making	.171* (.105)	.804*** (.189)	.102	.260	1.47	NA ˚	.920*** (.283)		.193		.186*** (.127)	.786*** (.275)	.113	.275	0.26
Training	.209** (.131)	.804*** (.189)	.102	.260	1.71	NA ˚	.920*** (.283)		.193		NA ˇ	.786*** (.275)		.275	

NA ˚= No significant path a (no mediation possible)
NAˇ= No significant path c (already fully mediated)

4.3.4 Summary of the Results

Summing up, the data does not support the theoretical model, presented in the theoretical framework, where the three basic psychological needs have been thought to completely mediate the relationship between HPWS and PSM. However, there still is evidence that PSM, HPWS, and the three basic psychological needs are interrelated. PSM is linked to the dimensions of HPWS 'job characteristics', 'say in decision making', 'training', 'teamwork', and to the three psychological basis needs 'competence', 'autonomy' and 'relatedness'. In addition, six HPWS dimensions are related to the three basic psychological needs. 'Relatedness' mediates the link between 'training' and 'PSM'. The same is partially true for 'autonomy and relatedness' which mediate the relationship between 'job characteristics' and PSM.

Regression analyses demonstrate that the dimensions 'job characteristics' and 'training' play the most important role in this complex relationship since they are of greatest predictive value for the dependent variables.

Finally, as expected, there is no evidence that the level of PSM differs in public hospitals compared to private ones.

For a schematic overview of these results, see Figure 10.

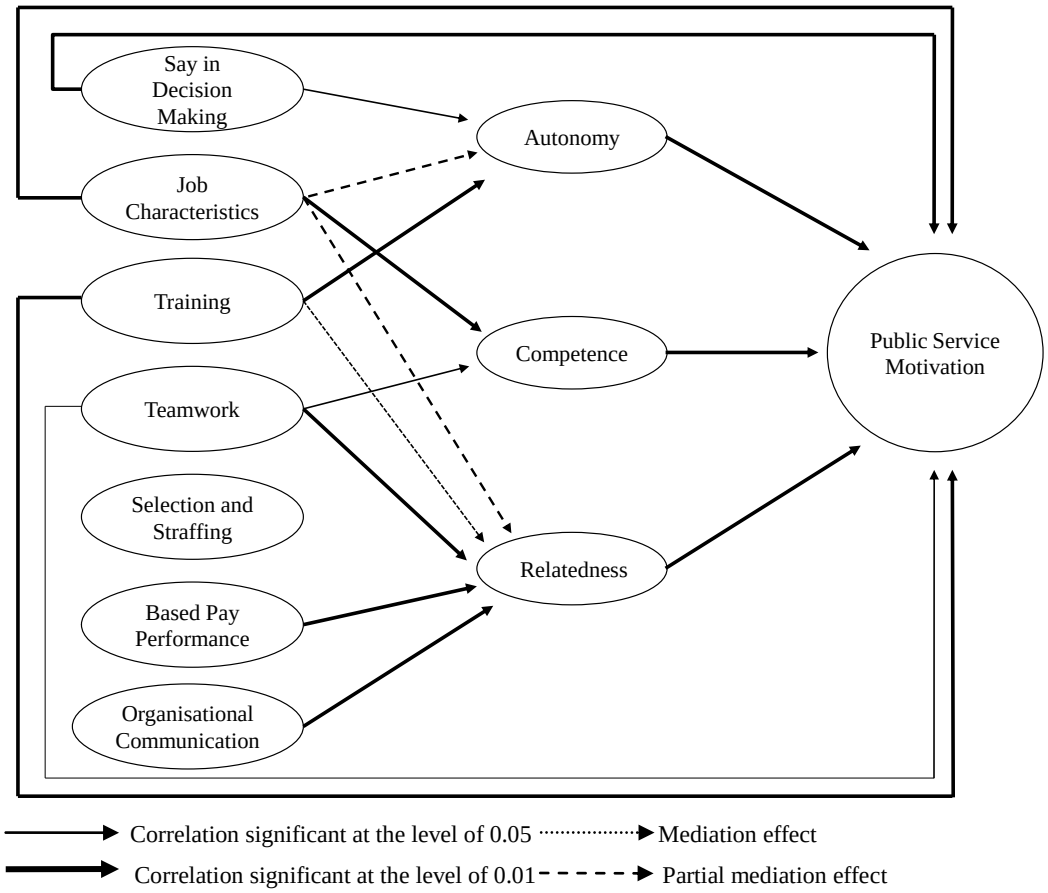

Figure 10 Schematic Review of the Results

5.0 Discussion and Conclusion

Based upon the data presented in this study, it can be concluded that PSM plays a role in German hospital settings among nurses, because its average scores is rather high. Compared to Flemish state civil servants of the central ministries, the average score of PSM is only slightly lower (For more information about this study, see Vandenabeelen 2008a).

Moreover, the conclusion can be drawn that the five different dimension of PSM are not equally presented among nurses (and therefore do not play equally important role), since the average scores of the dimensions 'self-sacrifice', 'public interest', and 'compassion' are higher than in the two remaining dimensions 'attraction to politics' and 'democratic governance'.

This phenomenon is not surprisingly, because the nursing profession does not involve any form of political authority. Before individuals enter the nursing profession, they are familiar with the fact that involvement in public policy making will not be one of their future tasks. In contrast, the nursing profession is known for the opportunity to help and care for others under exertive working conditions (think of night shifts) in return for little money and prestige. Consequently, individuals who want to get involved in public politics are unlikely to enter the nursing sector.

In addition, because hospital's primary tasks focus on heath provision, their organizational values are more likely to emphasise the importance of altruism and benevolence than values that push employees into political involvement. This fact might foster the high level of 'self-sacrifice', 'public interest', and 'compassion' through the process of internalization

Summing up, the mechanisms self-selection and internalization provide a good explanation for the dominance of the dimensions 'self-sacrifice', 'public interest', and 'compassion' in hospitals.

Next to this, even though the theoretical model explaining PSM cannot be verified as expected, based upon the data presented, one can conclude that this study provides empirical evidence for the importance of the organizational context in fostering PSM directly and via the satisfaction of the three basic psychological needs.

Empirical testing of the hypothesizes proofed that four of the seven dimensions of HPWS correlated positively with PSM *(H1a/b/c/d).* In addition, a positive relationship between all three basic psychological needs and PSM could be demonstrated *(H9a/b/c)* and a number of hypotheses regarding the relationship between HPWS and basic psychological needs could be verified as well *(H2a, H3a/b, H5b/c, H8*).

Therefore, it can be concluded that three concepts (HPWS, psychological basic needs, and PSM) are interrelated. This phenomenon supports the usability of the self-determination theory in explaining the transmission of the organizational context (institutions addressed as HPWS) to an individual level of behaviour (public service motivated behaviour) trough the process of internalization (the basis of the formation of identities) which depends on the satisfaction of the three basic psychological needs.

Because 'training' and 'job characteristics' were of the greatest predictive value, it can be concluded that these two play the most important role in the complex relationship between the organizational context and PSM.

Against expectations, the dimensions 'selection and staffing', 'performance based pay', and 'organizational communication' were not related to PSM *(H1e/f/g)*.

An explanation for the first missing correlation (the one between 'selection and staffing' and PSM, *H1e*) might lie in the high distribution of the variable 'selection and staffing'. It is notable that nurses in general answer the items of this dimension very differently. This raises the question whether the items can be interpreted differently, or whether there exist different staffing and selection techniques for nursing staff in different positions (think of specialized nurse and nurses with a management function). Both cases could have influenced the variability of the 'selection and staffing' dimension in a negative way, what in turn, might have adulterated the relationship between 'selection and staffing' and PSM.

The second missing correlation, the one between 'performance based pay' and PSM *(H1f)* might be explained by the idea that employees scoring high on PSM cannot

be motivated easily by monetary incentives (Perry & Wise, 1990; Camilleri, 2004). There is some evidence that monetary incentives may even undermine PSM (Perry & Wise, 1990). The crowding out theory offers a plausible explanation for this phenomenon. Following Deci (1971, p.105), one is said to be intrinsically motivated to perform an activity when she or he receives no apparent reward except for the activity itself. Consequently, momentary incentives crowd-out intrinsic motivation because people are not longer able to do an activity for the sake of it (Frey & Jegen, 2001). According to Frey (2000), crowding-out-effect and relative effect price (described in section 2.2) work simultaneously. The relative price effect gives an incentive to supply more of the activity while the crowding-out-effect undermines existing intrinsic motivation and reduces supply. The occurrence of these two effects simultaneously might be an explanation for lack of the relationship between 'performance based pay' and PSM.

Finally, one reason for missing correlation between 'organizational commitment' and PSM *(H1f)* might the fact that the variable 'organizational commitment' is measured by only one item. Generally, measurement instrument which use only one item to measure a certain construct run the risk of low construct validity which might have lead to an adulteration of the relationship between 'organizational commitment' and PSM because the measurement instrument is not a reflection of the initially intended construct.

The mediating hypothesis *(H10)*, which claims that this relationship is mediated by the three psychological basic needs 'relatedness', 'competence', and 'autonomy', could not be corroborated in general by the data found (depending on the HPWS and basic need dimension). Therefore, it can be concluded that these needs are not the only variables that contribute to a deeper insight into the processes through which organizational values are transmitted to an individual level. In other words, even though the self-determination provides a good explanation for the transmission of institutional variables to an individual level of analysis, it cannot explain the whole process exclusively.

Against expectations, the data provides evidence for the variable 'relatedness' to mediate the relationship between 'training' and PSM. Next to this, the relationship between 'job characteristics' and PSM is partially mediated by 'relatedness' and

'autonomy'. Reasons for these unexpected results might be found in the incomplete theoretical framework. For example, it can be argued that employees, having training possibilities, develop a sense of 'relatedness' because they experience that their employer believes in their abilities and developmental capacities. In addition, because they get to know their colleagues better during 'trainings', they might develop a stronger sense of 'relatedness' towards them, too. Next to this, it seems logical that employees who receive (constructive) 360° feedback on a regular basis are more likely to develop a higher sense of 'relatedness' towards colleagues and supervisors than others who don't.

The failed general mediating effect might be grounded in the fact that this study focuses on one single type of mediator, namely 'psychological basic needs', thus ignoring the potential interrelationships between this variable and other relevant employee outcomes, such as 'organizational commitment', 'job satisfaction', which are also related to PSM (Bright, 2008; Stijn, 2008; Vandenabeele, 2009), or organizational variables, such as 'organizational strategy' or 'climate climate'. In other words, it would be interesting to expand the self-determination theory and investigate whether a combination of the three basic psychological needs with other relevant variables would result in a better model of the relationship between HPWS and PSM, which represents the complex social reality in a more accurate way.

Finally, based upon the presented data, one can conclude that wildly spread claim 'the level of PSM in public organisations is higher than in private ones' cannot be generalized to the medical sector, particularly to the nursing profession, where the differences in the degree of publicness of the two types of organizations are very small. This raises the question, whether the initial claim must be rejected in general or differentiated. Further effort should repeat this research in organizations where the differences in the degree of publicness are larger. For example, one could think of research in privately and publicly run airline or phone companies which are not in charge of the provision of such a vulnerable common good as healthcare. Moreover, it would be interesting to observe, whether the results found in this study can be repeated among higher educated employees who, in general, can be choosier about their job's choice and

working place. In other words, it would be rewarding to cross-validate this study in other sectors and among employees of different professions, because this process will help to determine whether the conclusions of this study can be generalized to a broader context.

However there are also some limitations in this study that should be considered and highlighted.

Firstly, the dataset upon which this study is based is medium sized (N = 251). A larger sample size leads to more accurate parameter estimates and provides more chances for unrepresentative elements to cancel each other out (Dooley, 2001). In other words, due to the relatively small simple size of this study, small effect sizes run the risk to remain unrecognized. Consequently, it can be suggested to repeat this study using a larger sample size. Next to this, the hospitals under study differ regarding their size and function. For instance, hospital A2 is a tertiary care hospital which employs over 1600 nurses. In contrast, in hospital B2 only work about 50 nurses. These facts might have had an unwanted effect on the data presented.

Secondly, another point of limitation we must keep in mind is the research design. Longitudinal datasets would have yield better internal validity because they allow us to make stronger causal claims. That calls for repeating this research on a regular basis.

Thirdly, regarding the methodology of this empirical study, self-reported measurement instruments are used to measure all variables under study. This fact might have yield biased results. More in detail, we can think of the risk of social desirable answers or a biased sample. (For instance think of the possibility that only the most dependable employees were willing to fill in the questionnaire.) Another methodological limitation of this study is the fact that the scale of HPWS measures three dimensions by using only one item. Using only one item might be a risk to the construct validity. In other words, the item might not cover the complete theoretical construct which it is supposed to represent. For this reason, for further research on this subject might consider using a different measurement instrument to measure HPWS. In addition, further effort should also analyze the tensions between the concept HPWS used in this study and other common definitions of this term to reach consensus for further research involving HPWS.

Summing up as answer to research question 1 (*what is the role of PSM in German hospitals, especially among nurses?):* based upon the analysis of statistical desriptives it can be concluded that PSM in general plays a role in German hospital settings. In detail, the three dimensions self-sacrifice', 'public interest', and 'compassion' seem to be most important.

With regard to research question 2 (*what is the relationship between high performance work systems and public service motivation, and which role do basic psychological needs play in this relationship?)*: based upon the presented data, it can be concluded that four dimensions of HPWS ('job characteristics', 'training', 'say in decision making', and 'teamwork') have a positive and significant effect on PSM. Next to this, it can be concluded that the three psychological basic needs ('relatedness', 'competence', and 'autonomy') also play a relevant role in fostering PSM, because they influence PSM and HPWS as well. However, against the expectations, they do not mediate the relationship between PSM en HPWS completely. That means, self-determination theory self-determination provides a good explanation for the transmission of institutional variables to an individual level of analysis, but cannot explain the whole process exclusively.

Concerning research question *3 (what are the differences in the level of PSM in private organisations compared to public organizations operating in one sector?):* Just as expected, on the basis of the shown data, one can conclude that there are no significant differences in the level of PSM in the two types of hospitals under study among nursing staff.

5.1.0 Practical Implications

The results of this study should urge managers of nursing staff to consider the relevance of HR activities as a possibility to foster PSM, and in turn, to increase the performance of the nursing staff. Especially the HPWS dimensions 'job characteristics' and 'training' seem to play a crucial role in the relationship between HPWS and PSM, because these dimensions correlate strongest with PSM (directly and indirectly).

Once again, the HPWS dimension 'job characteristics' can be described best by the five task dimensions 'skill variety', 'task identity', 'task significance' and 'employee's autonomy' with which he or she is able to perform the job (Martel & Dupuis, 2006). The HPWS dimension 'training' is characterised by a set of activities which react to the present needs and is focused on the instructor (Beardwell & Claydon, 2007).

Skill variety can be achieved by job rotation, a HR tool established in the 1970s with spin-off effects (if properly structured) for business performance. More in detail, job rotation aims to reduce boredom, vary activities and develop or increase skill level by encouraging employees to change jobs periodically (Beardwell & Claydon, 2007). In the praxis, it can be recommended to organise work in such a way that nurses can work in different areas of medical expertise and fulfil different tasks within a team. Depending on the present skills of the working staff, job rotation might require additional trainings so that the employees are capable of completing the new task successfully.

One way to increase the skill level of employees is the introduction of a mentor program, a HR activity, which started to be recognized about 25 years (Beardwell & Claydon, 2007). This means, a more experienced worker (a mentor) guides, encourages and supports a less experienced worker, a so called 'protégé' (Beardwell & Claydon, 2007). The advantage of this program lays in the fact that both parties benefit from this mentor- protégé- relationship. While the developmental needs of the protégé are met, mentors experience that they are needed and that they fulfil an important task. In addition, they gain greatly from being challenged to understand their own jobs and organization from different point of view (Beardwell & Claydon, 2007). In other words, through the introduction of mentor programs the 'task significance' of experienced

employees and younger employee's needs for 'training' is stimulated. Next to this, the 'task variety' of both parties increases, because throughout process, young employees become capable to perform a greater number of tasks and more experienced workers are challenged to understand their jobs and organizations from a broader point of view (Beardwell & Claydon, 2007).

Another way to increase 'task significant' can be achieved by implementing a feedback culture which makes employees feel that they do crucial and meaningful job. Two types of feedback can be distinguished: formal feedback, in form of appraisal interviews and informal feedback, for instance personal chats, which is less time-consuming and highly effective (Beardwell & Claydon, 2007) For this reason, it can be recommended to urge all employees, especially employees in a higher position, to give feedback on a daily and constructive basis, because just these little words increase the employee's sense of doing a highly valued and significant task. In addition, 'job rotations' based on the recovery of a patient will also increase the employee's 'task significance', because he or she gets the chance to see the own efforts directly in the increased health status of the patient.

Summing up, it can be recommended to introduce 'mentor programs', 'job-rotation' and the implementation of a feedback culture in hospital settings among nursing staff. These three interrelated HR activities will support the HPWS dimensions 'job characteristics' and 'training', and in turn, increase the performance of nursing staff in the long run

.

Appendix 1: Items Used in Measurement Instruments

Table A1a Items of the Self-Reported Basic Psychological Needs Measurement Instrument

Based on Vlachopouslos and Michailidoi, 2006		**Composite reliability**
	Autonomy	**.53**
Auto1	The work I follow is highly compatible with my choices and interest	
Auto2	Even if I could, I wouldn't change any processes of the work I do (l)	
Auto3	I feel very strongly that I have the opportunity to make choices with respect to the way I do my work	
	Competence	**.75**
Comp1	I have been making huge process with respect to the carrier objectives I have in mind	
Comp2	From time to time I have doubts that I go anywhere regarding my current work position (l)*	
Comp3	I feel that I can manage with the requirements of the job I am involved	
Comp4	If feel that I am doing a good job at my workplace	
	Relatedness	**.84**
Relate1	I feel extremely comfortable when my colleagues are around	
Relate2	I feel that a can talk with my colleagues about everything (private and work related topics)	
Relate3	The contact with my colleagues goes beyond working hours. From time to time, we meet after the shift	

(l) Reversed coding

* Excluded item after confirmatory factor analysis

Table A1b Items of the Self-Reported HPWS Measurement Instrument

Based on Harley et al. (2007)		**Cronbach's aplpa**
	Selection and Staffing	**.61**
SandS1	I had enough time to ask questions and present myself during the recruitment process	
SandS2	The employee selection process at this hospital was very rigorous involving tests, interviews, work samples	
	Training	
Training1	Over the last 12 month I had sufficient chances to participate in trainings (at least twice)	
	Performance based Pay	**.66**
PbasedP1	My performance is judged by more than one person	
PbasedP2	Performance more than once a month discussed with employees	
PbasedP3	The wages in this hospital are not very competitive for this industry (l)	
PbasedP4	In this hospital, pay is not closely tied to individual performance (l)	
PbasedP5	When I am judged my supervisor, personal willingness to perform plays a important role	
	Say in decision making	
SDMing	When new nursing methods are introduced, I personally have a say in the decision about the changes	
	Organizational Communication	
OrgCom2	Usually, I am informed about any changes in the organization I work and/or my working condition	
	Teamwork	**.74**
Team1	I see myself as a member of a formally designated team	
Team2	The success of the team depends on team members working together	
Team3	Team members appoint their own leader	
Team4	Team members jointly decide how work is done	
Team5	Teams are given responsibility for particular tasks or services	
	Job characteristics	**.85**
JobC1	My job involves doing a whole piece of work from start to finish, and the results of my effort are easily seen in the health of the patient	
JobC2	My job provides me with the chance to be completely involved in the recovery of patients	

(l) reversed coding

Appendix 2: Full Correlation Matrix of Psychological Basic Needs and PSM

Table A2a Full Correlation Matrix for Basic Psychological Needs

Basic needs	**Correlations**									
	1	2	3	4	5	6	7	8	9	10
1. autonomy1	1									
2. autonomy2 (I)	-.162	1								
3. autonomy3	.512	-.196	1							
4. competence1	.213	-.000	.208	1						
5. competence2 (I)	-.050	.0334	-.047	-.035	1					
6. competence3	.120	.0131	.226	.292	.120	1				
7. competence4	.085	.041	.265	.254	.020	.747	1			
8. relatednesss1	.168	-.228	.142	.010	-.203	.232	.363	1		
9. relatedness 2	.176	-.237	.198	-.051	-.178	.103	.225	.743	1	
10. relatedness3	.073	-.162	.067	-.094	-.121	-.004	.064	.568	.593	1

* Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

(l) Reversed coding

Table A2b Full Correlation Matrix for PSM

Public Service Motivation	**Correlations**																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. PSM1	1																	
2. PSM2	.737	1																
3. PSM3 (I)	.189	.221	1															
4. PSM4	.299	.372	.275	1														
5. PSM5	.243	.303	.281	.428	1													
6. PSM6	.243	.320	.276	.282	.213	1												
7. PSM7 (I)	-.346	-.303	-.012	-.066	.-.177	-.270	1											
8. PSM8	.402	.425	.019	.113	-.030	.334	-.227	1										
9. PSM9	.474	.539	.320	.220	.262	.319	-.333	.481	1									
10 .PSM10(I)	-.208	.-.135	-.082	-.163	.004	-.072	-.102	-.054	-.126	1								
11. PSM11(I)	-.256	-.207	-.072	-.259	-.043	-.005	.068	-.209	-.119	.406	1							
12. PSM12	.366	.310	-.001	.198	.135	.312	-.282	.303	.300	.008	-.029	1						
13. PSM13	.339	.362	.151	.381	.395	.239	-.186	.117	.3987	.057	-.064	.506	1					
14. PSM14	.369	423	.104	.374	.428	.260	-.137	.092	.321	-.018	-.030	.185	.436	1				
15. PSM15	.380	.460	.099	.426	400	.171	-.100	.072	.359	-.155	-.112	.276	.533	.573	1			
16. PSM16	.279	.371	.128	.308	.220	.243	-.141	.345	.366	-.040	-.065	.228	.281	.359	.482	1		
17. PSM17	.310	430	.155	.178	.155	.364	-.181	.375	.391	-.086	-.093	.254	.221	.256	.219	.386	1	
18. PSM18	.329	.307	156	.252	.065	300	-.118	.299	.228	-.116	-.131	.099	.214	.245	.239	.367	367	1

* Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

(I) Reversed coding

Appendix 3 Descriptives Statistics and Representativeness of the Sample

Table A3a Descriptives of Hospitals under Study

Hospital Status	**A 1** Secondary care hospital (Akutkrankenhaus der Zentralversorgung)	**A 2** Tertiary care hospital (Krankenhaus der Maximalversorgung)	**B 1** Primary care hospital (Krankenhaus der akuten Grund- und Regelversorgung)	**B2** Specialist hospital (Spezialklinik)	**Total**
Number of beds	~ 350	~ 1300	~ 130	~ 35	1815
Number of nurses (incl. apprentices and medical temps)	~ 400	~ 1500	~ 100	~ 50	2050
Number of addressed nurses	170 (43% of total number)	600 (40 % of total number)	40 (40% of total number)	40 (80 % of total number)	850 (40 % of total number)
Responses	89 (52%)	130 (22 %)	18 (45%)	14 (35%)	251

Table A3b Chi² Test for Gender

	Real	expected	X²
Male	22, 1 %	17.7%	0,65
Female	77,9 %	81.3 %	0,33
			0,95

χ^2 0.99 (1)= 6, 63
P (χ^2 > X²) = 6, 63 > 0, 95 → Groups do not differ significantly from one another.

$$\chi^2 = \sum_{j=1}^{m} \frac{(n_j - n_{jo})^2}{n_{jo}}$$

Appendix A3c Chi² Test for Type of Working Contract

	Real	expected	X²
Full-time	61,6 %	69,5%	0,89
Part-time	28,7 %	30,5 %	0,12
			1,01

χ^2 0.99 (1)= 6,63
P (χ^2 > X²) = 6.63 > 1, 01 → Groups do not differ significantly from one another

$$\chi^2 = \sum_{j=1}^{m} \frac{(n_j - n_{jo})^2}{n_{jo}}$$

Appendix A3d Descriptives of Position, Age and Education

	A1 (N=88) %	**B1 (N=19) %**	**A2 (N=130) %**	**B2 N= 14 %**	**Total N=251 %**
Position					
Apprentice	5,7	5,3			2, 5
Nurse	71,6	37,7	62, 1	42,9	65,4
Specialized nurse	12,5	10,5	25,9	50,0	21,3
Nurse in higher position	10,2	10,5	12,1	7,1	10,8
Age					
>35	19,3	36,8	15,7	28, 7	19, 9
<35>55	71,6	57,9	78, 7	61, 7	73, 7
<55	9,1	5,3	5,5		4,8
Education					
Nursing school	92, 9	94, 1	81,4	90,0	79,3
University of applied science	4, 7	5, 9	18,4	10,0	10,8
University	2,4				0,8

Table A3e Statistics on the Sociohistorical Context: Private and Public Hospitals Compared

Variable	**Private hospital**		**Public hospitals**	
	N	**%**	**N**	**%**
Gender				
Male	47	21,7 %		
Female	164	75,6%		
Position				
Apprentice	5	2,4 %	1	29 %
Nurse	136	66,6 %	21	61,0 %
Specialized nurse	42	20,4 %	9	26,5 %
Nurse in higher position	23	11,2%	3	8,8 %
Age				
>35	38	17,5 %	12	35,2 %
<35>55	164	75,6 %	21	61,7 %
<55	11	5,1%	1	2,9 %
Education				
Nursing school	173	79,7 %	26	70,5 %
University of applied science	25	11,5 %	2	5,9 %
University	2	11,2 %		

Appendix 4: Paper about the public dimension of this master thesis

De publieke dimensie van de masterscriptie:
De relatie tussen personeelsbeleid en public service motivation

Dit paper maakt onderdeel uit van mijn masterscriptie die erop gericht is de samenhang tussen personeelbeleid en public service motivatie in publieke en private ziekenhuizen empirisch te onderzoeken. Doelstelling van dit paper is een analyse van de publieke dimensie van a) de organisatie waar ik onderzoek uitvoer en b) het onderzoeksvraagstuk. Gezien de beperkte omvang van dit paper zal ik de analyse toespitsen op één publiek ziekenhuis dat deel uit maakt van mijn onderzoek.

Eerst zal ik analyseren wat het ziekenhuis waar ik onderzoek uitvoer tot een publieke instelling maakt. Daarna zal ik na gaan of maatschappelijk verantwoord ondernemen een doelstelling van het HR beleid van het ziekenhuis is. Ten slotte, zal ik mijn eigen oordeel over de publieke dimensie van mijn vraagstuk geven, analyseren hoe het ziekenhuis op dit moment met het vraagstuk omgaat en aangeven hoe de beleidsmedewerkers het vraagstuk aan zouden kunnen pakken

Het onderscheiden van publieke en private organisaties is niet altijd eenvoudig, omdat het onderscheid op verschillende criteria gebaseerd kan worden (Rainey, 2003). Ten eerste, bestaat de mogelijkheid private en publieke organisaties op grond van formele kenmerken, zoals eigendom, bron van inkomsten en zeggenschap in te delen (Rainey, 2003). Helaas is deze indeling niet altijd zinvol, omdat er een grote variatie tussen de twee categorieën (private en publieke organisaties) blijkt te zijn (Rainey, 2003). Zo kunnen organisaties die het eigendom van één shareholder zijn, maar bijvoorbeeld over een goed beleid ter integratie van gehandicapten beschikken, ‘publieker’ zijn dan hun ‘werkelijk publieke’ counterpartners, omdat ze hun functie als voorbeeldwerkgever beter nakomen (Boyne, 2002).

De kenmerken moeten dus meer als continuüm worden opgevat en niet als aparte dimensies die het verschil tussen private en publieke organisaties zwart-wit aangeven (Boyne, 2002, Rainey, 2003). Als men een dergelijke formele indeling (op basis van

eigendom, bron van inkomsten en zeggenschap) toepast op het ziekenhuis waar ik mijn onderzoek uitvoer komen we dit verschijnsel ook tegen. Het betreffende ziekenhuis wordt beheerd door de provincie Baden-Württemberg (Qualitätsbeticht, 2008), de belangrijkste stakeholders van het ziekenhuis zijn de patiënten, de werknemers en de overheid. Verschillende politieke partijen zitten in het bestuur (Klinikum Konstanz, 2010). Volgens de directeur van het ziekenhuis brengt dit met zich mee, dat grote beslissingen, bijvoorbeeld de sluiting van een inefficiënte afdeling, niet zo maar kunnen worden gemaakt. Bij de diverse betrokken partijen staan de neuzen vaak niet dezelfde kant op, hetgeen het besluitvormingsproces tot een langdurend en bureaucratisch proces kan maken. De financiering van grote investeringen wordt binnen het ziekenhuis door provincies en de regering geregeld, terwijl lopende kosten voor de rekening van zorgverzekeraars komen (RWI, 2009). Binnen de dimensies van financiering en eigenaarschap is het ziekenhuis dus puur publiek. Daar tegenover staat dat het ziekenhuis nauwelijks over zeggenschap beschikt. Door voorlichtingen kan het ziekenhuis wel enigszins de meningen van de burgers vormen, maar het ziekenhuis heeft niet de macht namens anderen bepaalde zaken te regelen. Het heeft ook niet de macht om bindende beslissingen te nemen, zoals bij bijvoorbeeld een publieke instantie als de politie dat wel heeft.

Naast bovengenoemde formele criteria, kunnen verschillen in het bestaansrecht ook als criteria worden gebruikt om private en publieke ondernemingen te kunnen onderscheiden (Rainey, 2003). In Duitsland heeft iedereen het recht op voldoende zorgverlening (GG, Art. 74). Als men de zorgsector geheel door de markt laat reguleren bestaat het gevaar dat de kosten voor de zorgverlening omhoog gaan, en dat er mensen buiten de boot vallen omdat ze niet over voldoende financiële middelen beschikken om voor zorgverlening in aanmerking te komen. De markt is dus geen goed coördinatiemechanisme die ‘zorg voor iedereen’ kan garanderen. In andere worden, de bestaansreden voor het ziekenhuis is van relationele rationaliteit. Niet efficiëntie, effectiviteit and winstmaximalisatie (economische rationaliteit) maar gelijkheid en participatie staan centraal. Daarnaast vervult het ziekenhuis een functie waartoe individuele burgers zelf niet in staat zijn. Verschillende specialisten van het ziekenhuis maken deel uit van international en nationaal onderzoeksprojecten. Op deze manier kan

de stand van kennis op het gebied van geneeskunde verder worden ontwikkeld wat iedereen ten goede komt.

Nordegraaf e.a. (2003) hanteert het criterium ‘identiteit’ om de publieke dimensie van organisaties te kunnen bepalen. De identiteit van publieke organisaties uit zich in het streven naar hoge en duurzame doelen die bepalen waar de organisatie voor staat (Nordegraaf & Teeuw, 2003). In tegenstelling, de identiteit van private organisaties is gekenmerkt door de focus op operationele, korttermijn doelen. Inzicht in de strategievorming maakt het mogelijk de identiteit van organisaties te achterhalen (Nordegraaf & Teeuw, 2003). De strategie van het ziekenhuis waar ik mijn onderzoek uitvoer is gericht op het verbeteren van a) duurzame faciliteiten, b) de kwaliteit van de zorg, c) transparantie, c) netwerken, d) coöperatie en e) integratie. Het expliciete noemen van het grote aantal lange termijn doelstellingen, en het buiten beschouwing laten van economische korttermijn doelen, onderstreept het publieke karakter van het ziekenhuis.

Samenvattend kan gezegd worden, dat de publieke dimensie van het ziekenhuis waar ik onderzoek doe groot is, onafhankelijk van het criterium dat wordt gehanteerd. Slechts met betrekking tot zeggenschap is het niet geheel duidelijk dat het zich om een publieke instelling handelt.

In de volgende sectie zal ik na gaan of maatschappelijk verantwoord ondernemen een doelstelling is van het HR beleid van het ziekenhuis. Volgens Boxall e.a. (2008) heeft strategisch human resource management (SHRM) vier doelstellingen: efficiëntie, maatschappelijk verantwoord ondernemen, autonomie, en flexibiliteit. (Merk op, dat maatschappelijk verantwoord ondernemen slechts één van de doelstellingen is.) Volgens de auteurs (2008) kunnen deze doelstellingen spanningen op roepen. Er is sprake van maatschappelijk verantwoord ondernemen als organisaties naast winst ook nog naar positieve effecten voor het milieu, de mensen binnen de onderneming en de samenleving als geheel streven (MVO Nederland, 2009).

Het ziekenhuis waar ik onderzoek uivoer noemt in zijn jaarverslag niet expliciet een systematisch HR beleid of het doel meer maatschappelijk verantwoord bezig te zijn. Echter is het wel met maatschappelijk verantwoord ondernemerschap bezig. Dat uit zich in de duurzame manier van renovatie aan oude gebouwen, in de jaren 2007 en 2008, met

als doelstelling op de lange termijn energiekosten te kunnen besparen. Als bewijs voor de duurzame renovatie is het ziekenhuis in 2008 met een prijs (Gütesiegel Energiesparendes Krankenaus) voor een energiezuinig ziekenhuis bekroond (Qualitätsbeticht, 2008).

Twee, los van elkaar staande, HR activiteiten worden in jaarverslag van het ziekenhuis sterk benadrukt: een bedrijfsideeënbus (Betriebliches Vorschlagwesen) en training (Qualitätsbeticht, 2008). Medewerkers hebben de mogelijkheid voorstellen voor verbetering en persoonlijke bezwaarden en klachten aan het managementteam door te geven. Voorstellen die helpen de processen binnen het ziekenhuis te optimaliseren worden met een bonus gehonoreerd. Daarnaast vindt een keer per maand een 'supervision' op elk afdeling plaats om problemen op tijd te communiceren te voorkomen. Daarnaast wordt alle medewerkers de mogelijkheid geboden hun kennis te actualiseren en te verbreden. Vier keer per jaar verschijnt een brochure die de medewerkers over interne trainingscursussen informeert. De kosten worden volgens de medewerkers grotendeels (afhankelijk van de gewerkte uren) door de werkgever betaald.

Ondanks dat het HR beleid van het ziekenhuis waar ik mijn onderzoek uitvoer niet zeer uitgebreid besproken in het sociaal jaarverslag, is het aannemelijk dat de HR activiteiten die centraal staan op de relationele rationaliteit gericht zijn en niet op de economische rationaliteit (die zich op korte termijn doelstellingen en winstmaximalisatie focust). De bedrijfsideeënbus biedt medewerkers een toegankelijke manier om problemen aan te kaarten of ergernissen en bedenkingen te uiten. Op deze manier kunnen waarden zoals gelijkheid, medezeggenschap en participatie gewaarborgd worden. Ook het aanbieden van trainingen levert de organisatie geen directe winst op, omdat tijd nodig is om de nieuw geworven kennis te implementeren. De kosten voor trainingen worden als investering voor de toekomst gezien om altijd state-of-the-art zorg aan te kunnen bieden.

In hoe ver het ziekenhuis zich bewust bezig houd met mijn eigen vraagstuk 'de relatie tussen HR beleid en public service motivatie, of motivatie in het algemeen' wordt in het geraadpleegde beleidstuk niet duidelijk. Ook gesprekken met medewerkers in verschillende functie leverden geen extra informatie op. Om deze reden kan men concluderen dat het ziekenhuis zich niet (voldoende) van het belang van gemotiveerde werknemers bewust is.

In de laatste sectie van dit werkstuk zal ik de publieke dimensie van het vraagstuk dat ik onderzoek beoordelen en uitleggen hoe het ziekenhuis het vraagstuk aan zou kunnen pakken.

Het vraagstuk naar de samenhang van public service motivation heeft volgens mij zowel publieke als ook economische aspecten. Als de (public service) motivatie van medewerkers door HR instrumenten versterkt kan worden, kan het ziekenhuis zijn publieke taak 'het verzorgen van patiënten' beter vervullen, omdat public service motivatie als factor van prestatie kan worden gezien (Perry & Wise, 1990, Brewer in Perry & Hondeghem, 2008). Juist in een tijd die gekenmerkt wordt door een steeds groter wordend aantal hulpbehoevende mensen, veroorzaakt door vergrijzing en toename aan chronische ziektes, is goed gemotiveerd en goed presterend vakkundig personeel cruciaal. Aan de andere kant kan het stimuleren van motivatie natuurlijk ook als middel in worden gezet om de efficiëntie van de werkprocessen te verhogen. Maar aangezien de organisatiestrategie van het ziekenhuis niet op winstmaximalisatie, maar op de langdurige verbetering van faciliteiten, transparantie en kwaliteit gericht is, weegt de publieke dimensie van mijn vraagstuk volgens mij zwaarder.

De eerste stap die binnen het ziekenhuis moet worden gezet is, naar mijn mening, de bewustwording dat HR beleid een cruciale bijdrage aan het prestatievermogen van de organisatie kan leveren, zowel in de publieke als ook in de economische zin (Pauuwe, 2004). Op dit moment geeft het ziekenhuis duidelijk aan, dat het naar verbetering op de gebieden samenwerking, transparantie en faciliteiten streeft, maar het beschikt niet over een HR beleid dat goed bij deze doelstellingen aansluit. Belangrijk is dat het bewustwordingsproces aan de top van de organisatie begint omdat het management een belangrijke sleutelfunctie in dit proces inneemt (Boxall & Purcell, 2008). Zonder het besef dat HR beleid een cruciale beidrage aan de realisatie van de organisatiedoelstellingen kan leveren hebben vervolgstappen die het vraagstuk concreet aan zouden kunnen pakken weinig zin.

Over de volgende stap, de implementatie van bepaalde HR activiteiten ter bevordering van public service motivation, hoop ik na de analyse van de gegevens die ik voor mijn scriptie wil verzamelen meer te kunnen zeggen. Uit de literatuur blijk weliswaar dat HR beleid van invloed op public service motivation is (Mayonihan &

Pandey, 2007, Camilleri, 2007), maar het komt niet duidelijk naar voren welke HR instrumenten het sterkste verband met motivatie hebben.

Refferences

Antonsen, M., Jorgensen, T., B. (1997). The 'publicness' of public organizations. *Public Administration*, 75, 337-357.

Baron, R. M., Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.

Beardwell. J., Claydon, T. (2007). *Human resource management: a contemporary approach.* Prentice Hall: Financial Times.

Bedeutung der Krankenhäuser in privater Trägerschaft. (2009). Rheinisch-Westfälisches Institut für Wirtschaftsforschung (RWI). Addressed at 1th April 2010, from http://www2.carenoble.de/index.php?eID=tx_nawsecuredl&u=0&file=uploads/media/RWI_Private_Kliniken.pdf.

Beltrán-Martín, I., Roca-Puig, V., Escring-Tena, A., Bou-Llusar, J. C. (2008). Human resource flexibility as a mediating variable between high performance work systems and performance. *Journal of Management*, 34, 5, 10009-1044.

Bhattacharya, C., B., Hayagreeva, R., Glynn, M.-A. (1995). Understanding the bond of identification: an investigation of its correlates among art museum members. *The Journal of Marketing*, 59, 4, 46-57.

Boxall, P., Purcell, P. (2008). *Strategy and Human Resource Management*, 2nd ed. Palgrave macmillan.

Bovens, M., A., P., Hart, P., M., Twist, M., J., W. (2007). *Opbaar bestuur: beleid, organisatie en politiek*. Kluwer: Alphen aan den Rijn.

Boyne, G., A. (2002). Public and private management: what's the difference. *Journal of Management Studies*, 39, 1, 97-122.

Bozeman, B. (1987). *All organizations are public*. London: Jossey-Bass.

Brewer, G., A. (2008). *Employee and organizational performance.* In: Perry, J., L., Hondeghem, A. (2008) Perry, L., P., Vandenabeele, W. (2008). *Behavioral dynamics: institutions, identities, and self- regulation*, 56-79, in Perry, J., L., Hondeghem, A. (2008). *Motivation in public management: the call of public services*, NY: Oxford University Press.

Brewer, G., A., Selden, S., C. (1998). Whistle blowers in the federal civil service: new evidence of the public service ethic. *Journal of Public Administration Research and Theory*, 8, 3, 413-439.

Brewer. G., A. (2003). Building social capital: civic attitudes and behavior of public servants. *Journal of Public Administration Research in Theory*. 13, 5, 5-26.

Bright, L. (2005). Public employees with high levels of public service motivation: Who are they, where are they and what do they want? *Review of Public Personnel Administration*, 25, 2, 138-54.

Bright, L. (2007). Does person-organization fit mediate the relationship between public service motivation and job performance of public employees? *Review of Public Personnel Administration*, 27, 4, 361-379.

Bright, L. (2008). Does public service motivation really make a difference on job satisfaction and turnover intention of public employees? *American Review of Public Administation*, 38, 4, 361-379.

Bryant, E., Yarnold, P. (1994). Principal-components analysis and exploratory and confirmatory factor analysis. In: Grimm, L., Yarnold, P. (1994). *Reading and understanding multivariate statistics* (pp. 99−136). Washington, DC: American Psychological Association.

Buchan, J., Seccombe, I. (2003). *More nurses, working differently? A review of UK nursing labor market 2002-2003*. RNC: London.

Camilleri, E. (2007). Antecedents affecting public service motivation. *Personal Review*, 36, 3, 356-277.

Coomber, B., Barriball, L., K. (2007). Impact of job satisfaction components on intent to leave and turnover for hospital-based nurse: a review of the research literature. *International Journal of Nursing Studies*, 44, 2, 207-314.

Crewson, P., E. (1995a). *The public service ethic.* PH. D. diss. American University.

De Hart-Davis, L., Pandey, S., K., Marlowe, J., (2006). Gender Dimensions of Public Service Motivation. *Public Administration Review*, 873-887.

Deci, E., L. (1971). Effects on externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology*, 18, 105-115.

Deci, E., L., Ryan, R., M. (2000). The 'what' and the 'why' of goals pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227-268.

Deci., E., L., Koestner, R., Ryan, R., M. (1999). A meta-analytic review of experiments examining the effect of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, 125, 627-688.

DiIulio, J., J. (1994). Principles agents: the cultural bases of behavior in a federal government bureaucracy. *Journal of Public Administration Research and Theory*, 4, 277-318.

Dooley, D. (2001). *Social research methods*, 4th ed. New Jersey: Prantice Hall.

Downs, A. (1967). *Inside Bureaucracy*. Boston, MA: Little, Brown and Company.

Escury, T. C., Alma, A. (2008). Ontwikkelingen Nederlandse ziekenhuizen 2003-2008 en belangrijkste aandachtspunten voor de toekomst. Adressed at 10 December 2010, from http://www.rolandberger.nl/media/pdf/Roland_Berger_zorgstudie_20090928.pdf.

Forero, C., G., Maydeu-Olivares, A., Gallardo-Pujol, D., (2009). *Factor Analysis with ordinal indicators: a monte carlo study comparing DWLS and ULS Estimation*. Structural Equation Modeling, 16, 625-641.

Frederickson, H., G., Hart, D., K. (1985). The public service and the patriotism of benevolence. *Public Administration Review*, 45, 547-553.

Frey, B., S. (2000). Motivation and human behaviour. In: Taylor-Gooby, P., F. (2000). *Risk trust and welfare.* London: Palgrave Macmillan.

Frey, B., S., Jegen, R. (2001) Motivation crowding theory. *Journal of Economic Survey*, 15, 5, 489-611.

Gagne, M. Deci, E. (2005). Self-determination theory and work motivation. *Jounal of Organizational Behavior*, 26, 331-362.

Garriga, E., Mele, D. (2004). Corporate soocialresponsibility theory: mapping the territory. *Journal of Business Ethics*. 53, 51-71.

Gerhart, B., Wright, P., M., McMahan, G., C. (2000). Measurement error on the human resource and firm performance relationship: further evidence and analysis. *Personnel Psychology*, 35, 856-872.

Gillian, V. (2009). Work as Community: Narratives of Solidarity and Teamwork in the Contemporary Workplace, Who Owns Them? *Sociological Research Online*, 14, 4.

Grundgesetz, Artikel 74

Guest, D., E. (1997). Human resource management and performance: a review and research agenda. *International Journal of Human Resource Management*, 8, 263-276.

Guthrie, J., P., Flood, P., C., Liu, W., MacCurtain, S. (2009) 'High performance work systems in Ireland: human resource and organizational outcomes', *The International Journal of Human Resource Management*, 20, 1, 112 - 125.

Harley, B., Allen, B., C., Sargent, L., D. (2007). High performance work systems and employee experience of work in the service sector: The case of aged care. *British Journal of Industrial Relations*, 45, 3, 607-633.

Herrenstein, R., J. (1990). Rational choice theory: necessary but not sufficient. *American Psychologist*, 45, 3, 365-367.

Hood, C. (1995). The 'new public management' in the 1990s: variations on a theme. *Accounting Organizations and Society*, 20, 2, 93-109.

Houston, D., J. (2000). Public-service motivation: a multivariate test. *Journal of Public Administration Research and Theory*, 10, 2, 713-728.

Houston, D., J. (2006). Walking the walk of public service motivation: public employees and charitable gifts of time, blood and money. *Journal of Public Administration Research and Theory*, 16, 1, 67-86.

Hu, L-T., Bentler, P., M. (1999). Cutoff criteria for fit index in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling*, 6,1, 1-55.

Huff, C., Sproull, L., Kiesler, S. (1989). Computer communication and organizational commitment: Tracing the relationship in a city government. *Journal of Applied Social Psychology*, 19, 1371-1391.

Hulin, C., L. (1971). Individual differences and job enrichment: the case against general treatments. In Marker, J., R. (1971). *New perspectives in job enrichment*, NY: van Nostrand Reinhold.

Huizingh, E. (2004). *Inleiding SPSS: 12.0 voor windows en data entry*. Den Haag: Academic Service

Katzenbach, J., R., Smith, D., K. (1993). *The wisdom of teams: creating the high-performance organization*, Harvard Business School Press, Boston.

Kelmanm S. (1987). Public choice and public spirit. *The Public Interest*, 87, 80-94.

Kelmann, S. (2005). Public management needs help! *Academy of Management Journal, 48,967-46.*

Knoke, D., Wright-Isac, C. (1982). Individual motives and organizational incentive systems. *Research in the Sociology of Organization,* 1, 209-254.

Koestner, R., Losier, G., F., Vallerand, R., J., Carducci, D. (1996). Identified and interjected forms of political internalization: Extending self-determination theory. *Journal of Personality and Social Psychology,* 70, 1025-1136.

Krombacher. (2010). Adressed at 1th June 2010. www.Kromber.de.

Kutner, M., H., Nachtsheim, C., J., Neter, J., William, L. (2005). *Applied linear statistical models, 5th ed*. New York: McGraw-Hill.

Latham G., P., Winters, D., C., Locke, E., A. (1994). Cognitive and motivational effects of participation: a mediator study. *Journal of Organizational Behavior*, 15, 1, 49-63.

Lee, S., M. (1971). An Empirical Analysis of Organizational Identification. *The Academy of Management Journal*, 14, 2.

Leisink, P. (2004). *Do polities nourish public service motivation?* Paper to be presented at the EGPA Annual Conference, 1 to 4 September, 2004, Llublijana, Slivenia.

Lewis, G., B., Alsonso, P. (1999). *Public service motivation and job performance*. Paper presented at the 60th national conference of the American Society for Public Administration, 10 to 14 April, 1999, Orlando, Florida.

Locke, E., A. (1991).Introduction to special issue. *Organizational Behavior and Human Decision Process*, 50,288-299.

Mann. G., A. (2006). A motive to serve: public service motivation in human resource management and the role of PSM in the nonprofit sector. *Public Personnel Management*, 35, 1, 33-48.

March, J., G., Olson, J., P. (1989). *Rediscovering institutions: the organizational basis of politics*, New York: Free Press.

Martel, J-P., Dupuis, G. (2006). Quality of working life: theoretical and methodological problems, and presentations of a new model and measuring instrument. *Social Indicators Research*, 77, 333-368.

Meyer, J., P., Becker, T., E., Vandenberghe, C., (2004). Employee commitment and motivation: a conceptual analysis and integrative model. Journal of Applied Psychology, 89, 6, 991-1007.

Moore, D., S., McCabe, G., P. (2005). *Statistiek in de Praktijk 3ed*. Den Haag: Academic Service.

MVO Nederland (2009), adressed at 1 november 2009 van http://www.mvonederland.nl

Moynihan, D., P., Pandey, S., K. (2007). The role of organizations in fostering public service motivations. *Public Administration Review*

Myers, M.,T., Myers. G., E. (1982). *Managing by communication : an organizational approach*. New York: McGraw-Hill Book Company.

Noordegraaf, M., Teeuw, M., M. (2003). Publieke Identiteit: eigentijds organiseren in de publieke sector. *Bestuurkunde jaargang*, 12, 1, 1-13.

Pampers. (2010). Adressed at 1th June 2010, from www.pampers.nl.

Pandey, S., K., Stazyk, E. (2008). *Antecendents and Correlates of Public Servive Motivation* in Perry, J., L., Hondeghem, A. (2008). *Motivation in public management: the call of public services*, NY: Oxford University Press.

Paauwe, J. (2004). *HRM and Performance: achieving long term viability*. Oxford: University Press.

Perry, J. L. (1996). Measuring public service motivation: an assessment of the construct reliability and validity. *Journal of Public Administration Research and Theory*, 1, 5-22.

Perry, J. L., Wise, L., R. (1990) The motivational base of public service. *Public Administration Review*.

Perry, J., L. (1997). Antecedents of public service motivation. *Journal of Public Administration Research and Theory*, 7, 2, 181-97.

Perry, J., L. (2000). Bringing society in: toward a theory of public-service motivation. *Public Administration research and theory*, 10, 2, 471-488.

Perry, J., L., Hondeghem, A. (2008). *Motivation in public management: the call of public services*, NY: Oxford University Press.

Perry, L., P., Vandenabeele, W. (2008). *Behavioral dynamics: institutions, identities, and self- regulation*, 56-79, in Perry, J., L., Hondeghem, A. (2008). *Motivation in public management: the call of public services*, NY: Oxford University Press.

Pfeffer, J. (1998). *The human equation building profits by putting people first*. Boston, MA: Harvard Business School Press.

Pilivin, J., A., Grube, L., A., Callero, P., L. (2002). Role as a resource for action in public service. *Journal of Social Science*, 58, 459-485.

Rainey H. G. (1982). Reward Preferences among public and private managers: in search of the service ethic. *American Review of Public Administration*, 16, 288-302.

Rainey, H., G. (1983) Public agencies and private firms incentive structures, goals, and individual roles. *Administration and Society*, 15, 207-242.

Rainey, H., G. (2003). *Understanding and managing public organizations*. San Francissco: Jessey-Bass

Rainey, H., G. (2003). *Understanding and managing public organizations*. San Francissco: Jessey-Bass.

Rawels, J. (1971). *A theory of justice*. Cambridge: Belknap Press.

Ray, M., A., Turkel, M., C., Marino, F. (2002).The Transformative Process for Nursingin Workforce Redevelopment. *Nurse Admintration Quarterly*, 2002, 26, 2, 1–14.

Ryan, R., M., Deci, E., L. (2005). *On assimilating identities to the self: a self-determination theory perspective on internalization and integrity within cultures*, 253-276. In: Leary, M., R., Tangney, J., P. (2003). *Handbook of self and identity* NY: The Gilford Press.

Ryan, R., M., Deci, E., L. (2006). Self- regulation and the problem of human autonomy: does psychology need choice, self-determination, and will? *Journal of Personality*, 74, 6, 1557-1586.

Ryan, R., M., La Guardia, J., G. (2000). What is being optimized? Self determination theory on the basic and experience. *International Journal of Sport Psychology*, 28, 335-354.

Shell. (2010). Adressed 1th June 2010.www.shell.com.

Shields, M. A., Ward, M. (2001). Improving nurse retention in the National Health Service in England: the impact of job satisfaction on intentions to quit. *Journal of Health Economics*, 20, 5, 677-701.

Snell, S., A., Dean, Jr., J., W. (1992). Integrated manufacturing and human resource management: a human capital perspective. *Academy of Management Journal*, 35, 3, 467-504.

Steijn, B. (2008). Person-environment fit and public service motivation. *International Public Management Journal*, 11, 1, 13-27.

Stijn, B. (2006). *Public service motivation in the Netherlands*. Paper prepared for presentation at the Annual Conference of the European Group of Public Administration (EGPA), Public Personnel Politics Study Group, Milan, Italy.

Stone, G., P., Faberman, H., A. (1970). *Social psychology through symbolic interaction*. Waltham, MA: Ginn-Baisdell.

Taylor, J. (2008). Organizational influences, public service motivation and work outcomes: an Australian study. International public Management Journal, 11,1 , 67-88.

Tourangeau, A., E., Cranley, L., A. (2006). Nurse intention to remain employed: understanding and strengthening determinants, *Nursing and Healthcare Management and Policy.* 55, 4, 497-509.

Trendrapport Vraag naar arbeid. (2000). Addressed at 1th April 2010, from http://arno.uvt.nl/show.cgi?fid=96324.

Vandenabeele, W. (2008a). Development of a public service motivation measurement scale: corroborating and extending Perry's measurement instrument. *International Public Management Journal*, 11, 1, 143-167.

Vandenabeele, W. (2008b). *Toward a public administration theory of public service motivation*, Dissertaion, Instituut voor de overhead, Katholieke Universiteit Leuven.

Vandenabeele, W. (2009). The mediating effect of job satisfaction and organizational commitment on self-reported performance: more robust evidence of the PSM-performance relationship. *International Review of Administrative Science*, 71, 1, 11-32.

Vandenableele, W. (2007). Toward a public administration theory of public service motivation: An institutional approach. *Public Management Review*, 9, 4, 54-60.

Visser, B. (2000). Organizational communication structure and performance. *Journal of Economic Behavior & Organization*, 42, 231–252.

Vlachopoulos, S., P., Michailidoi, S. (2006) Delevepment and initial validation of a measure of autonomy, competence and relatedness in exercise: the basic psychological needs in exercise scale. *Measurement in Physical Education and Exercise Science*, 10, 3, 197-201.

Volksgezondheid Toekomst Verkenning, 2009, Nationaal Kompas Volksgezondheid. Addressed at 27th October 2009, from http://www.nationaalkompas.nl.

Wagner, J., A. (1994). Participation's effect on performance and satisfaction: a reconsideration of research evidence. *Academy of Management Review,* 19, 2, 312–330.

Walton, R., E. (1985). From control to commitment in the workplace. *Harvard Business Review,* 63, 2, 77-84.

Weigert, A., J., Teitge, J., Teitge, D., W. (1986*). Society and identity: towards a sociological psychology*. Cambridge: Cambridge University Press.

Weisberg, S. (2005). *Applied linear regression*. Minnesota: Wiley-Interscience.

Wittmer, D. (1991). Serving the people or serving for pay: Reward preferences among government, hybrid sector, and business managers. *Public Productivity Management Review,* 14, 4, 269-383.

Woods, S., Albanese, M., T. (1995). Can we speak of high commitment managers on the shop floor? Journal of Management Studies, 32, 215-247.

Wright, P. M. Gardener, T. (2003). Theoretical and empirical challenges in studying the HR practice-firm performance relationship. In D. Holman, Wall, T., D. Clegg, C., Sparrow, P., Howard, A,. (2003). *The new workplace: people technology, and organization*, John Wiley and Sons.

Wright, P., M., Gardener, T., M., Moynihan (2003). The impact of HR practices on the performance of business units. *Human Resource Management*, 13, 3, 21-36.