Association for Information Systems AIS Electronic Library (AISeL)

ECIS 2013 Completed Research

ECIS 2013 Proceedings

7-1-2013

Evaluating The Potential Of Social Networking Services For Hospital Recruitment

Thomas Lux

Niederrhein University of Applied Sciences, Krefeld, Germany, tlux@ccehr.de

Katharina Schufft

Freie Universität Berlin, Berlin, Germany, katharina.schufft@rub.de

Anja Lorenz

University of Technology Chemnitz, Chemnitz, Germany, anja.lorenz@wirtschaft.tu-chemnitz.de

Follow this and additional works at: http://aisel.aisnet.org/ecis2013 cr

Recommended Citation

Lux, Thomas; Schufft, Katharina; and Lorenz, Anja, "Evaluating The Potential Of Social Networking Services For Hospital Recruitment" (2013). ECIS 2013 Completed Research. 67.

http://aisel.aisnet.org/ecis2013_cr/67

This material is brought to you by the ECIS 2013 Proceedings at AIS Electronic Library (AISeL). It has been accepted for inclusion in ECIS 2013 Completed Research by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

EVALUATING THE POTENTIAL OF SOCIAL NETWORKING SERVICES FOR HOSPITAL RECRUITMENT

Lux, Thomas, Hochschule Niederrhein, University of Applied Sciences, Faculty of Health Care, 47805 Krefeld, Germany, thomas.lux@hs-niederrhein.de

Katharina Schufft, DB Training, Learning & Consulting (DB Mobility Logistics AG), 60486 Frankfurt/ Main, Germany, katharina.schufft@deutschebahn.com

Lorenz, Anja, Technische Universität Chemnitz, Faculty of Economics and Business Administration, Professorship Business Information Systems I, 09107 Chemnitz, Germany, anja.lorenz@wirtschaft.tu-chemnitz.de

Abstract

Currently, the German healthcare industry is a fast-growing sector. However, it has to face enormous challenges posed by the increasing lack of skilled employees. Particularly in the hospital sector, qualified staff is one of the most critical success factors. Therefore, it was analysed whether social networking services such as Facebook and the German business network XING provide suitable opportunities for hospitals' e-recruitment strategies. First, the characteristics of human resource management in hospitals and its presence in social networking services as an application of Web 2.0 were analysed. Subsequently, actual recruiting activities and further potentials by using Facebook and XING were investigated by an online survey of German hospitals and an empirical study within these platforms. It was evaluated whether hospitals are using social networking services, and in a further study whether this use is promising. Major results included a low acceptance by the hospitals, but a significant success of using social networking services, especially for recruiting employees for senior positions in nursing and medical fields.

Keywords: eHealth, Social Networking Services, Social Recruitment, Hospital Management, Human Resource Management.

1 Introduction

The skills shortage in healthcare is on everyone's lips. Studies published by major consulting agencies, initiatives of German federal states and growing discussions on conferences are just some indications of this important and urgent problem (cf. section 2). But precise implementation strategies and guidelines for hospitals barely exist. The aim of this paper is therefore to identify whether social networking services are appropriate instruments to improve the skill shortage in German hospitals. Thus, the hospitals' human resource management (HR) departments are suggested as the main strategic areas in the 1st section. As a recruitment alternative, the 2nd section suggests the use of social networking services. HR departments might benefit from the interactive communication enabled by the Web 2.0 and the implementation of social recruitment as a promising strategy. Subsequently, current recruitment activities of hospitals in general are explored by an online survey (cf. section 4). An empirical analysis of the social networking services Facebook and XING in section 5 reflects the hospitals' actual use and potentially success of these platforms. The overall success of social recruitment is discussed in section 6, followed by a final summary and an outlook on further research activities.

2 Skill Shortage and Human Resource Management in Hospitals

Despite the high economic importance of the healthcare sector, the domain is more and more shaped by a dramatic skill shortage. Demographic changes are leading to a lack of young medical and nursing staff. At the other hand, medical and technological progress, changing organizational structures, such as interdisciplinary teams as well as the increasing demands of patients raises qualification requests and improvements in education and training of hospital staff.

2.1 Skill Shortage in Hospitals

Shortages of skilled staff have long been known in nursing and medical service. A survey conducted in 2010 among members of the Marburger Bund¹ identified 12.000 current vacant positions for medical services (Marburger Bund 2010). The actual lack of skilled staff can also be recognised in the "Krankenhaus Barometer 2011" announced by the German hospital institute DKI (Blum et al. 2011). Based on this survey, 74% of all hospitals have difficulties to fill vacancies in medical services. In numbers, there is a lack of 3.800 full-time employees throughout Germany. Similar problems are known concerning nursing staff. On average, 5.6 full-time vacancies per hospital cannot be filled in that domain. The current and prospective lack of adequate staff is therefore a major challenge for all hospitals and their HR departments. Thus, hospitals have to implement appropriate strategies to stand out from the crowd in this "war for talent". This can primarily be reached by verified and constant high quality of medical care (Schaffartzik 2009) and the corresponding highly qualified staff. Therefore, human resources are the crucial factor of success to any other service of the hospital.

2.2 Specifics of Human Resource Management in Hospitals

A central characteristic of the health care sector is the more functionally oriented organisation structure. Hierarchical structures in German hospitals are merely built up around (medical) knowledge (Lega & DePietro 2005). Thus, hospitals can be understood as expert organisations in which employees with high level of expertise hold wide authority and autonomy (Engelke & Schmidt-Rettig

¹ The Marburger Bund is the specific trade union of medical doctors in Germany.

2006). This leads to the constitution of robust subcultures. Due to this often counterproductive culture at hospitals, Senge (1990) called the healthcare sector an "anti-learning industry", which impedes the introduction of a company-wide learning culture (Khatri et al. 2006). This is particularly difficult because change and adaptation readiness had become critical factors in hospitals. With the more instable environments, functional structures become more and more unsuitable (Lega & DePietro 2005). Highly diversified services increase the need for integration and coordination of the more and more diverse subdivisions (Kinston 1983). Demands for inter-organisational cooperation, such as hospital alliances and networks, but also the internal integration of functional departments require reengineering of existing processes. As a consequence, traditional roles in hospitals have to be (re-) allocated, whereas the overcome of different cultures is the most significant challenge (cf. Lega & DePietro 2005). Subject-specific and centralised hierarchies as well as competency-based individual autonomy have to be transformed into team-based structure and collaborative cultures.

A further characteristic is based on the high patient involvement. Very personal contact and the importance of medical service for patient's life shape the relationships to the "customers" in contrast to other service domains. These "high-contact service organizations" (Goldstein 2003) set special requirements to the workforce. Thus, HR takes a prominent role in this domain. But hospitals are strongly regulated by legal and political rules and decisions. So, resources and actions of the HR department are highly depending on such external regulations.

In summary, specifics of hospitals are the more functional organisational structure, intensive personal contact to patients and legal provisions. These aspects determine the framework of HR.

2.3 Recruitment as a Central Instrument against Skills Shortage

Filling vacant positions urgently or only with little delay needs rapid reaction. Among the investigated areas of human resource management, the *human resources marketing* and *recruiting* can be applied relatively short-dated (see Figure 1). The implementation of new search approaches and extended communication channels can be realised relatively quickly. The study analyses to what extent these types of human resource management activities can be supported by methods and applications of Web 2.0, i. e. social networking services. Therefore, the next section gives an overview on relevant erecruitment approaches as well as understanding and application areas of Web 1.0 and Web 2.0.

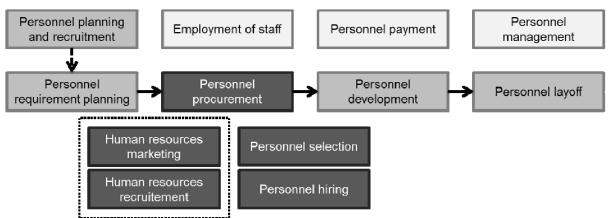


Figure 1. Areas of human resources management covered by the study (Wickel-Kirsch et al. 2008; Holtbrügge 2010)

3 E-Recruitment, Web 1.0 and Web 2.0 for HR

The term "e-recruitment" summarises shades of web-based recruitment. Employment websites, career networks and career sites of companies are still the most effective ways. A general approach and the use of Web 1.0 and Web 2.0 applications are explained in the following section.

3.1 E-Recruitment

Lee (2011) defines e-recruitment as "a hiring process that utilizes a variety of electronic means and technologies with the primary purpose of identifying, attracting, and selecting potential employees. In addition, e-recruiting technologies are defined as web-based technologies that help recruiters and job applicants to complete their tasks more efficiently and effectively by automating recruiting processes and providing the information necessary for making appropriate decisions." In this definition the radical developments of recruitment processes caused by automation and changed information supply are highlighted. A typical strategy of traditional recruiting is the so-called batch processing ("batch mode") of applications. Numerous hard copies of applications, handwritten signatures, and strict differentiations of internal and external communications transform classic recruitment to a very time consuming process. Due to the use of automated analysis and selection processes and reduced paperwork, electronic recruitment processes are much more time-saving (Lee 2011). Accordingly, time spent on face-to-face job interviews also declines by concentrating on highly relevant candidates only (Buckley et al. 2004) However, also this type of recruitment has a "dark side" (Dineen et al. 2007), such as an immense flood of applicants but with partly deficient qualifications. Thus, the aforementioned economic benefits by procedural improvements are put into perspective due to the cost of candidate selection (Maurer & Cook 2011).

3.2 Web 1.0

Using the internet to find a job is nowadays as common as candidates looked at job advertisements in newspapers 10 years ago. Thereby, the majority of applications is achieved via companies' career sites and general job websites (Institute for Competitive Recruiting 2011). Both represent types of one-way communication in which the company provides information to candidates. The organization takes the role of a sender; the applicant is acting as receiver. That means there is a clear one-to-n relationship.

The lack of skilled staff caused that qualified candidates become more and more customers of the hospital that have to be handled carefully. Only passive recruiting strategies are no longer sufficient. Hospitals need to actively address potential applicants. These more offensive recruiting strategy can be supported by the use of Web 2.0 technologies (Kürn 2009), i. e. social networking services.

3.3 Web 2.0 and Social Networking Services

Using a Web 2.0 platform for human resource management needs to be attractive and valuable for everyone involved. As a precondition to enable this valuable interaction, the information offered here has to meet the information requests. In order to select a suitable platform, quantitative and qualitative aspects have to be considered (Kollmann & Stöckmann 2011). One quantitative aspect is shaped by the "chicken-and-egg problem" (Easton 1980), i. e. which actor needs to be represented first on the platform. A poor density of offers is as unattractive as too little potential and relevant applicants (Kollmann & Stöckmann 2011). So there are two critical masses²: on the side of the supply channel as

² Oliver et al. (1985) define a critical mass as "a small segment of the population that choose to make big contributions to the collective action, while the majority do little or nothing."

well as on the demand side (Kollmann 1998). Foundation and potential benefits from the Web 2.0 platform are qualitative aspects that determine if the offered services will be accepted or not.

The Forrester report "Global Enterprise Web 2.0 Market Forecast: 2007 to 2013" predicted that spending on Web 2.0 technologies will increase for the case of social networking services (Hülsbömer 2008). In comparison to other ways of recruitment, the so-called *social recruitment* might succeed by addressing latent job change-willing people that do not actively look for a new position and can therefore not be reached via employment websites and traditional offline channels (Schäuble et al. 2009). In addition, communities of social networking services meet the quantitative precondition by providing sufficient demand. An online survey accomplished by BITKOM and Forsa showed that 73% of the sample (1,001) actively uses social networking services. Among respondents at an age of 14–29 years, even 94%, and at an age of 30-49 years 76% are available via online social networks. Comparing the private use of several social networks in Germany, Facebook clearly dominates among the users up to the age of 50 years (Huth 2011). The fulfilment of the qualitative aspect can be affirmed as especially young users actively make sense of online social networks. For recruitment of young employees, social networks provide possibilities to address a relevant audience. In Germany, XING is the leading online social network for business and professionals. With 12 million users worldwide, including 5.5 million in German-speaking countries, XING has the largest range in the German business segment (boerse.ARD 2012; XING AG 2012). From a qualitative and quantitative point of view, both platforms appear to be appropriate instruments in the recruitment.

In the context of HR online social networks are also interesting because of the different relationship levels of their members. According to a distinction between "strong" and "weak ties" social networks are characterised by rather weak and loosely joined relationships (Cyganski & Hass 2011). Following Granovetter (1973), the binding strength is defined as a combination of contact frequency, emotional intensity, intimacy and mutual commitment. Depending on the severity of these components, there are weak or strong bonds. The value of weak ties is particularly formed by the connection of several communities and their contexts as well as by the willingness to communicate (Cyganski & Hass 2011). In general, online social networks have high potential to identify suitable candidates. This can be used in combination with the fact that recommendations by employees are a successful way to use relationships for recruitment, because employees tend to propose candidates that show similar performance as themselves. Employers also tend to offer promising recommendations to their employers to raise their own reputation (Holtbrügge 2010). With increasing online social networking, there is a much better access to information. Via the web, not only job-relevant information of potential candidates can be explored, but they can also be addressed actively. There are also large saving potentials. In comparison to newspaper advertisements or fees for online job agencies, there are just little costs caused by social networking services. In addition, the often time-consuming review and evaluation of application materials can be significantly reduced (Schäuble et al. 2009).

4 Recruitment in Hospitals – Results of an Online Survey

To analyse the recruitment activities of German hospitals an online survey with the title "Human Resource Management in the German health" was conducted. This exploratory approach aimed to identify actual used recruiting channels. The methods and results are presented in the following.

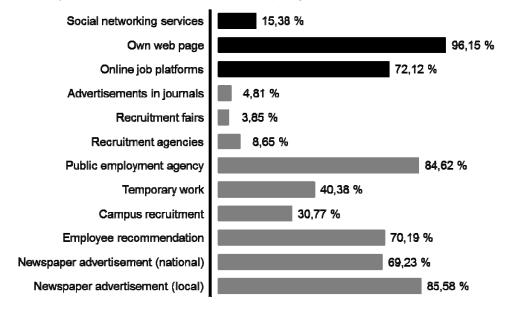
4.1 Sample Characteristics and Data Collection

For the survey preparation, a total of 1.267 suitable contacts were collected. Among these, approx. 35% were from contact persons of personnel management, 22% staff of human resources departments, 21% of the contacted persons were of management as well as administration departments, and for the remaining 22% only general contact e-mail addresses can be determined.

Within a two week period, a total of 110 responses were received. Out of these, 97 questionnaires were filled out completely (response rate of 8.7% or rather 7.7% for complete responses). However, considering that some survey participants are responsible for multiple hospitals in a hospital network, the actual response rate can be estimated much higher³. The questionnaire was created using the open source survey system LimeSurvey⁴. It consists of 18 individual questions that can be structured into the following groups: Already used recruitment channels, average number of applicants, success evaluation of e-recruitment channels, use of Web 2.0 applications for personnel marketing, barriers for the implementation of Web 2.0 technologies, and general personal information of the respondent.

Survey Results

For analysing the survey results, two topics will be highlighted: the actual use of e-recruitment channels and individual evaluations of its success. For the question on recruitment channels the participants could choose multiple options out of a given set. The option "other" allows adding three more channels that were not in the given set (e.g. recruitment fairs, recruitment agencies, advertisements in journals like "Deutsches Ärzteblatt"). Figure 2 visualises the results.



Percentage of use of channels for recruiting (N=104)Figure 2.

In the domain of e-recruitment channels, one-way communication is mainly represented by online job portals and the hospitals' web pages. Online social networks are channels with interactive (two-way) communication and thus mutual information providence in the context of e-recruitment. Almost all respondents (96.15%) use their own website as a recruitment platform. With another high percentage (about 85%) more classical recruitment ways follow, like advertisements in local newspaper and magazines, and the use of the public employment agency. There is a relatively balanced situation concerning the use of traditional recruitment and e-recruitment: Classical channels are used by 63%, whereas e-recruitment is used by 61% of the respondents. One-way channels of communication are predominantly used (84%). Only 16 people (15%) state they have already used social networks for recruitment process. In summary, the results are in a line with former presented studies on recruiting.

³ Participants were asked at the end of the questionnaire name the numbers of hospitals, for which they are responsible. On average, respondents are responsible for 3.6 hospitals whereas answers vary from 1 to 33 hospitals.

⁴ Cf. http://www.limesurvey.org/

5 Social Networking Services and Social Recruitment in German Hospitals – An Empirical Online Analysis of Facebook and XING

A further evaluation should provide information about the actual presence of German hospitals in social networking services. Therefore, the more privately used platform Facebook and the business network XING were analysed. These very different types of social networks were chosen in order to identify differences in presentation and usages. The intention was to show to which extend hospitals are already using social networks. In addition to a quantitative analysis, the qualities of the activities were also evaluated by indicators like provided information or interactions. In a third analysis step the extension of social recruitment activities in these networks have been measured.

5.1 Data and Sample

The data for the analysis is taken from the "white list" of the Bertelsmann Foundation. Due to the extensive data base (1,867 records) it was reduced to a representative sample. First, data sets were excluded, which do not characterise the hospital as a "General Hospital". After this data cleansing, a net population of 1,532 remains. For obtaining a representative sample, a hierarchical cluster analysis using Ward's method was performed. Therefore, the hospitals were grouped by their sizes. This was done based on the following attributes:

- Number of full time stationary cases,
- number of beds,
- number of doctors (without attending physicians), and
- number of further health care and nursing staff.

Table 1 shows the identified three different hospital sizes. With the help of the statistics software SPSS, a proportionate random sample (Wermuth & Streit 2007) containing 15% of the net population was determined. This results in a sample size of N=230, which contained 197 records of class 1, 24 of class 2 and 9 from the third size class.

	Ward Method											
	1				2				3			
	Ø	Min	Max	n	Ø	Min	Max	n	Ø	Min	Max	n
Cases	7886	47	20495	1308	26299	20655	38486	163	52871	39563	184230	61
Beds	212	2	1272	1308	651	350	1422	163	1328	826	3213	61
Doctors	47,31	,00	267,30	1308	194,50	37,00	541,90	163	326,19	273,20	3290,00	61
Further staff	117,1821	,0000	1202,0000	1308	387,6442	118,0000	941,4000	163	936,3721	435,9000	1929,00000	61

Table 1: Descriptive statistics to the survey sample classes

5.2 The Usage of Facebook by Hospitals

17.8% of the hospitals have their own Facebook page or rather a page of their parent group or hospital network. This result corresponds to the previously presented online survey (here 15.38% stated that they use online social networks). To evaluate the usage in general, this quantitative value alone has little significance. Therefore, the quality of the Facebook page was evaluated in a next step.

⁵ According to the definition of the German Federal Statistical Office, General Hospitals are Hospitals that have beds in inpatient departments, whereas beds are maintained not only for psychiatric, psychotherapeutic or psychiatric, psychotherapeutic and neurological patients. Hospitals of the German Federal Defence Force "Bundeswehr" as well as day or night clinics are also excluded.

Most profiles provide general information about the hospital and its range of services, as well as further contact information. More than 80% of hospitals used photos as illustrative elements. The number of received "likes" of hospitals' profiles varies from 0 to 493. One way to evaluate the activity on Facebook is based on the amount of own posts and comments. 70% of hospitals do not even post once a week. Overall, the activity on the hospitals' pages can be rated low. One fifth of the Facebook pages have even less than one activity per month. The range of the monthly activities varies from 0 to 15. According to this, there are some hospitals that use Facebook more intensively as a communication tool. Whether hospitals can stimulate conversations was evaluated as an indicator of interaction. The number of hospitals' posts was compared to those of other users. So, for one third of cases studied there was no interaction at all. In 10% of all cases there was a nearly balanced interaction between hospital and other users. However, activities are predominantly performed by profile owners. Finally, activities were analysed if they are part of the social recruitments. Social recruitment activities can be identified for 60% of hospitals' Facebook profiles. Thus, it could be stated that more than half of the analysed hospitals is already involved in social recruitment activities. However, with the shortage of skilled staff in mind, that number has to be put into perspective. In 40% of all cases observed the potential of the social network presence is underachieved, although the provision of job offers in this way requires little extra effort and extensive know-how.

5.3 The Usage XING by Hospitals

Using the enterprise search feature of XING has revealed that 30.4% of the sample can be found here (18.7% via parent groups or hospital networks). However, it does not necessarily mean that hospitals have actively created a company profile. Only eight of the 230 hospitals have such a self-established profile on XING. Enterprise profiles are basic features of XING. The profile allows free memberships, customizing features like an own logo, as well as a news channel. Generally, the creation of a corporate profile has no certain risks and needs little effort. Therefore, it is hard to understand that only 3.5% of hospitals seem to take this option. In summary, hospitals in Germany are rarely present on XING. Hence, they cannot use the platform actively in order to look for suitable candidates.

5.4 Conclusion on the Use of Social Networks and Social Recruitment

The evaluation of the use of social networks by an online analysis has revealed that these communication channels are little-noticed by hospitals. Less than a fifth of all analysed hospitals can be recognised on the largest and most successful social networking service Facebook. The option to use the business network XING is only used by less than 5%. In summary, the study shows a very small use of social networks by hospitals. However, this statement must be handled carefully because of the rapidly growing number of profile registrations⁶ in online social networks, which leads to an increased number of hospitals registered at Facebook (Schleicher 2012) and other networks. It seems that the hospital industry currently discovers and establishes the use of social media in e-recruitment. But at the moment, among the existing profiles, social networks are rarely used actively and strategically. On Xing, no recognizable professional use for e-recruitment could be observed. Accordingly, it is not surprising that observable implementations of a social recruitment strategy are only to a very limited extent. The increasing numbers of users, however, indicate that they might be also relevant for hospitals. In conclusion, social recruitments on Facebook and XING are evaluated in the next section. Thereby, increasing numbers of applicants are considered as an indicator of success.

_

On the basis of quantitative measurements on newly registered hospital Facebook pages a strong growth of 40% in the period July 2011 to February 2012 can be stated.

6 Success of Social Recruitment

As the hospital industry faces a dramatic shortage of skilled staff, appropriate actions of intervention need to be taken. Therefore, social recruitment was introduced as a strategy. The additional recruitment channels enable the access to a larger and wider target group. Profile pages in social networking services also allow presenting the hospital as an attractive employer. Furthermore, an active communication between candidates and potential employers can be achieved. Applicants can learn more about the company beforehand and may eliminate existing information asymmetries. For the hospitals, the sometimes complex selection process can be shortened and deregulated. The establishment of an attractive employer brand can be used as an indirect way to increase the number of applicants. In this section it is analysed to what extent potentials can be positively implemented.

6.1 Hypotheses on the Potential of Social Recruitment

The discussed hospital industry needs to increase the number of (relevant) candidates to overcome the lack of qualified ones. Thus, the average amount of applicants per vacant position is used to measure the success of personnel marketing. Therefore, only hospitals that already use social recruitment were taken into account. The following hypotheses were used to analyse this connection with regard to the professional background needed and hierarchy of the vacant positions:

- **Hypothesis 1:** The implementation of social recruitment leads to an increasing number of incoming applications for vacant positions in the senior medical service.
- **Hypothesis 2:** The implementation of social recruitment leads to an increasing number of incoming applications for vacant positions in the senior nursing.
- **Hypothesis 3:** The implementation of social recruitment leads to an increasing number of incoming applications for vacant positions in the non-executive medical service.
- **Hypothesis 4:** The implementation of social recruitment leads to an increasing number of incoming applications for vacant positions in the non-executive nursing.

6.2 Results of the Potential Analysis

Table 2 shows the comparative results of four regression analyses. Therefore, the job profiles that were chosen for the hypotheses are determined as regression models. All models are significant and have explanatory power (cf. adjusted R² between 15 and 20%). The independent variables explain therefore about one-fifth of the scattering of the dependent variable "amount of applicants". The results show that surprisingly social recruitment seems to have no significant effect on the application volume for non-executive positions. Accordingly, hypothesis 3 and 4 cannot be confirmed. For senior positions, the analysis show converse results. A correlation between social recruitment and growing number of applicants can be observed here. In addition, the results vary with regard to the different social networks XING and Facebook. Especially the second model shows a highly significant correlation between social recruitment on Facebook and a growing number of applicants for senior nursing positions. Thus, social recruitment increases the number of applications to senior nursing position by nearly 15 (b = 14.830 senior nursing Facebook). This means that hospitals using Facebook for recruitment may achieve a unique competitive advantage. Compared to that, recruitments using XING has no influence. This maybe results from the small number of users with a nursing background. Overall, the hypothesis 2 can be confirmed. Hypothesis 1 suggests a positive influence of social recruitment on the number of applicants for senior medical service positions. Comparing the both social networking services, XING has a greater influence on application numbers. The use of XING or Facebook consequently leads to an increase of about 8 to 9 additional candidates (b = 9.5420 senior nursing Xing, b = 8.6020 senior nursing Facebook) compared to companies who do not take this option. Thus, hypothesis 1 can be confirmed.

		del 1:		lel 2:		del 3:	Model 4:		
	senior medical		senior nursing		non-exec. medical		non-exec. nursing		
	b	β	b	β	b	β	b	β	
Forecast value									
sen. nursing Xing	9.5420	0.422**	6.2120	0.2300	2.2830	0.1000	-1.6190	-0.0340	
sen. nursing Faceb.	8.6020	0.369**	14.830	0.519**	-1.4050	-0.6000	9.4330	0.1920	
			0	*					
Control values									
population densitiy state	0.0180	0.3200	-0.0160	-0.2360	-0.0230		-0.0410	-0.333*	
Case-Mix	5.6460	0.0100	3.2690	0.450**	3.4320		5.7340	0.436**	
newspaper ad local	-1.4940	-0.0620	-1.6880	-0.0570	-2.3690		-16.6410	-0.309**	
newspaper ad national	1.4300	0.0750	-1.5410	-0.0660	0.0440		-2.4700	-0.0590	
employees	2.2300	0.1140	-1.8280	-0.0740	-3.5620		-5.8970	-0.1340	
campus recruitng	-1.10480	-0.0530	4.6580	0.1880	4.7620		12.5240	0.279**	
temporary employ.	-0.2060	-0.0110	-1.1770	-0.0530	2.7680		6.1130	0.1530	
public employ, agency	-5.2730	-0.1910	2.1020	0.0620	-1.9680		-10.3780	-0.1680	
online job portals	0.3810	0.0180	-0.8980	0.0160	-2.4030		-2.4560	-0.0540	
homepage	11.4250	0.1550	3.2930	0.0360	3.7990		-4.3350	-0.0260	
social networks	-10.5910	-0.543**	-9.1600	-0.3830	-3.1400		-7.6190	-0.1800	
physicans	0.0580	0.633***	0.0340	0.3090	0.0600		0.0600	0.3060	
total beds	-0.0110	-0.2970	0.0010	0.03300	-0.0240		-0.0140	-0.1740	
\mathbb{R}^2	0.3730		0.3740		0.39530		0.3350		
Corrected R ²	0.1920		0.1900		0.1770		0.1500		
F	2.062**		2.034**		2.001**		1.812		
N	68		67		71		70		

Table 2. Results of regression analyses for the tested hypotheses 1-4 (significance level: $*\rho < 0.1 ** \rho < 0.05 *** \rho < 0.001$; b: non-standardised regression coefficient; β : standardised regression coefficient)

7 Conclusion and Outlook

Using social networks for recruiting in hospitals is in the early stages. Only few German hospitals have already performed social recruitment. However, the number of hospitals' Facebook profiles grows constantly. But numerous hospitals do not have a clear strategy and seem to be content with a simple presence on the online social network. It can be supposed that the perceived barriers and the associated risk are still regarded as too high for many hospitals. Retentions concerning costs are out of all proportion towards the benefits⁷ or on privacy and professionalism seem to be still too serious. However, the results predict the success of social recruitment for filling vacant senior positions. The rare use of XING and the statements of some respondents indicate the underestimated potential of this business community. Repeatedly, respondents referred to the high cost the low acceptance among the relevant audience and that medical professionals were barely represented. Concerning medical senior positions, these statements have to be rejected. A relatively high percentage (38%) of German senior physicians in the inpatient sector are presented on XING with an own profile. Contrastingly, only 3.5% of hospitals and thus potential employers have a self-created profile on XING. The analysis results also show the potential to fill vacant positions via using this recruiting channel.

The study contributes to a current, highly relevant, and constantly growing research field, which is mainly driven by practical developments in the health care industry. The results underpin that social networking services should be taken into account by hospitals as additional e-recruitment tools, as they may be implemented with low cost whereas the potential use seem to be very high. Additional insights could be achieved e. g. via expert interviews in hospitals. Using further qualitative data on the

⁷ This was written in a comment of the online survey on planned use of social recruitment.

could identify concrete barriers, but also assess social recruitment activities based on qualitative characteristics of applicants. An exciting research question for following investigations would also contain an analysis of the candidates' perspective in order to compare it with the findings of this work. Thus, the attitude and acceptance of medical staff towards social recruitment would be in the focus.

References

- Blum, K. et al., 2011. Krankenhaus Barometer: Umfrage 2011, Düsseldorf.
- boerse.ARD, 2012. Xing wächst immer noch. *Börse und Geld bei ARD.de*. Available at: http://boerse.ard.de/meldungen/xing-waechst-immer-noch-100.html.
- Buckley, P. et al., 2004. The use of an automated employment recruiting and screening system for temporary professional employees: A case study. *Human Resource Management*, 43(2 & 3), pp.233–241. Available at: http://doi.wiley.com/10.1002/hrm.20017 [Accessed March 17, 2013].
- Cyganski, P. & Hass, B.H., 2011. Potenziale sozialer Netzwerke für Unternehmen. In G. Walsh, B. H. Hass, & T. Kilian, eds. *Web 2.0: Neue Perspektiven für Marketing und Medien2*. Berlin, Heidelberg: Springer, pp. 81–96.
- Dineen, B.R. et al., 2007. Aesthetic properties and message customization: Navigating the dark side of web recruitment. *Journal of Applied Psychology*, 92(2), pp.356–372.
- Easton, A.T., 1980. Viewdata—a product in search of a market? *Telecommunications Policy*, 4(3), pp.221–225.
- Engelke, D.-R. & Schmidt-Rettig, B., 2006. Management im Gesundheitswesen. In R. Busse, J. Schreyögg, & C. Gericke, eds. *Management im Gesundheitswesen*. Berlin, Heidelberg: Springer, pp. 285–301. Available at: http://www.springerlink.com/index/10.1007/978-3-540-29465-8 [Accessed December 6, 2012].
- Goldstein, S.M., 2003. Employee Development: An Examoination of Service Strategy in a high-contactservice environment. *Production & Operations Management*, 12(2), pp.186–203.
- Granovetter, M.S., 1973. The Strength of Weak Ties. *The American Journal of Sociology*, 78(6), pp.1360–1380. Available at: http://www.itu.dk/courses/DDKU/E2007/artikler/Granovetter-Weak Ties.pdf.
- Holtbrügge, D., 2010. *Personalmanagement* 4th ed., Berlin, Heidelberg: Springer. Available at: http://www.springerlink.com/index/10.1007/978-3-642-14580-3 [Accessed December 6, 2012].
- Hülsbömer, S., 2008. Web 2.0 wird marktreif. Computerwoche, p.17.
- Huth, N., 2011. *Soziale Netzwerke. Eine repräsentative Untersuchung zur Nutzung sozialer Netzwerke im Internet*, Berlin. Available at: https://www.bitkom.org/files/documents/BITKOM_Publikation_Soziale_Netzwerke.pdf.
- Institute for Competitive Recruiting, 2011. *Social Media Recruiting Report 2011*, Available at: http://competitiverecruiting.de/SocialMediaRecruitingReport2011.html.
- Khatri, N. et al., 2006. Strategic human resource management issues in hospitals: a study of a university and a community hospital. *Hospital Topics*, 84(4), pp.9–20.
- Kinston, W., 1983. Hospital organisation and structure and its effect on inter-professional behaviour and the delivery of care. *Social Science & Medicine*, 17(16), pp.1159–1170.

- Kollmann, T., 1998. Marketing for Electronic Market Places -the Relevance of Two "Critical Points of Success". *Electronic Markets*, 8(3), pp.36–39.
- Kollmann, T. & Stöckmann, C., 2011. Diffusion von Web 2.0-Plattformen. In G. Walsh, B. H. Hass, & T. Kilian, eds. Web 2.0: Neue Perspektiven für Marketing und Medien2. Berlin, Heidelberg: Springer, pp. 33–47. Available at: http://www.springerlink.com/index/10.1007/978-3-642-13787-7 [Accessed November 23, 2012].
- Kürn, H.-C., 2009. Kandidaten dort abholen, wo sie sind: Wie Web 2.0 das Recruiting und Personalmarketing verändert. In *Employer Branding. Arbeitgeber positionieren und präsentieren*. Köln: Luchterhand, pp. 148–155.
- Lee, I., 2011. Modeling the benefit of e-recruiting process integration. *Decision Support Systems*, 51(1), pp.230–239. Available at: http://linkinghub.elsevier.com/retrieve/pii/S0167923611000029 [Accessed November 22, 2012].
- Lega, F. & DePietro, C., 2005. Converging patterns in hospital organization: beyond the professional bureaucracy. *Health Policy*, 74(3), pp.261–281.
- Marburger Bund, 2010. *Mitgliederbefragung 2010 zur beruflichen Situation der angestellten und beamteten Ärztinnen und Ärzte*, Berlin. Available at: http://www.marburgerbund.de/umfragen/2010_mitgliederumfrage/Hintergrundinfo.pdf.
- Maurer, S.D. & Cook, D.P., 2011. Using company web sites to e-recruit qualified applicants: A job marketing based review of theory-based research. *Computers in Human Behavior2*, 27(1), pp.106–117.
- Oliver, P., Marwell, G. & Teixeira, R., 1985. A theory of the critical mass. I. Interdependence, group heterogeneity, and the production of collective action. *American Journal of Sociology*, 91(3), pp.522–556.
- Schaffartzik, W., 2009. Wettbewerb zwischen Krankenhäusern aus Sicht des ärztlichen Leiters. *Zeitschrift für Evidenz, Fortbildung und Qualität im Gesundheitswesen*, 103(10), pp.653–657.
- Schäuble, T., Mandl, T. & Griesbaum, J., 2009. Mehrwertpotenziale von Online-Social-Business-Netzwerken für die Personalbeschaffung von Fach- und Führungskräften. In S. Fischer, E. Maehle, & R. Reischuk, eds. *Informatik* 2009 *Im Focus das Leben, Beiträge der 39. Jahrestagung der Gesellschaft für Informatik e.V. (GI)* 28.9. 2.10.2009 in Lübeck. Bonn: Springer, pp. 2166–2180.
- Schleicher, M., 2012. Liste der deutschen Krankenhäuser bei Facebook (01/2012). *der gesundheitswirt*. Available at: http://gesundheitswirt.posterous.com/liste-der-deutschenkrankenhauser-bei-faceboo.
- Senge, P.M., 1990. The fifth discipline: The art of the learning organization, Currency.
- Wermuth, N. & Streit, R., 2007. *Einführung in statistische Analysen*, Berlin, Heidelberg: Springer. Available at: http://www.springerlink.com/index/10.1007/978-3-540-33931-1 [Accessed December 6, 2012].
- Wickel-Kirsch, S., Janusch, M. & Knorr, E., 2008. *Personalwirtschaft: Grundlagen der Personalarbeit in Unternehmen*, Wiesbaden: Gabler.
- XING AG, 2012. Wie viele Mitglieder hat XING, wie viele davon sind Premium-Mitglieder? Q&A.