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Research Report

Attitudes, Preferences and Usage Behavior of the Population Regarding Social Media Pages of Hospitals - Results of a Quantitative Survey in the DACH Region (Germany, Austria, Switzerland)

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Attitudes, Preferences and Usage Behavior of the Population Regarding Social Media Pages of Hospitals -
Results of a Quantitative Survey in the
DACH Region (Germany, Austria, Switzerland)

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April 2021

Abstract: This research report describes attitudes, preferences and usage behavior of the population regarding social media pages of hospitals. For this purpose, the results of a quantitative survey (N=1,547) in the DACH region (Germany, Austria, Switzerland) are presented and explained.

This research report is an adapted English version of a report in German (Beier and Früh 2021). The report in German can be found here (free PDF):

https://www.researchgate.net/publication/350801484

and here: https://ssrn.com/abstract=3825715

1. Introduction

Social media platforms offer hospitals, medical centers and clinics (hereinafter referred to synonymously as hospitals) extensive opportunities to reach their target groups effectively and efficiently. Conversely, however, it also appears necessary for hospitals to adapt the way they communicate with their stakeholders in some respects to the changed forms and structures of interaction on the new platforms. In recent years, numerous studies have been conducted on how hospitals can use their own presences (hereafter referred to as pages) and activities on social media platforms (e.g., Facebook and YouTube) to pursue specific purposes (e.g., patient acquisition, employer branding, or increased public presence). However, most research has been mainly focused on the perspective of hospitals. In contrast, the attitudes, preferences and usage behavior of the population with regard to social media pages of hospitals have been largely disregarded in empirical studies so far. Ultimately, however, these are decisive factors influencing the extent to which social media strategies and activities can be successfully implemented by hospitals. Against this backdrop, this study explores four key research questions regarding the attitudes, preferences, and behaviors of the population with respect to hospital social media pages. These four research questions (RQ) are:

RQ1: *What are the prevailing opinions among the population regarding hospital pages on social media platforms and their content?*

RQ2: *To what extent does the public use social media platforms and to what extent do they follow hospital pages on them?*

RQ3: *What are reasons why people follow hospital pages on social media platforms?*

RQ4: *What are reasons why people <u>don't</u> follow hospital pages on social media platforms?*

In order to provide empirically sound answers to the preceding research questions, a quantitative survey (N=1,547) was conducted via a standardized online questionnaire in the three countries of the DACH region (Germany, Austria, Switzerland). The data collected and the analyses of the results are intended to help hospitals to better understand their target groups in the population and, based on this, to (further) develop social media strategies and activities that (better) meet the needs, wishes and behaviors of the users of social media platforms.

This research report documents the collection and analyses of the survey data. To this end, the following chapters briefly present relevant theoretical foundations (chapter 2), explain the data basis and methods of analysis (chapter 3), and describe and discuss the findings on the individual research questions (chapter 4). The research report closes with a conclusion and outlook (chapter 5).

2. Social Media and Hospitals

"Social media" generally refers to Internet-based or mobile platforms that allow their users to create and maintain their own profiles, network with other profiles, and exchange messages or publish their own content via the platform (Boyd and Ellison 2008; Luca 2015; Taylor and Strutton 2016). Some of these platforms focus more on networking between their users (online social networks), while others are more concerned with the distribution of user-generated content in specific formats, such as online videos (e.g., YouTube) or online reviews of products and services (e.g., Yelp and TripAdvisor) (Kaplan and Haenlein 2010; Luca 2015).

The starting point for both the technical development and the extensive spread of social media platforms among the population was the transition from Web 1.0 to Web 2.0 (Beier 2018; Beier and Wagner 2016; Kaplan and Haenlein 2010). It was the Web 2.0 technologies that enabled the development and operation of web-based services which allow users in interactive platforms to edit or provide content among each other without having to program or operate websites themselves (Beier and Wagner 2016). Accordingly, only these developments enabled the broad participation of the general population in Internet communication. Moreover, the extent and intensity of this broad participation was again significantly increased when the advent of smartphones increasingly allowed the use of Internet technologies via "mobile apps" (mobile applications running on smartphones) at any place, at any time, and in virtually any situation (Aguenza et al. 2012; Beier 2018; Beier and Aebli 2016; Syrek et al. 2018). The more smartphones became part of everyday life in the population, the more comprehensive the presence and availability of social media platforms became for many people (Beier and Früh 2019b; Leimeister 2015). Today, the use of social media platforms is generally part of the everyday life for many people in the DACH region. For example, in a survey in Switzerland, 42% of respondents said they use social media platforms daily, and 62% use them at least occasionally (Latzer et al. 2017).

Thus, social media platforms offer important communication channels for the healthcare sector in general, and for hospitals in particular, to interact and connect directly with different stakeholder groups in the population (Beier and Früh 2019b; Campbell et al. 2014; Moorhead et al. 2013). On the one hand, the platforms offer hospitals enhanced opportunities to serve their audiences with informative but also social, emotional, or supportive content (Zhou et al. 2018). On the other hand, they also provide hospitals with an effective and efficient means to better get to know and understand their respective stakeholder groups (Beier 2016; Fan and Gordon 2014; Stieglitz et al. 2014). In general, social media platforms are considered an important tool for communication and marketing by hospitals (Smith 2017). In this context, social media platforms offer hospitals many potential benefits in various areas of application, but in some respects they also require adjustments in terms of how hospitals communicate with their stakeholders (Beier and Früh 2020a).

Against this backdrop, research in recent years has focused intensively on various core topics relating to the use of social media platforms by hospitals. For example, early studies in this fairly young field of research first investigated exhaustively the extent to which hospitals maintain their own pages on social media platforms (social media adoption) and what reach (measured as the number of followers on the pages) they generate with them (e.g., Beier and Früh 2019a; Bermúdez-Tamayo et al. 2012; Huang and Chang 2012, Martinez-Millana et al. 2017; Thaker et al. 2011; Van de Belt et al. 2012; Vanzetta et al. 2014; Wong et al. 2016). Likewise, some other studies have investigated which factors influence whether hospitals maintain their own pages on social media platforms and what reach they achieve with their activities (e.g., Beier and Früh 2020a; Griffis et al 2011; Yang et al. 2018).

In addition, numerous studies have examined how hospitals use their own activities on social media platforms in specific contexts or for specific purposes (Beier and Früh 2020a). For example, studies have examined how and to what extent hospitals use social media platforms as a communication and marketing tool to reach potential patients, provide information on health topics, establish a public presence, or showcase their own service offerings (Diddi and Lundy 2017; Kordzadeh and Young 2018; Smith 2017; Wong et al. 2016). There were also analyses of how hospitals can support or improve their service delivery to patients through activities on their social media pages (Beier and Früh 2019a; O'Conner et al. 2016; Zhang et al. 2018). In addition, studies have examined how hospitals use their social media pages in the education and training of professional staff, as well as in employer branding and recruiting (Carpentier et al. 2017; Cartledge et al. 2013; Widmer et al. 2016).

Overall, these research findings offer a variety of insights into the purposes hospitals can pursue with activities on social media platforms and what they need to do in order to be successful with them. However, most of the studies were conducted solely from the perspective of hospitals or on the basis of data from hospitals' social media pages. The perspective of the population, on the other hand, has mostly either been neglected or only indirectly included. The only research area where the behavior of the population or users in social media platforms in relation to hospitals has been specifically addressed so far is the analysis of reviews of hospitals in social media platforms (e.g., on Yelp, Google Reviews, or Facebook). These studies have mostly examined the extent to which such reviews from the public correlate with official hospital quality statistics (Bjertnaes et al. 2020; Campbell and Li 2018; Glover et al. 2015; Lee et al. 2018; Perez and Freedman 2018). In this regard, however, it was also noted that biases occur on social media platforms because parts of the population are not active on them or do not review hospitals on them (Bjertnaes et al. 2020; Campbell and Li 2018; Rozenblum et al. 2017; Huppertz and Otto 2018). Furthermore, there are hardly any empirical findings to date on attitudes, preferences or user behavior of the population with regard to social media pages of hospitals.

In the context of this study, social media platforms can be categorized into three types that are of particular relevance for the empirical analysis of the preceding research questions:

(1) On the one hand, these are **general online social networks** (e.g., Facebook and Instagram). These are geared to the broadest possible user base and offer general functionalities for networking and exchange without addressing specific application contexts or user groups.

(2) On the other hand, these are **business-related online social networks** (e.g., XING and LinkedIn). In these, the focus is on networking and activities in professional and occupation-related contexts. Accordingly, these platforms offer special functions for networking and exchange in terms of industry-, topic-, and profession-related interactions. In addition, these platforms offer enhanced functionalities for organizations, e.g., in human resource management and recruiting (Amadoru and Gamage 2016; Dietel 2017).

(3) In addition, **content-sharing platforms** (e.g., YouTube) are relevant in the context of this study. These also offer networking opportunities between platform users. However, the focus is on the generation, provision and distribution of media content (Bernhardt et al. 2011; Kaplan and Haenlein 2010).

This study only includes social media platforms on which hospitals can set up and maintain their own pages and in which private individuals as users can follow these hospital pages on the platforms. "Following" in this context means that the content published by a hospital on its social media page can be subscribed to by users so that it automatically appears in the individual newsfeed of their platform account (Beier and Früh 2020b; Smith and Gallicano 2015).

Accordingly, however, other types of social media platforms or platforms with extensive social media functions are not considered in this study. First, these are general review platforms (e.g., Yelp and Google Reviews). Online reviews have also gained importance for hospitals in the DACH region (Angerer et al. 2017). Thus, on the one hand, in addition to general rating platforms, there are also special platforms for rating hospitals, and digital hospital registries allow their users to enter ratings and experience reports (e.g., welches-spital.ch or weisse-liste.de). On the other hand, hospitals can also be rated as employers on special rating sites for employees (e.g., Kununu or Glassdoor) (Beier and Früh 2019a; Könsgen et al. 2018). However, these platforms are primarily concerned with users publishing content about hospitals rather than networking with hospitals or subscribing to their content or pages. Second, crowdfunding platforms (e.g., Crowdify.net, GoFundMe, and Startnext) are also left out of this study. These are of increasing importance in the healthcare sector and also offer hospitals extensive opportunities for high-profile communication and digital networking with various stakeholder groups (Bassani et al. 2019; Beier et al. 2019; Beier and Wagner 2015; Burtch and Chan 2014). However, the nature and structure of networking and communication on the platforms does not meet the selection criteria of this study. Third, pure messenger services (e.g., Whatsapp, Snapchat, or Facebook Messenger) also remain excluded from this study. These communication services allow their users to network, send messages and share other content among each

other. However, they are primarily geared toward individual communication bilaterally or in group chats. Accordingly, these platforms can be understood more in terms of traditional communication networks (e.g., SMS and MMS) or as apps that built on general online social networks (Nieborg and Helmond 2019; Susilo 2014).

3. Data and Methods

For the empirical investigation of the preceding research questions, a quantitative survey was conducted using a standardized online questionnaire. To ensure sufficient reach and coverage in the DACH region, the questionnaire was distributed in Germany, Austria and Switzerland via the representative online panel of an internationally active market research company. The online survey was conducted in January 2021 and achieved a response of 1,547 fully completed questionnaires for the entire DACH region. The number of cases was distributed relatively evenly across the three countries (Germany (N=517), Austria (N=519) and Switzerland (N=511)).

Overall, the procedure described supports a high degree of representativeness in terms of general demographic characteristics of the respondents. However, the questionnaire was provided exclusively in German in all three countries. Thus, all major regions within the countries were covered. Nevertheless, in some cases there was a relative underrepresentation in the sample for individual regions in Switzerland in which the proportion of the population speaking German is very low.

A further restriction on the representativeness of the survey arises from the use of an online questionnaire and its distribution via the online panel. People who are not active online at all are largely disregarded. However, in the context of this study, this should be understood as focusing on the target group of social media pages of hospitals. Thus, this study aims to empirically analyze which relevant attitudes, preferences and behaviors prevail in the population which is generally accessible for hospitals via social media platforms. The empirically based results should help hospitals to better reach these target groups with suitable social media strategies and activities based on them. Nevertheless, hospitals should also be aware of the digitally inaccessible target groups and further consider how they can also be better reached and engaged (Borg et al. 2019). However, this is beyond the scope of this study. It should be noted, nevertheless, that in this study, due to the focus on online active people in the population, the surveyed shares of users on social media platforms are likely to be higher than in other surveys of the entire population (which also include the further population that is not active online at all).

The online questionnaire was used firstly to record the use and following of hospital pages on specific social media platforms among the population. On the other hand, specially developed items were used to determine the degree of agreement with statements or preferences regard-

ing the social media content of hospital pages. Following this procedure, degrees of agreement on motivations to follow or not to follow social media pages of hospitals were also surveyed. In order to be able to quantitatively record and evaluate the attitudes, preferences and motivations of the respondents, the responses to the individual items were each recorded using a 5-point Likert grading from (1) lowest agreement/preference to (5) highest agreement/preference. This mapping of responses to values between 1 and 5 allowed for the calculation of a mean value of responses for each item as well as the ordering of items into a rank order with decreasing means.

Surveys on the use of social media platforms (especially among the population) can easily be distorted if it is not clear to the respondents what exactly is meant by "social media platforms". For example, the surveyed usage rates and intensities in surveys on social media usage in the population turn out to be much higher if messenger services (e.g., Whatsapp or Snapchat) are included. Accordingly, the respondents were given a conclusive list of social media platforms in the questionnaire to which this study refers. In this regard, the general online social networks Facebook, Twitter and Instagram were named to the respondents, as well as the business-related online social networks XING and LinkedIn. In addition, the content sharing platform YouTube was explicitly mentioned. Likewise, an open category of "other social media platforms" was finally included, which allowed respondents to refer to platforms that function similarly to the explicitly listed social media platforms but were not included in the final list (e.g., Pinterest or Vimeo). Pure messenger services such as Whatsapp, Snapchat and Facebook Messenger were explicitly excluded from the survey.

4. Results and Discussion

In the following sections, the data collected in the quantitative survey are systematically described and analyzed with respect to the four research questions (RQ) of the study.

4.1. Opinions about Hospitals on Social Media Platforms (RQ1)

With regard to general opinions among the population about hospitals on social media platforms, the study differentiated between attitudes toward hospitals on social media platforms as well as preferences and expectations for content published on hospital social media pages.

Attitudes Towards Hospitals on Social Media Platforms

In a first step of the survey, all respondents (N=1,547) were confronted with various statements on possible attitudes towards hospitals on social media platforms and asked to indicate the extent to which they agreed or disagreed with each of these. For this purpose, the answers of the respondents to the individual items were quantitatively recorded using a 5-point Likert scale ranging from (1) "strongly disagree" to (5) "strongly agree".

Figure 1 shows the results for the individual items sorted in descending order by the mean of all respondents in the entire DACH region (Mean). A ranking is derived to match the descending mean values, which is displayed in the table as ascending numbering (Rank). The mean values of the quantitatively recorded responses to the attitude items range from 3.89 at rank 1 (highest agreement) to 2.65 at rank 9 (lowest agreement).

DACH N=1,547 Rank	Mean	Attitudes towards hospitals on social media platforms	Germany N=517 Rank	Mean	Austria N=519 Rank	Mean	Switzerland N=511 Rank	Mean
1	3.89	Social media channels of hospitals are only valuable if they offer relevant content.	1	3.87	1	3.97	1	3.83
2	3.56	Social media gives hospitals the opportunity to inform the public about health issues.	2	3.63	2	3.52	2	3.53
3	3.48	Hospitals should rather use the resources (which they invest in social media activities) for the treatment and care of patients.	3	3.53	3	3.49	3	3.40
4	3.34	Social media channels of hospitals offer a good opportunity to communicate with them in a publicity-effective way in order to place praise or criticism.	4	3.44	4	3.29	4	3.30
5	3.21	I think it's good when hospitals have a presence on social media.	5	3.26	6	3.11	5	3.26
6	3.20	I don't care if hospitals have a presence on social media or not.	6	3.19	5	3.22	6	3.20
7	2.94	I like / would like to be able to connect with my hospital (or multiple hospitals) via social media.	7	2.95	7	2.94	7	2.91
8	2.73	Social media channels of hospitals give me a sense of connection to the hospital.	8	2.79	8	2.61	8	2.79
9	2.65	I use / would use social media platforms to approach the hospital with questions.	9	2.76	9	2.55	9	2.65

Figure 1: Attitudes towards hospitals on social media platforms (N=1,547).
Source: Own survey.

In addition to the analysis of the responses for the entire DACH region, the figure also shows the results differentiated by the individual countries Germany, Austria and Switzerland (right part of the figure). Overall, the mean values for the individual items differ between the countries. However, the rankings of the items in the population's agreement are almost completely the same in the three countries. Individual deviations in the item rankings between the individual countries and the DACH region as a whole are highlighted in color in the figure. If an item was ranked lower by respondents in one country than in the total DACH region, this is marked in red. Conversely, if an item was ranked higher in one country than in the total DACH region, this is highlighted in blue.

Items related to the worthiness of information and content communicated by hospitals through their pages on social media platforms received on average the highest level of agreement (rank 1 and 2). The results for these items generally indicate concrete expectations and a higher appreciation among the population for substantial and relevant social media content related to health topics on hospital pages.

In contrast, the critical view that social media activities by hospitals could possibly divert resources away from their core tasks (treatment and care of patients) ranks third in the agreement of the population. Somewhat less positive attitudes toward hospitals' social media pages (rank 5) are also confirmed, as is a general lack of interest in hospitals' social media activities (rank 6).

In the literature, it has been noted (and occasionally criticized) that hospitals primarily communicate "outbound" via their pages on social media platforms. Thus, they mainly unidirectionally publish news and posts in various formats for diverse target groups. However, most of the activities of hospitals on social media are not aimed at intensifying interactions and relationships with their target groups or even taking inputs from them (Beier and Früh 2019b; Vanzetta et al. 2014; Wong et al. 2016). In this regard, however, the survey results of this study indicate that there also tends to be a low level of interest among the general population in connecting with hospitals via social media or even approaching hospitals with questions in this way (ranks 7 to 9). In contrast, however, there is a somewhat higher level of interest in posting statements about hospitals publicly visible on their social media pages (rank 4).

Preferences and Expectations Regarding Content on Social Media Pages of Hospitals

The analysis of general attitudes in the population showed in the first step that the perceived usefulness and value of hospital pages on social media platforms ultimately depends strongly on the content offered therein. In a second step, it was evaluated which specific content is considered desirable by the population. To this end, ten statements on possible preferences and expectations for the content of hospital pages on social media platforms were presented as items in the survey. A 5-point Likert scale from (1) "not at all desirable" to (5) "absolutely desirable" was used to quantify respondents' answers.

Figure 2 shows the results for the individual items sorted in descending order according to the mean of all respondents in the entire DACH region. Here, the mean values of the responses range from 3.80 at rank 1 (highest preference) to 2.51 at rank 10 (lowest preference). The right side of the figure shows the specific results of the three individual countries studied (Germany, Austria, and Switzerland) in detail. Deviations in the rankings of the individual countries compared to the entire DACH region are marked in red (the item has a lower rank in the respective country than in the entire DACH region) and blue (the item has a higher rank in the respective country).

DACH N=1,547		Preferences and expectations regarding content on social media pages of hospitals	Germany N=517		Austria N=519		Switzerland N=511	
Rank	Mean		Rank	Mean	Rank	Mean	Rank	Mean
1	3.80	Contributions to acute situations, for example epidemics/pandemics and how to deal with them (e.g. current Covid-19 situation)	1	3.95	2	3.78	1	3.68
2	3.76	Presentation of services offered by the hospital	2	3.88	1	3.83	2	3.55
3	3.57	Contributions to specific clinical syndromes and possible therapy methods	3	3.60	3	3.63	3	3.48
4	3.47	General advice and information on health topics	4	3.48	4	3.50	4	3.43
5	3.37	Contributions to occurrences and developments in the hospital	5	3.43	5	3.32	5	3.37
6	3.32	Information on regulations, society and politics in health care	6	3.42	6	3.27	6	3.27
7	3.23	Notes on events of the hospital	7	3.35	7	3.08	7	3.26
8	3.01	Introduction of employees from the hospital	8	3.10	8	3.00	8	2.93
9	2.71	Stories about patients	9	2.74	9	2.58	9	2.82
10	2.51	Contributions for entertainment (e.g. quiz questions, funny or nice photos/videos)	10	2.50	10	2.40	10	2.62

Figure 2: *Preferences and expectations regarding content on social media pages of hospitals (N=1,547). Source: Own survey.*

On social media pages of hospitals factual and specialist information from the healthcare sector are valued most highly by the population. For example, respondents consider posts about acute health situations (e.g., Covid-19) to be particularly desirable (rank 1). This high rating may be supported in part by the acute global Covid-19 pandemic at the time of the survey. Nevertheless, the high rating also shows that the population perceives hospitals as a relevant source when it comes to pressing health issues and sees their pages on social media platforms as suitable communication channels to convey related information to the public. In addition, posts on disease patterns and therapy methods (rank 3) and general advice and information on health topics (rank 4) also tend to be desired as content on hospitals' social media pages. In contrast, the preferences for general information on the healthcare system are somewhat lower (rank 6).

The content of social media posts that relate specifically to the hospital in question get mixed ratings. On the one hand, the presentation of own service offerings on the social media pages of hospitals appears to be very desirable among the population (rank 2). In addition, posts about occurrences and developments at the hospital are also rated as relatively worthwhile (rank 5). On the other hand, notes on hospital events (rank 7), posts about employees (rank 8) or stories about patients of the hospital (rank 9) are rather not preferred.

Overall, a general tendency can be seen that the population values contributions with a technical and factual reference in the healthcare sector more highly, irrespective of whether these deal with general topics or hospital-related aspects. If, on the other hand, the posts on social media pages of hospitals shift away from this factual reference, e.g., in the direction of interpersonal, social or entertaining topics, the degree to which the population considers these to

be desirable also decreases. Accordingly, the rating of contributions for entertainment (e.g. quiz questions, funny or nice photos/videos) is particularly low in the survey results (rank 10).
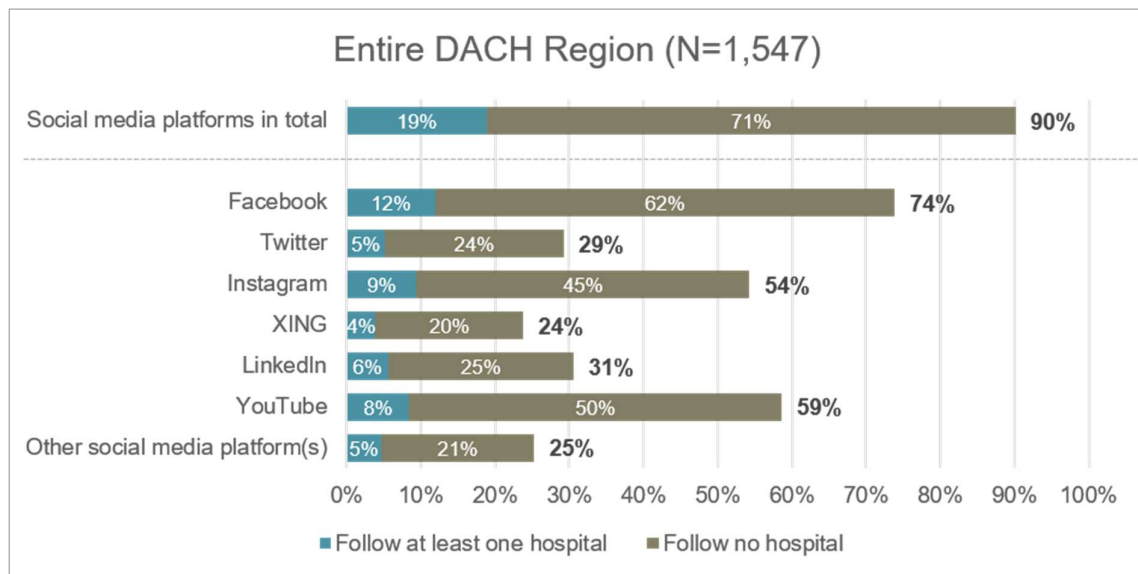
4.2. Social Media Use and Hospital Page Following on Social Media (RQ2)

Research question 2 of this study aims to clarify the extent to which people in the DACH region "follow" hospital pages on social media platforms. Generally, following pages is about users of a social media platform subscribing to the posts of selected pages on the platform. This then results in all posts of the selected pages being displayed in the user's respective newsfeed (Beier and Früh 2020b; Smith and Gallicano 2015). Conversely, the total number of "followers" (subscribers) is displayed on social media pages and is a measure of their media reach (Beier and Früh 2019b). However, in order to follow a hospital page on a social media platform, it is first necessary for an individual to maintain their own profile on that platform.

Overall, the analysis of the survey data for the entire DACH region revealed that 292 (19%) of the respondents follow at least one hospital on social media. 1,102 (71%) of the respondents maintain at least one profile on a social media platform, but do not follow any hospital page. In addition, 153 (10%) of the respondents do not have a profile on a social media platform. In the following sections, the survey results are first shown for the entire DACH region. This is followed by the country-specific results for Germany, Austria and Switzerland, which are shown separately.

Entire DACH Region

Figure 3 shows for the entire DACH region (N=1,547) the extent to which the respondents maintain their own profile on specific social media platforms and differentiates these according to the extent to which they follow at least one hospital on the platform or not. In addition, the aggregated results for all social media platforms surveyed are shown in total (first line).
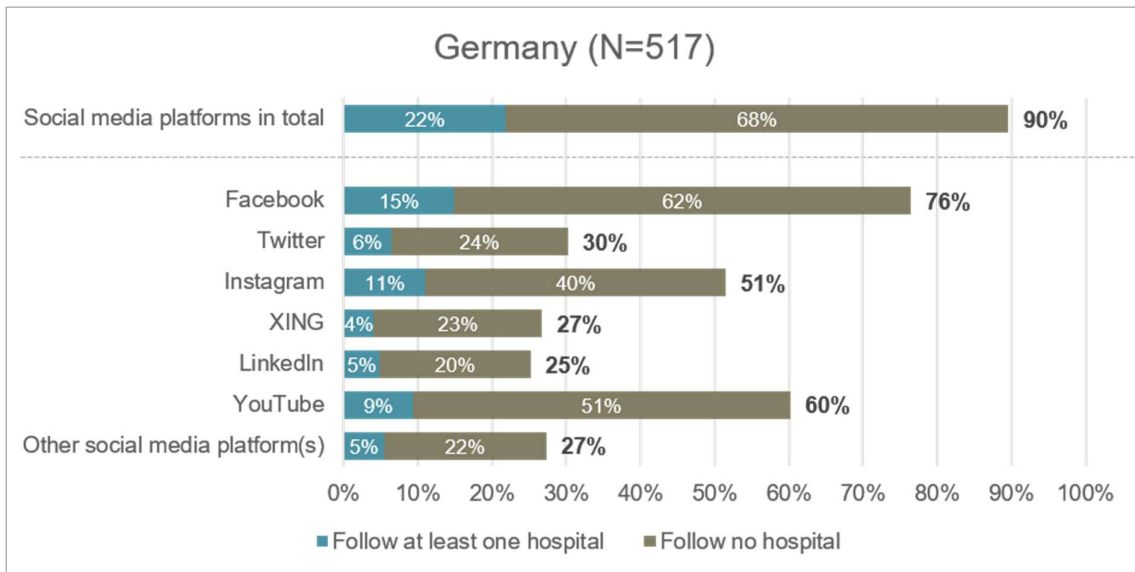
Figure 3: Social media use and following of hospital pages by the population in the entire DACH region (N=1,547). Source: Own survey.

The analyses of the survey data for the entire DACH region show that 90% of all respondents maintain a profile on at least one social media platform. Facebook (74%), YouTube (59%) and Instagram (54%) have the highest user rates. However, the values for users of social media platforms who also follow at least one hospital are much lower. Thus, a total of 19% of all respondents follow at least one hospital on at least one social media platform. In this regard, Facebook (12%), Instagram (9%) and YouTube (8%) also have the highest rates for specific platforms. Overall, general online social networks (Facebook and Instagram) as well as content sharing platforms (YouTube) are more likely to be used to follow hospitals than the business-related online social networks XING (4%) and LinkedIn (6%). However, the business-related online social networks also have generally lower usage rates among the population.

Germany

Figure 4 shows the corresponding evaluations for research question 2 specifically for Germany (N=517). The results for Germany are relatively similar to the entire DACH region. However, with 22%, the proportion of respondents who follow at least one hospital on a social media platform is somewhat higher. This difference is also evident in the higher proportions with regard to specific platforms, particularly regarding Facebook (15%) and Instagram (11%).

Figure 4: Social media use and following of hospital pages on social media platforms by the population in Germany (N=517). Source: Own survey.

Austria

Figure 5 shows the corresponding evaluation for Austria (N=519). With regard to the results for Austria, it should be noted in particular that the proportion of respondents who follow at least one hospital on a social media platform is remarkably low in a country comparison, with only 14%. Overall, it seems to be less common in Austria to follow social media pages of hospitals. The highest rates for individual platforms on which users follow hospitals are shown for Facebook (8%), Instagram (6%) and YouTube (6%).
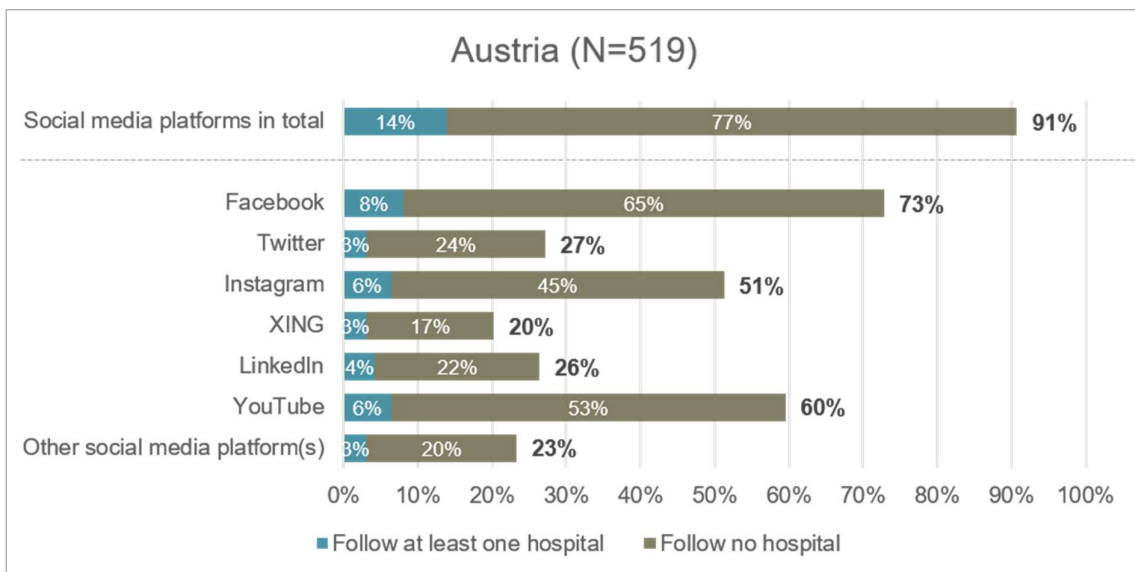
Figure 5: Social media use and following of hospital pages on social media platforms by the population in Austria (A) (N=519). Source: Own survey.

Switzerland

Figure 6 shows the evaluations of social media use and following of hospital pages on social media platforms for the population in Switzerland (N=511). As in Germany, the overall rate of respondents who follow at least one hospital on a social media platform is relatively high with 21%. Also for Switzerland, with Facebook (13%), Instagram (11%) and YouTube (10%), the same social media platforms show the highest rates of users following at least one hospital on the platform as in the other two countries studied. For Switzerland, however, it is also noticeable that the general usage rate of LinkedIn is quite high in a country comparison at 40%. This is also reflected in a higher rate of users following at least one hospital on LinkedIn (8%) compared to the other countries.
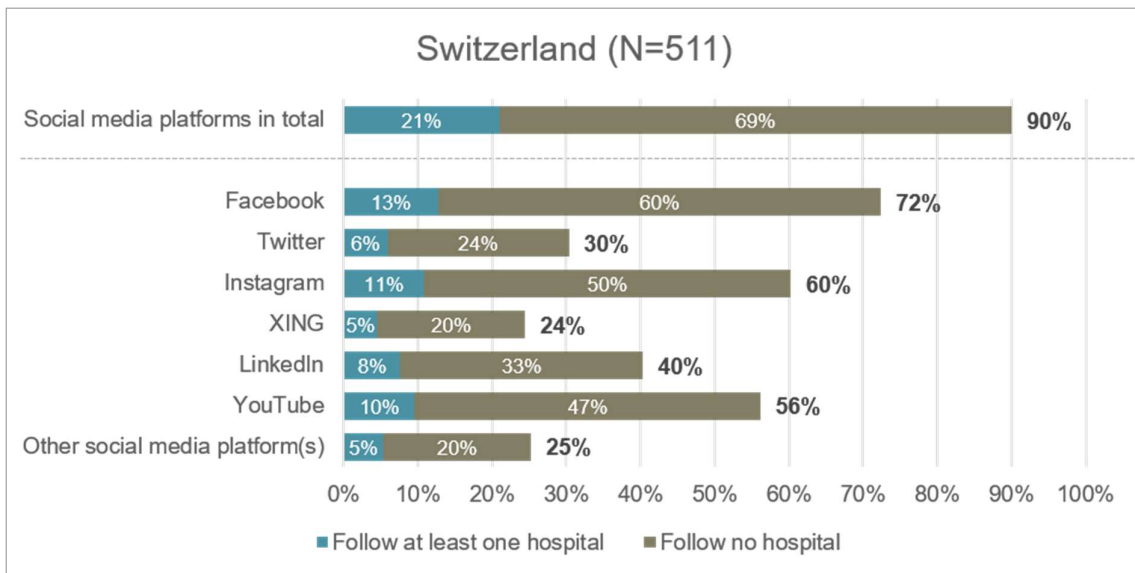
Figure 6: Social media use and following of hospital pages on social media platforms by the population in Switzerland (CH) (N=511). Source: Own survey.

4.3. Reasons to Follow Hospital Pages on Social Media Platforms (RQ3)

Research question 3 of this study deals with the specific reasons that motivate people to follow hospitals on social media platforms. In order to ascertain these reasons in the population of the DACH region, the people surveyed were presented with eight different statements on possible reasons that might have motivated them to follow a hospital. For this purpose, only those individuals were surveyed who had previously indicated that they would follow at least one hospital on a social media platform (N=292). Accordingly, these individuals were presented with the eight different statements about possible reasons and asked to what extent it was true in each case that this reason had motivated them to follow one or more hospitals on one or more social media platforms. To quantify the responses, a 5-point Likert scale ranging from (1) "strongly disagree" to (5) "strongly agree" was used for each item.

Figure 7 shows the results for the individual items sorted in descending order according to the mean of all responses in the entire DACH region. The mean values of the responses to the items range from 3.85 at rank 1 (highest agreement) to 2.98 at rank 8 (lowest agreement). The right part of the figure shows the results for the individual countries in the DACH region (Germany, Austria, and Switzerland), where deviations from the item rankings are marked in red (downward deviation) and blue (upward deviation).

DACH N=292		Reasons to follow hospital pages on social media platforms	Germany N=113		Austria N=72		Switzerland N=107	
Rank	Mean		Rank	Mean	Rank	Mean	Rank	Mean
1	3.85	The hospital is doing a good job.	1	3.82	1	3.79	1	3.91
2	3.68	The hospital is important in my local area.	3	3.70	2	3.76	2	3.61
3	3.60	Regional solidarity	2	3.71	3	3.57	3	3.50
4	3.49	The hospital addresses a health issue that is important to me (e.g., a treatment method or disease).	5	3.51	4	3.47	4	3.49
5	3.43	The hospital posts interesting content.	4	3.53	5	3.33	5	3.40
6	3.35	I identify myself with the work of the hospital and how those involved do it.	6	3.49	7	3.11	6	3.36
7	3.32	I or someone close to me was treated in that hospital.	7	3.42	6	3.29	7	3.23
8	2.98	I or someone close to me works there.	8	3.09	8	2.65	8	3.09

Figure 7: Reasons to follow hospital pages on social media platforms (N=292). Source: Own survey.

With regard to the perception of the work performed in the hospital as a motivation for following hospital pages on social media platforms, a mixed picture emerges in the data. Thus, general recognition and appreciation of the work done in the hospital ("The hospital is doing a good job") is the most strongly supported motive for following a hospital page among the respondents (rank 1). However, this seems to be exclusively about recognition of the performance, less about identification with the actors providing the performance or the entire organization (rank 6).

In second place, it is above all aspects of a regional or thematic connection between people and a hospital that motivate them to follow the hospital on social media. Possible reasons relating to geographical proximity (rank 2), regional ties (rank 3) and the thematic relevance of the hospital (rank 4) tended to receive a high level of approval from the respondents.

The results of research question 1 of this study (see Section 4.1.) indicated that the public's perception of hospital pages on social media platforms is strongly dependent on the perceived relevance of the content conveyed. Nevertheless, the content communicated by a hospital on its social media pages only makes a subordinate contribution to the motivation to follow a page (rank 5). This corresponds to similar findings in a recent study on Swiss hospitals on Facebook (Beier and Früh 2020b). In this study, it had been shown that parts of the users who

follow hospitals on Facebook do so rather only symbolically, to publicly show some support and connection to the hospital (fans but not followers to the Facebook page[2]). While these users publicly revealed themselves as fans of the hospital's page, they had explicitly disabled the display of the hospital's posts in their own Facebook newsfeed, indicating a corresponding lack of interest in the posted content. However, there were significant differences between the hospitals studied in terms of the extent of these deactivations. In addition, some hospitals also showed a significant number of Facebook users who had only subscribed to the posts in their newsfeed, but who did not publicly identify themselves as fans of the hospital page (followers but not fans of the Facebook page).

Furthermore, in the present study, the possible reasons with the lowest level of confirmation by the respondents show that personal relationships with the hospital are a rather minor motivator for following hospital pages on social media platforms. Correspondingly, the items that refer to one's own treatment at the hospital (or that of close persons) (rank 7) as well as the hospital as one's own employer (or that of close persons) (rank 8) show on average the lowest agreement values among the respondents. However, these low approval ratings on average can also be explained by lower proportions of respondents to whom treatment or employment in the hospital (own or related person) applies at all. Detailed analyses of the data indicate, for instance, that the motivation to follow a hospital page may well be higher after treatment. However, this only applies to a certain percentage of the respondents who actually received hospital care in recent years.

4.4. Reasons not to Follow Hospital Pages on Social Media Platforms (RQ4)

As a counterpart to research question 3, research question 4 investigated which specific reasons contribute to people not following hospitals on social media platforms. In order to ascertain these reasons, all persons who maintain a profile on at least one social media platform but do not follow a hospital on one of these platforms were surveyed (N=1,102). These individuals were presented with five different statements about possible reasons and asked to what extent it was true in each case that this reason prevented them from following one or more hospital pages on social media. Similar to the previous questions, a 5-point Likert scale ranging from (1) "strongly disagree" to (5) "strongly agree" was used to quantify the responses for each item.

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[2] Facebook allows its users differentiated settings to connect with a Facebook page as a "fan" or as a "follower". While the fan attribute (corresponding individual privacy settings required) publicly displays users' fan relationship to the Facebook page, only the follower relationship leads to the display of posts of the page in the users' individual newsfeed. Users can set both (fan and follower attribute) or only one of the two to relate with a Facebook page.

Figure 8 shows the results for the individual items sorted in descending order according to the mean of all respondents in the entire DACH region. The mean values of the responses to the items range from 4.33 at rank 1 (highest agreement) to 3.16 at rank 5 (lowest agreement). The right part of the figure shows the results for the individual countries in the DACH region, where deviations from the item rankings are marked in red (downward deviation) and blue (upward deviation).

DACH N=1'102		Reasons <u>not</u> to follow hospital pages on social media platforms	Germany N=350		Austria N=399		Switzerland N=353	
Rank	Mean		Rank	Mean	Rank	Mean	Rank	Mean
1	4.33	I've never thought of that before.	1	4.47	1	4.32	1	4.21
2	4.04	So far, I haven't noticed any hospital that I wanted to follow.	2	4.10	2	4.08	2	3.93
3	3.43	Hospitals are not relevant to me on social media.	3	3.43	3	3.47	3	3.38
4	3.20	Health topics are too private for me on social media.	5	3.15	4	3.28	4	3.16
5	3.16	I don't follow any organizations on social media at all.	4	3.25	5	3.12	5	3.11

Figure 8: *Reasons <u>not</u> to follow hospital pages on social media platforms (N=1,102).*
Source: Own survey.

According to the survey results, a key reason for most of the respondents not to follow any hospital on social media platforms is that they had simply never thought of doing so before the survey (rank 1). In a similar vein, many of the respondents also had not yet noticed a hospital (or hospital page) they would have wanted to follow (rank 2). Both reasons indicate that hospitals could possibly gain even more followers for their social media pages by specifically addressing their target groups outside of their social media pages (assuming adequate content on the pages).

In contrast, however, some of the respondents also state that hospitals are generally not relevant for them on social media (rank 3). Somewhat less support was given to arguments about privacy on social media, particularly with regard to health topics (rank 4), as well as the approach of not following any organizations on social media platforms as a matter of principle (rank 5).

5. Conclusion and Outlook

This study closes a significant gap in previous research on social media activities of hospitals by showing empirically which attitudes, preferences and behaviors prevail in the population of the DACH region regarding social media pages of hospitals. So far, research has primarily considered the perspective of hospitals on their social media activities. Social media strategies can only be successfully developed and applied if they sufficiently reflect the needs and expectations of their target groups.

The results shown above can be used by hospitals to review and adapt their social media strategies with regard to their fit with the needs and expectations of the population. In particular, the results of research question 1 can help to further develop content strategies and editorial plans for hospitals' social media pages. The evaluations for research question 2 also show the potential of different platforms in general for hospitals in the individual countries. The results for research questions 3 and 4 also support hospitals in the derivation of strategies and procedures for gaining new followers for their social media pages.

Finally, however, it should be pointed out that all the results presented in this research report are only aggregated findings for the countries of the DACH region and accordingly only provide a fairly general picture. In addition, hospitals should also look into the preferences and behaviors of their specific target groups in their own interaction and communication channels in order to better understand them in concrete terms (e.g., via analyses of user behavior on their own social media pages and their own website).

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