Social Media and Healthcare Professionals

Actual Usage, Ethical Dealings, Benefits and Limitations in Healthcare

Master Thesis

For attainment of the academic degree of
Master of Science in Engineering (MSc)

in the Master Programme Digital Healthcare
at St. Pölten University of Applied Sciences

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St. Pölten, 14.05.2017

Declaration

I declare that I have developed and written the enclosed Master Thesis completely by myself, and have not used sources or means without declaration in the text. Any thoughts from others or literal quotations are clearly marked. This work was not used in the same or in a similar version to achieve an academic grading or is being published elsewhere.

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Place, Date	Signature

Preface

Dear reader,

I want to keep short. Social media change and transform health communication. While social media is changing our ways of obtaining information, the related software applications offer the necessary structural change to align our behaviour with it. We make decisions based on existing information. We act according to decisions taken by means of structural possibilities.

In brief, information alone is not sufficient, structural transformation leads to behavioural change. Social media provide the personalized information you require, while appropriate software applications ensure that we can realize our individual desired needs. Health would be such a need.

My motivation for this work was formed in summer 2016 after countless discussions about social media in the circle of friends. Like us, dear reader, we came to the insight that there is little knowledge and there are many opinions about the profound changes based on social media.

For this very well-considered reason, my dear reader, I have used my energies to thoroughly explain the thesis of social media in health care, in order to make the right conclusion at the end of my work.

It is up to you, dear reader, to make your own judgement on the basis of your opinion and the information presented.

Best regards,

Simon Pusswald

Vorwort

Liebe Leserin, lieber Leser,

ich möchte mich kurzhalten. Soziale Medien verändern und transformieren die Gesundheitskommunikation. Während soziale Medien unsere Wege der Informationsbeschaffung verändern, so bieten die dazugehörigen digitalen Applikationen die nötigen strukturellen Veränderungen an, um unser Verhalten danach ausrichten zu können – die Transformation durch Digitalisierung. Wir treffen Entscheidungen aufgrund vorhandener Informationen. Wir handeln, gemäß den getroffenen Entscheidungen, durch uns zur Verfügung gestellte strukturelle Mittel.

Kurzum, Informationen alleine sind nicht ausreichend, strukturelle Umgestaltung führt zu unserer Verhaltensveränderung. Soziale Medien stellen die individuell-personalisierten Informationen bereit, während die passenden digitalen Applikationen dafür Sorge tragen, dass Wir unsere individuell gewünschten Bedürfnisse umsetzen können. Gesundheit wäre ein solches Bedürfnis.

Meine Motivation zu dieser Arbeit ist im Sommer 2016, nach unzähligen Diskussionen im Freundeskreis über soziale Medien, entstanden. Gleichsam sind Wir, liebe Leserin und lieber Leser, zur Erkenntnis gekommen, wie wenig Wissen und wieviele Meinungen über die tiefgreifenden Veränderungen durch soziale Medien vorhanden sind.

Aus diesem sehr wohl überlegten Grund, habe ich meine Energien darauf verwendet, die Thematik der sozialen Medien im Gesundheitswesen gründlich darzutun, um die richtigen Schlussfolgerungen am Ende meiner Arbeit ziehen zu können.

Es obliegt Dir, werte Leserin und werter Leser, anhand Deiner Meinung und der Dir vorliegenden Informationen, selbstständig Dein eigenes Urteil über dieses wichtige Thema zu fällen.

Beste Grüße,

Simon Pusswald

Abstract

Background: Social media offer a medium for health communication. Health professionals use the trend of social media for professional purposes. The research currently does not show in detail how healthcare professionals, in particular therapists, use social media.

Objective: To identify the current use of social media in the occupational groups physiotherapy, ergotherapy and speech therapy in Austria. Digital competencies are characterized in the ethical and responsible treatment of social media as well as the benefits and limitations of social media for healthcare perceived by therapists.

Methods: A descriptive exploratory study design was applied. An online survey conducted in February until March 2017 collected the thematic data.

Results: 153 participants completed the survey. 105 (69.5%) respondents used social media for professional purposes. 68.5% of the participants used Facebook and 53.4% messenger services on a weekly basis for professional purposes. Wikis (68.6%) and online medical communities (65.7%) were used on a monthly basis. Twitter (79.0%) and professional networks (73.4%) have rarely been used for professional purposes. The main reason for the use of social media was the sharing of information (79.0%), the seeking of information (79.0%) and networking (84.8%). 68.3% of the respondents participated actively in social media on a monthly basis. The improved access to health information (70.8%) was reported as a benefit of social media. The limitations were a lack of privacy and confidentiality (66.7%) of social media. The digital competence of the participants is with 75% in the upper third of a positive self-assessment of ethical issues.

Conclusions: Primarily young and professionally inexperienced therapists use social media. The focus is on the information retrieval. Potential exists in the area of social media to share health related information and support patient communication. Legal and ethical questions have to be clarified in advance and guidelines for the professional application of social media have to be developed.

Kurzfassung

Hintergrund: Soziale Medien bieten ein Medium der Gesundheitskommunikation an. Gesundheitsberufe nutzen den Trend sozialer Medien für professionelle Zwecke. Die Forschung zeigt derzeitig nicht detailliert auf, wie medizinische Fachkräfte, im speziellen TherapeutInnen, soziale Medien nutzen.

Ziel: Das aktuelle Nutzungsverhalten von sozialen Medien bei den Berufsgruppen Physiotherapie, Ergotherapie und Logopädie in Österreich aufzuzeigen. Charakterisiert werden digitale Kompetenzen im ethischen und verantwortungsvollen Umgang mit sozialen Medien sowie die von TherapeutInnen wahrgenommenen Vor- und Nachteile sozialer Medien im Gesundheitswesen.

Methode: Es wurde ein deskriptives, exploratives Studiendesign angewandt. Die Daten wurden anhand einer Online-Umfrage im Februar und März 2017 erhoben.

Ergebnisse: Die Umfrage beendeten 153 TeilnehmerInnen. Es nutzten 105 (69,5%) der Befragten soziale Medien für professionelle Zwecke. 68,5% der TeilnehmerInnen verwendeten Facebook und 53,4% Messenger-Dienste mehrmals wöchentlich für professionelle Zwecke. Wikis (68,6%) und medizinische Onlinegemeinschaften (65,7%) wurden mehrmals monatlich genutzt. Twitter (79,0%) und berufliche Netzwerke (73,4%) wurden selten bis nie für berufliche Anliegen verwendet. Hauptgründe für die Nutzung waren das Teilen von Informationen (79,0%), die Informationssuche (79,0%) und das Netzwerken (84,8%). 68,3% der Befragten partizipierten im Durschnitt monatlich aktiv auf sozialen Medien. Als Vorteil sozialer Medien wurde der verbesserte Zugang zu Gesundheitsinformationen (70,8%) genannt. Die Nachteile waren eine mangelnde Privatsphäre und Vertraulichkeit (66,7%) sozialer Medien. Die digitale Kompetenz der TeilnehmerInnen befindet sich mit 75% im oberen Drittel einer positiven Selbsteinschätzung ethischer Fragestellungen.

Schlussfolgerung: Soziale Medien werden vorrangig von jungen und beruflich unerfahrenen TherapeutInnen genutzt. Der Schwerpunkt liegt auf der Informationsgewinnung. Potential besteht im Bereich sozialer Medien, um Gesundheitsinformationen zu teilen und die PatientInnenkommunikation zu unterstützen. Rechtliche und ethische Fragestellungen sind im Vorfeld zu klären und Leitlinien zur professionellen Anwendung sozialer Medien zu entwerfen.

Table of Content

1 Introduction

Is social media the future of healthcare? With this question, the Forbes magazine points to the increasing influence of social media in the area of healthcare (Belbey, 2016). In recent years, social media have changed our way we interact and communicate. The integral part of social media in our society leads to an increasing utilization of these information and communication technologies in the area of healthcare. From public health to clinical healthcare, health organizations are turning to social media to promote and publish information in order to support individual and public health practices. They are transforming the landscape of health communication and healthcare.

Social media have formed social networks, which makes it easier for a large number of healthcare professionals and patients to frequently share information, support each other or build healthcare communities to exchange their experiences. The increasing use of mobile devices and the related supply of software applications promote these social network structures within the healthcare society. Hence, health becomes more mobile and ubiquitous, and smart devices make health everywhere and at any time more tangible. Patients and healthcare professionals can collect and share their health data independently of time and place.

Nevertheless, beside beneficial aspects such as widely available health related information, there are possible inconvenient consequences related to its use in healthcare occupations and services. Potential misinformation and poor quality of medical information that is rapidly shared on social media networks, are only a few of these limitations.

The statements above therefore raise the questions of how far are health professions familiar with social media, how far do they use them and where are the benefits and limitations identified for health services (see Table 1)? The trend to use social online networks to adjust and compare health data will continue in the near future. This trend has the potential to make comprehensive changes. With the possible changes, it will become increasingly important to shape these processes. To this end, research work and projects have to be implemented, which tackle this issue.

RQ1	What is the current status quo in the use of social media regarding to the specific professional group?
RQ2	How competent, in an ethical and responsible way, are the healthcare professionals themselves in dealing with social media for professional purposes?
RQ3	What benefits and limitations arise through the application of social media in the specific occupational group to the health services?

Table 1 Formulation of the research questions (RQ)

Since social media have grown in popularity and pervasiveness in recent years, this paper is of particular interest to the usage behaviour, scope of use and ethical issues. Therefore, the thesis of this work relates to the examination of the social media usage behaviour of healthcare professionals to fulfil the objectives (see Table 2) and answer the individual research questions.

TO1	Determination of the current usage behaviour of social media in healthcare professions.
TO2	Determination of the ethical and responsible use of social media in healthcare professions.
TO3	Determination of the benefits and limitations of social media to the healthcare system.

Table 2 Formulation of thesis objectives (TO)

The benefit of this work is that the status quo of the use of social media in healthcare is determined. The paper illustrates the priority of the use of social media and its advantages, as well as the limitations in the area of healthcare. Furthermore, the paper provides an insight into ethical issues dealing with social media in the field of healthcare. The provided findings are proposed to promote healthcare and support healthcare communication. It is intended to state results of the potential and deficits of social media used by healthcare professionals.

The first part of this thesis explains the theoretical part of using social media in healthcare systems. The chapters give a detailed view on the terms *social media* and *social networks*. Subsequently these terms are set to the context of healthcare. Thus, they provide the theoretical foundation to explain the usage motives and the benefits as well as unpleasant effects of social media applications in healthcare. Furthermore, the concept of participation elaborates a deeper understanding for the activity of healthcare professionals in social media. The last section of the theoretical part explains the digital competencies with regard to media ethics and its responsibilities.

The second part of this thesis refers to the empirical survey of the data and its evaluation. It precisely explains the method and the development of the questionnaire. A descriptive, explorative study design was chosen to achieve the formulated objectives of this work. An appropriate online survey collected the thematic data. Therefore, a questionnaire was drawn up to quantitatively measure the necessary data. The descriptive method refers to the basic questions of *who*, *where*, *what*, *how* and *why* social media are used in healthcare. The collected data made a deeper analysis of the issue possible. The data was analysed by an explorative-descriptive statistic. The chapter “results” graphically presents the analysed data.

The chapters “discussion” and “conclusion” provide a final assessment of the findings. The discussion describes the data and the limitations of the study. The conclusion qualifies the data on the basis of the theoretical foundation. Finally, prospects for further research are derived.

2 Theoretical Background

The following chapters of this thesis explain the theoretical part using social media in healthcare systems. The first chapters give a detailed view on the term *Social Media* and its theoretical basis, as well as a theoretical background for the usage motives of health professionals and their ethical and responsible behaviour. The following chapters are tackling the impact of social media on healthcare professionals, their communication behaviour and their participation in social media.

2.1 Social Networks

Social media is a common term. The term belongs to a series of infrequently used terms, has a characteristically slogan and loses, in consequence, its clarity. In order to explain the concept of social media, the term *social network* must first be understood.

The term social network describes a social interaction of any kind of type. Regular social interactions of several individuals in a group form social networks. They are a pattern of connections within a completed population of units. Within a social network these units are referred to as *actors*, and the connections between them refer to existing *social relationships*. In terms of network research, actors are described as *nodes* and the social relationships between nodes are qualified as relational *ties*. Wasserman & Faust (1994, p. 20) define a social network as:

> "A social network consists of a finite set or sets of actors and the relation or relations defined on them. The presence of relational information is a critical and defining feature of a social network."

2.1.1 Actors and Social Relationships

An actor marks a social entity that acts as a node in a network. An actor is attributed a coordinated action and a different behaviour to other actors. These include individuals and formal organizations. Most social network applications

focus on collections of actors that are all of the same type, such as work professions or project groups (Wasserman & Faust, 1994, p. 17).

The establishment of connections between actors is the defining feature of a relational tie – the technical term for a social relationship. Relational ties consist of observable regularities of interactions between actors. This regularity consists essentially of expectations between actors. Therefore, social relationships show a certain kind of expression. They can be symmetrical, asymmetrical or reciprocal, and they can be of different strength or belong to a particular type of relationship. Wasserman & Faust (1994, p. 18) highlight seven kinds of more common relational ties employed in social network analysis: evaluation of one person by another (expressed friendship, liking, respect); transfer of material resources (business transactions, lending and borrowing things); association or affiliation (belonging to the same social club); biological relationship, formal relations (authority); behavioural interaction (communicate, messages); and movement (between professions).

The different social relationships can meet different expectations and can include different relational contents. One of the more common contents of a relational tie is defined as *social support*, so that some network concepts are equated with this term (Keupp, 1987, p. 29). Instead of defining social support in a straight psychological way, some authors have a more comprehensive notion. They include, next to the psychological aspect, an instrumental and a cognitive aspect. Psychological affections mean appreciation, affection, emotional application, encouragement and comfort. The cognitive part mainly comprises feedback, advice and orientation in the search for problem solving. Instrumental support includes information as well as material assistance, wherein the information can be the relaying of contacts and in case of material aid, for example, financial support (Angermeyer & Klusmann, 1989, p. 18).

Relational ties are expressive social relationships with a particular content. In order to strengthen social relationships with a certain content, it needs the creation of a social network.

2.1.2 Formation of Social Networks

Tow important terms characterize the formation of social networks: *activity-foci* and *homophilia*.

Activity-foci are a necessary condition to form social networks. The term describes locations of social exchange that lead to intensified formations of social relations. Locations like internet forums and medical online communities are

grouped around certain activities. They create social relationships between persons with similar interests or characteristics. For all activity-foci, certain characteristics are in the foreground, such as healthcare in health organizations, education at the university or certain health related issues in the relevant internet forums (Fuhse, 2016, p. 162).

The second effect of forming social networks is the concept of *homophilia*. The term homophilia stands for the tendency towards social relationships between actors with similar attitudes or similar attributes. The attitudinal homophilia attests to the observation that actors with similar attitudes and values establish a social relationship more likely. Like-minded actors or actors with similar cultural impacts give more reciprocal support and this is considered rewarding (Fuhse, 2016, p. 34). They form relationships more likely and resolve social relations with people of different attitudes. Close social relations manifest themselves in repeated exchange, and adjustments of values and attitudes. Otherwise, repeated contradiction can sever relationships among actors.

The approximation or adjustment of values and attitudes within a dense social network clarifies, that personality intentions, internal views, and the knowledge of the individual actors do not determine social actions, but that the social network already influences the respective aims and conceptions of an actor. Thus, social networks constitute framework conditions that influence an actor's action strategies. The behaviour is essentially influenced by the social network (Hollstein, 2010, p. 91ff).

2.1.3 Structures of Networks

The above-mentioned mechanisms for contact primarily form networks. These mechanisms answer the why of network formations. The network structuring state the *how* networks are structured. They describe the network constellations and their conditions for change. Change is meant to be the transformation of indeterminate, unstable networks into stable and specific network constellations. Stable and durable social networks are the main aspects to construct a network. Networks primarily show three main structures: *reciprocity*, *transitivity* and *preferential attachment (Fuhse, 2016, p. 167ff)*.

The concept of *reciprocity* refers to the circumstance of a mutual relationship between two actors. It means a bilateral social relationship, and describes a relationship in which an actor, as opposed to others, behaves in the opposite direction to the other. Therefore, reciprocity refers to a tendency of cooperation. An action of cooperation appears to the actor as an advantage within his/her social environment. Hence, reciprocal relations challenge their response.

Friendships, a common term in Facebook, are reciprocal relationships. The reason for this are (cultural) *expectations* associated with the concept of friendship. The reciprocity norm is found in the field of personal networks. Dense social online networks, especially on social networking sites such as Facebook and not business networks like LinkedIn, are primarily formed between actors who know each other personally and outside the online-space. These actors are also subjects to *expectations*, as long as they are known by name. Therefore, the reciprocity norm is a central regulative of social life. Reciprocity is bound to expectations. As actors take actions, they formulate at the same time certain expectations. They want to see these expectations fulfilled in a similar act of the opposite.

In a modern society reciprocity and complementarity must be considered separately. Reciprocity cannot be participated in every single social institution. The redundancy of actors requires a selectivity in which one can entertain a personal relationship to build trust. Personal networks express the selectivity of contacts. Reciprocity and trust are practiced to keep the relationship an ongoing basis. In this way, trust conveys a relationship between past experiences and future events (Holzer, 2006, p. 9ff).

Complementary relations are relations that interact to each other. Actors of this relationship structure complement each other and they are mutually dependent of each other, such as the therapist-patient-relation. In modern society, complementary performance and audience roles in the public reduce the reciprocity and lead to mutually complementary expectations, which are not due to the fact, that ones' action is equated with an equivalent action. This fact leads to defined expectation complexes between the roles of actors, in which a balanced situation of reciprocal obligations exists.

In addition to a complementary relation, the term *preferential attachment* also reduces the impact of reciprocity within a relationship. The mechanism of preferential attachment describes a binding behaviour of actors by trying to establish relationships with central and popular actors. The popularity and the central position of the actors are gained by the fact that many other actors have also chosen this relationship.

Due to the mechanisms of structures and formation of networks different networks can be formed. Thus, groups or subgroups can form, in which homophilia and reciprocity prevail; or central-peripheral networks can form, in which preferential attachment and complementary relationships, for example patient-therapist-relationships, prevail.

2.1.4 Effects of Networks

Network effects that occur within a network constellation are *access to information*, *power*, *social capital* and *social pressure*.

Access to information is a common beneficial effect of networks. Actors who take a central position within a network have a better access to information. One can argue that this is up to having good contacts or not. The previous considerations can suggest that good contacts are strong, reliable and social controlled relationships. Nevertheless, relational ties are precisely beneficial, when they are loose and occasionally activated. The access to information correlates with the effect of *weak ties*. Weak ties, in contrast to dense networks with its strong ties[1] (as, for example, friendships), have the advantage that they are superior in the generation of novel and valuable information. Weak ties are less transitive, and therefore often provide access to information from remote networks. They do not generate redundant information, like in a dense network (Stegbauer, 2008, p. 86). Weak ties are thus of central importance. They act as bridges and provide the flow of information between the regions of a network.

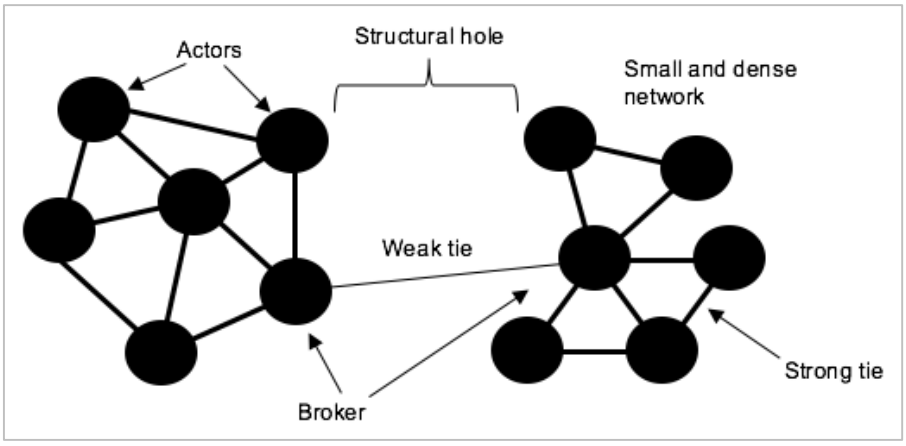


Figure 1 Representation of network concepts and their function within a social network.

The thesis of strong and weak ties corresponds to the sociology of a modern society. The theoretical construct consists of small circles of close friends up to known persons, in closely knotted networks with strong ties (dense social networks). These networks are connected to other small circuits and are therefore integrated into a larger but less dense network. Weak ties prevent large networks from falling apart into small groups.

[1] Five criteria determine the strength of relationships: duration, frequency, emotional intensity, intimacy and exchange of benefits.

Actors of weak ties, called *bridge connections*, convey information. They act as interfaces between groups. These interfaces are called *structural holes*. Therefore, structural holes are connections among networks, with otherwise someone would be unconnected (see Figure 1). Thus, actors become *brokers*. Brokers manage information. They forward information or keep it back. Brokers control the flow of information and therefore, these actors are in a position of power. If a third party is aware of the fact that a broker has certain contacts and important knowledge or information, he or she can make targeted use of this, which results in *social capital* (Holzer, 2006, p. 20).

Social capital describes social relationships and networks as a resource of individual actions. It is a concept for the resources that actors can mobilize through their social relationships. It is a form of acquisition of cultural and economic capital through social networks. Thus, social networks and relationships act as resources for education and status (Holzer, 2006, p. 14). They allow or facilitate access to assistance and support, as well as tangible and intangible resources in the network of contacts. The claim of social capital does not depend entirely on broker positions and weak ties, but also on the dense of social networks and the social control within a network.

Dense social networks[2] (closeness) belong to strong social control[3]. This is likely because social networks create a more cooperative behaviour and facilitate the acquisition of collective goods. Dense social networks convey the lifestyle through *social pressure*, attitudes as well as behaviour. In addition to the fact that dense networks have positive aspects, they also have negative effects. It should be pointed out that in networks with high density, only those patterns of behaviour are found which are perceived as a good in the group (Stegbauer, 2008, p. 86). The same applies to information. Thus social networks exert social pressure on the actors involved. This leads to cooperative behaviour and to adaptation of the behaviour within the network. Social pressure is higher, the denser the network is. It is also worth mentioning that dense networks with a high degree of reciprocity, and the more outstanding counterparts one actor can unite, the more likely this actor will be able to mobilize individual contacts from the network.

[2] Network density is defined as the ratio of existing relationships to the number of maximum possible relationships. In a denser network, it is assumed that mutual social control is stronger. It is an indicator for the activity in a network.

[3] Social control means the control of an individual within a group. It encompasses operations that are intended to restrict or prevent a behaviour, which deviates from the norms of a society or social group.

Social capital is a concept of several expressed circumstances. If it is a matter of facilitating actions or changing behaviour, network contacts with a high density can be advantageous because of the strong social control in these groups. If it is about getting new and valuable information, networks with weak ties, a loose density and contact with broker positions are more important. The first case shows more importance to closeness, with internal coherence and social control. The second case is more about brokerage positions at the borders to other groups and networks.

The social networks theories, illustrate that people with high network centrality accumulate benefits, such as a higher share of available resources and early access to information. This in order has an impact on enhancing performance, because individuals with a high network centrality have substantial influence to others and third parties (Gamache-OLeary & Grant, 2017, p. 3775). The described social networking theories and its implicitly terms manifest themselves in online networks.

2.1.5 Social Online Networks

With the development of the internet, the way of communication has changed fundamentally. The exchange of information encompasses entire networks and the communication changes from a uni- or bidirectional to a more interactive information exchange. Hence, the range of social networks expands and leads to virtual communities and online networks.

Virtual or online communities[4] are networks of virtual relationships. They are essential social structures, where the first contact of the relationship takes place online. It is a repeated interaction between actors, whereby previous experiences as well as future expectations influence the individual interaction. These networks are most often formed around a topic of interest and not primarily by knowing each other personally. They are defined by self-identification and shared information (Camerini, Diviani, & Tardini, 2010, p. 87ff). Online communities can be organization or member initiated, and professional or social. Porter (2004, p. 6) proposed a typology for social online communities, named (1) purpose, (2) place, (3) platform, (4) population interaction structure, and profit model. Successful platforms are led by few individuals, which are highly motivated and engaged.

[4] Community is a sociological construct and includes common elements such as social interaction, geographic area, and strong, stable and long-standing relationships among members.

The benefit of social networking sites is that members take advantage of the supportive virtual relationships by sharing practical and experiential knowledge. Strong online relationships often extend beyond the internet. They not only provide a support and information; they often positively affect ones' emotional needs. Therefore, *social support* and *social capital* become a central element in online communities. As underlined in the chapter personal networks, social capital can be acquiesced if interpersonal trust exists. Hence, *online social capital* fulfils the criteria in terms of confidence, social interaction and social support. Porter's population interaction structure explains community structures in terms of weak and strong ties (see section 2.1.4). The internet with its social networking sites offers other channels to create extended weak ties beside dense formed personal online networks. These weak relational ties build, in addition to informational needs, social capital. Searchable online content posted through ongoing interactions between network actors is just one of the possible accumulated capitals. Another is the fact that virtual relationships offer emotional support (Gamache-OLeary & Grant, 2017). In fact, social networking sites and social media facilitate forming social networks.

2.2 Social Media

In recent years the development of ICT and mobile technologies have produced novel innovations in the area of devices, such as smartphones, tablets, and transmission technologies, together with innovations in the field of software, such as Apps. These technologies shape todays' online and mobile communication and differ the term of social media and Web 2.0 more clearly from the term Web 1.0.

The Web 2.0 within its simplified operability without the need of special technological skills facilitates the individual possibility of participation to public discussions. The technological and social aspect of usage are central criteria for the term Web 2.0 and initiated a change in communication and media usage behaviour. Therefore, the term social media highlights the technical aspects, such as functionality and technical infrastructures, as well as social function and practices, which results from the usage of actors. Central characteristics are participation, such as publishing the own opinion and informational content, as well as maintaining and establishing relationships (see section 2.1). The technical framework is provided by the structures of the Web 2.0 (Schmidt & Taddicken, 2017, p. 5ff). At least the actors transform the technological offers into social applications.

2.2.1 Social Media Defined

Social media is used to cultivate existing social relationships or to establish new ones. The common goal of social media is the communicative exchange and the social interaction among actors. Therefore, they change social public structures, by providing informational and communicative content to a potentially large amount of people and thereby breaking the institutional forms of mass media. Information on social media is persistent, replicable, searchable and aggregatable.

Social media is a collective term for offers based on digitally connected technologies, which enable actors to access information of all kinds and to establish and / or maintain social relationships. It enables them to communicate and organize media content individually or in a community. The interaction encompasses the mutual exchange of information, opinions, impressions and experiences as well as the participation in the creation of content. Through comments, evaluations and recommendations, the actors show an active interest in the content. Due to this active participation in shared content, actors establish social relationships among themselves. The border between the consumer and the producer of information blurs (König, 2014, p. 13).

The actor is at the same time the producer of his / her own thoughts and can share this information with others. This in case means, that there is a possibility of an ongoing democratic process of information sharing and knowledge transfer. Every actor has the opportunity to participate in social networking sites and share his/her knowledge. This, in contrast, is the advantage to traditional mass media. Todays' actors have a large availability of social media.

2.2.2 Technical Framework of Social Media

The following chapter presents a classification of social media, broken down into instant messaging, wikis, platforms and personal publishing.

Instant messaging (WhatsApp, Instagram, and Viper etc.) supports a synchronic text-based communication among users. It is organized by a network of users, which have to authorize each other. Two or more users can communicate with each other in a group.

Wikis are Web 2.0. applications. It is a hypertext-system for websites, whereby the users can read and change the informational content directly online by using the browser. With a special syntax, they can be linked to other wiki-sites. Every change is listed and can be undone. They are mainly used for the exchange of knowledge (Schmidt, 2013, p. 14).

The term *platform* covers social networking sites, discussion platforms and user-generated-content platforms, such as Facebook, LinkedIn, Xing, YouTube and Slideshare. Boyd & Ellison (2007, p. 211) define *social networking sites* as:

> "[...] are web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system."

The unique of social network sites is that they enable members to articulate and make their social networks visible by adding users to contact lists or declare them as friends (Boyd & Ellison, 2007, p. 211). Interpersonal communication takes place by a public articulated connection, which means that only confirmed contacts get certain information.

Personal publishing describes the social software of weblogs and microblogs highlighting single authors. *Weblogs* are regularly updated websites. Contributions are displayed in chronological order and can be commented by other users. A well-known representative is WordPress. *Microblogs*, such as Twitter, are based on short messages listed in chronological order. Essential are the expressed social contacts. Most common are received messages from followed users (Schmidt, 2013, p. 13).

2.2.3 Applications and Practices of Social Media

Digital communication can express peoples' *social practice*. This expression is a certain kind of medial action and is embedded in a social context bound to a performing organ. Schmidt (2009, p. 47ff) therefore pursues the idea of classifying the individual social media terms of use into three categories: rules, relations and code.

Rules are above the ones individuality and transversal. They manifest expectations, which in a situation suggest certain actions or inhibit them. They describe norms and conversations, such as the netiquette for online communication. They provide a framework for actions, which are actually carried out, because normal or expectable media use is expressed in them. Rules are linked to competences, which are a combination of knowledge and skills. The knowledge of rules and expectations of actions allow actors to fulfil the social practice.

Social networking sites and social media establish or maintain connections and relationships. *Relations* refer to these structures, by linking, commenting or

carrying out other communicative actions. They take place in social interrelations and are the basis for social formation and structural communication.

A *code* is the technical basis for the digital communication. Applications and services are based on its infrastructure. The term code belongs to the software development and design of platforms such as creating, commenting or annotating). The design expresses the possible margin of freedom of users.

Based on this division, the support of social practice can be shown. Social media support the identity, relationship and information management (Schmidt & Taddicken, 2017, p.32f).

Identity management primarily means self-debate. People express their own preferences, opinions and competencies by sharing, commenting and liking contributions or by creating a profile. Self-presentation refers to role-related expectations of self-perception, as well as to social norms that inhibit or promote the supply of information.

Social media support establishing or maintaining *relationships* between users. Therefore, these technologies became an important application for relational management. Because modern societies have organized themselves into more flexible, freer and more individual forms, they help people to find their place in society. Active participation on social media produces social connections. They help to articulate explicitly social relationships.

The *information management* includes all the ways people use social media to create, filter, select, share or distribute information. Therefore, social networking sites support information through many different functions, such as subscribing, annotating or forwarding them. Moreover, they help actors to create and publish information more easily. Hence, social media is on the one hand a driver for information overflow; on the other hand, they can help to handle the density of information.

The performance of social practices on social networking sites requires basic communicative functions. They are regarded as options for specific actions, categorized into producing, publishing, commenting, annotating, sharing, subscribing and networking. These functions enable social networking sites to interact, exchange information, and build and maintain relationships. The function of producing certain content refers to the term *user-generated content*. This term implies that the technical barriers are easy to overcome in order to produce personal content. The requirement of technical skills to use new technologies are

constantly being reduced. Social networks become more accessible and uncomplicated in their use of identity, relation or information management.

2.2.4 Diffusion of Information in Social Media

This subsection intends to describe the information management in detail, since the dissemination of information is one of the most important activities in social networking sites and social media. The dissemination of information not only fulfils the effect of information diffusion, but also fulfils socio-communicative aspects. First, a distinction must be made among information dissemination, information distribution and information diffusion.

In terms of *information dissemination*, the actors themselves get active. They generate information through posting, blogging, or sharing. Publishing information on social networking sites makes them accessible for the own social network and connections. Therefore, other actors have access to this information and can redistribute it in their online communities or social networks. This process is described by the term *information distribution* (Puschmann & Peters, 2017, p. 213f). The shared information can be returned to the copyright holder. The *information diffusion* is the result of dissemination and distribution. It describes the circulation of information within a network. Depending on the intensity and extent, some information can go *viral*[5].

From the actor's point of view, it is of interest that the actor can free his-/herself from the consumer role by passing on information. Social media offer the actors the possibility not to remain in a passive position, so that important socio-communication aspects are fulfilled (Boyd, 2010, p. 1). Therefore, transfer of information plays an important role in relationship management and provides important approaches for explaining actors' motives and gratifications on a micro-perspective. In contrast, the macro-perspective of information diffusion describes the dependence of the mechanisms on the type of information.

2.2.4.1 Micro-perspective

The sharing of information is related to prosocial and equality norms. Easily accessible information is rather shared, than information that provides a competitive advantage within an organization. General accessible information can be used to establish and maintain relationships or to increase the status of an actor. By sharing information regularly about a certain topic, actors become

[5] The term viral refers to the comparison of a biological virus. Information spreads quickly and without any visible defence in networks.

experts within a community (Constant, Kiesler, & Sproull, 1994, p. 400). In case of social media, easily accessible information is shared more willingly and the dissemination of information depends on the relationships among actors.

The *uses-and-gratification-approach* is popular to explain actors' motives for information diffusion. The approach is a model of media usage research. The model examines the active role of the actors as recipients in dealing with mass media. Central questioning is what actors do with social media or mass media. In doing so, the intentional and goal-oriented action of an actor as a recipient is put into centre of media effects. The recipients and their actions are guided by needs that are satisfied by the use of social media. Blumler (1974, p. 21f) outlines five vital elements for this media approach:

1) The recipient is participating actively and he/she is in a self-initiatively position. The actor is no longer understood as a passive recipient of media, but as a subject who chooses from existing media offer. The use of media is assumed to be goal directed. The recipient defined expectations to the media.
2) The initiative of a media usage depends on the recipient. The expectations of the social media associated with their individual needs lead to the creation of a communication process.
3) Media compete with other sources of satisfaction of needs. These alternatives also include conventional ways for satisfaction. Thus, media application only takes place, if it is meaningful or rewarding for the recipient.
4) The recipients recognize their goals and needs and can describe the motives for using media. At least, when they are confronted with these.
5) Media use is to be understood as an interpretative social action. The recipient is given the ability to reflect from the outset and the action is not derived solely by social factors and psychological dispositions. The recipient constructs his/her environment, by providing it with meanings and valuations. The meaning of a media content depends on the interpretation of the acting individual (Hugger, 2008, p. 173).

The approach illustrates that media is not automatically used by an actor. Social media can have effects on the public only if the actors make use of them. The reasons to use social media are specified by the satisfaction of needs. Needs that are satisfied are called *gratifications*. This individual theory of actions justifies the intentions and attributes to use social media and explains the active search for specific informational content.

Palmgreen & Rayburn (1985, p. 63ff) have expanded the uses-and-gratifications-approach with the *expectation and valuation approach* (see Figure 2). According to Martin Fishbein[6], this model assumes, in addition to the needs and gratifications that the expectations and evaluations of the recipient play an important role. The expectation describes the perceived probability that an object has a certain property, or that a behaviour causes a certain consequence. The evaluation is the strength of an affective attitude (positive/negative), referring to a property or the consequence of a behaviour. According to this, the actors have certain beliefs/expectations that social media can fulfil their desired gratifications. The actors evaluate these with respect to the particular social networking site. This results into the searchable gratifications by using social media. The searched gratifications and the gratifications obtained are reflected in the fulfilment of beliefs in media application.

Lee & Ma (2012, p. 331ff) describe four essential gratifications using social media in terms of information diffusion[7]: (1) establishing and maintaining social relationships, (2) entertainment, (3) information seeking and (4) gaining status and social capital. Lee & Ma clarify that different information types are disseminated with different usage motives. As a result, the boundaries between producer and recipient are softened and qualitative information is more difficult to identify, as the source is more difficult to identify. The border between them blurs.

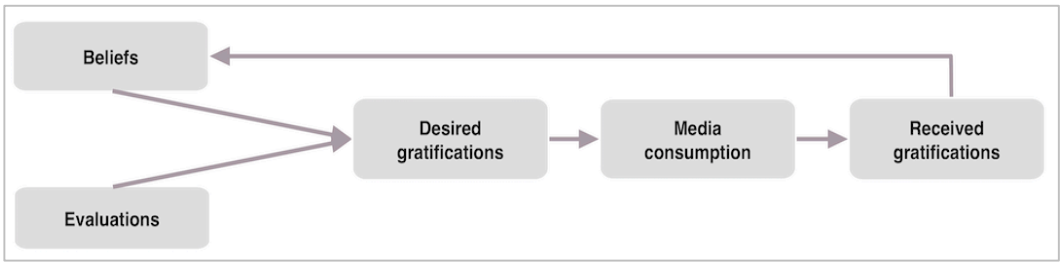


Figure 2 Representation of the extended uses-and-gratification-approach. Graphic based on Palmgreen & Rayburn (1985, p. 63ff).

Information seeking plays an important role in social media. Information diffusion is linked to the expectation that other actors share information on their part. As part of socialization on social networking sites, knowledge is acquired, through the fact that reciprocity (see section 2.1.3) belongs to the normatively correct

[6] Martin Fishbein insights into the relation between attitudes and behaviour led to the theory of reasoned action and influenced consumer behaviour research and communication studies.

[7] There are similar gratifications for other forms of social media usages.

behaviour within online communities. Members of virtual communities expect the publishing and sharing of information.

With regards to relationships, Coviello et al. (2014, p. 1) could show that the sharing of information has an influence on an actors' mind. Positive posts within a social network result in more common positive posts. This in case strengthens and supports relational ties between actors. Gaining status and social capital are influential gratifications, which are strongly expressed by social networking sites (Puschmann & Peters, 2017, p. 216). Sharing information establishes *social capital* (see section 2.1.4) and strengthens social relationships. Actors consider the sharing of information as a kind of investment, which depends on reciprocity. Actors, who look forward to reciprocity by other members of the community, share information within an online network.

Further reasons are the common norms within a group and the acquisition of status created by shared information. Instead of informational content, the assumption is that social interactions, face-to-face communication, respect and the role of the individual within the communities are the more important factors for information to be passed on (Weller, Bruns, Burgess, Mahrt, & Puschmann, 2013, p. 331). Information are shared, because they belong to network goods which are easy to transfer to a large amount of people, the reproduction is cheap and shared information have great benefits for the one who shares it, such as self-expression, maintaining relationships, and reciprocity (Puschmann & Peters, 2017, p. 218).

2.2.4.2 Macro-perspective

As already pointed out in the context of social network theories, the strength of the *weak-ties theory* (see section 2.1.4) provides an important approach for the description of information diffusion. Social network theories take into account that the structure among actors are decisive factors for sharing information, as well as the structure of social networking sites such as reciprocity or non-reciprocity structures. Information diffusion or viral effects of information are more likely, the closer the nodes/actors (experts or organizations) are within a network. In this sense, the term *centrality* is defined. Actors with a high status, opinion leaders or experts which express themselves with a high activity on a topic, show an increasing centrality (Wasserman & Faust, 1994). Therefore, these actors have a central role within a social network, because they are more contagious than other users, if they share information. On social networking sites, actors, which accordingly spread posts, are contagious and so their credibility is increasing and their posts are often passed on. This increases the responsibility of the actors for information diffusion (see section 2.4.2).

2.2.5 Participation in Social Media

Jungnickel & Schweiger (Einspänner-Pflock, Dang-Anh, & Thimm, 2014, p. 16ff) identify the concept of participation with a *public activity* in online social networks. This is because the actors act in different roles. As user, they receive information from others. As producers, they recommend, post and share articles, which will maintain the network's opinion and information flow. As produser[8], they receive information, and create or publish own content online. Actors are therefore always produsers within a social online network. They fulfil the role of the consumer/user and the producer. As a result, even less active actors, in contrast to former opinion leaders, act as gatekeepers for information. They occupy a broker-position and participate in the process of public opinion formation. Hence, the concept of participation, in which an active actor is presumed, is closely related to the *uses-and-gratification-approach*.

Jungnickel & Schweiger argue in favour of a participatory concept (see Figure 3) which includes all communication activities and does not reduce public activity to purely producing activities. The term participation is not only associated with an exclusive production of content.

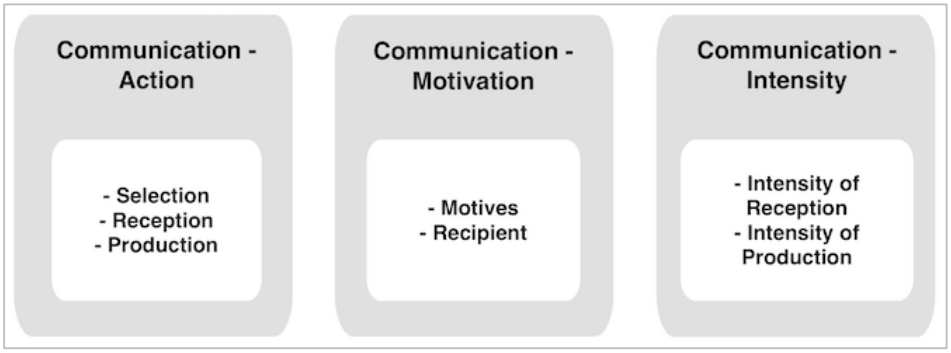


Figure 3 Framework of participation and public activity. Graphic based on Einspänner-Pflock, Dang-Anh, & Thimm (2014, p. 16ff).

A framework of public activity qualifies the participation in social networking sites. This framework consists of (1) communication action, (2) communication motivation and (3) communication intensity.

The focus of *communication activities* can be on selection, reception or production. *Receptive actions* include reading, watching or listening to social media posts. *Production actions* are divided into three types of action: (1) Recommend/review, such as the like-button, (2) Commendation, for instance a

[8] *Produser* is a term defined by Bruns („Blogs, Wikipedia, Second Life, and beyond", 2009), which means producer in combination with user.

variable judgment on a media content, and (3) Publishing own contents: the users his/herself initiates a discussion because of a self-posted topic.

Communication motives guide the use of social media and are determined by social needs (see section 2.2.4.1). Joinson (2008, p. 1030ff), in a study of the usage motives of social networking platforms, points to seven gratifications, such as social connection, shared identities, content, social investigation, social network surfing and status updating. Hence, the addressees who receive the information play an important role. Former, a large dimension of communicative activities took place in private circles, whereas today, on online sites, public, partly public or private addressees are reached.

Communication intensity is divided into reception-intensity and production-intensity. Reception-intensity defines a cognitive and affective discussion with a medial content. Production-intensity describes how much cognitive and time based resources one is willing to spend to produce a content. Recommendation and reviewing actions have a low production intensity than publishing own contributions.

It should be emphasized that all public activities in online networks are possible on a single platform or channel. Thus, interpersonal and mass communication are intermingled. Therefore, the public is a recipient and a public communicator (Einspänner-Pflock et al., 2014, p. 35) who can use social media in a democratic way to participate in the society in which they live. Social network platforms *can* lead to a democratization of knowledge. This because, technical innovations do not necessarily lead to certain consequences, which have already been applied in technology, but that the actual usage of a media technology, is the important part (Schmidt, 2013, p.75). Different levels of activity within a network illustrate a fundamental problem of democratizing knowledge.

The different levels of activity of social media are, on the one hand, the different access opportunities (*digital divide*) and on the other hand, the different interests and motives of social groups. The use of social networks is influenced by more or less stable personality traits, such as narcissistic needs for recognition and positive feedback or desire for prominence and fame. Actors with these manifestations are more active on social platforms and realize a more offensive form of self-expression than others (Gleich, 2014, p. 302).

Furthermore, actors can be categorized by an activity level. Nielson (2006, p. 1) defines three groups of actors: (1) lurkers[9] account 90% of actors, (2) 9% are intermittent contributors, and (3) 1% are defined as heavy contributors. This study shows that 90% of the actors on social networking sites are rather gaining information than sharing it. The literature thus speaks of a *90-9-1 rule*. This rule has an impact on the democratization process of knowledge, since a small part of actors actively participates in social media, but influences a large number of less active participating actors. Thus, there is no synchronous, but an asynchronous distribution of information on social media.

2.3 Healthcare and Social Media

The former chapters have illustrated the impact of social media and social online networks on the society. The fundamental sociological knowledge of social media theories helps to understand the impact of this technology on healthcare and healthcare professions. This chapter shows the specific impact on the health sector.

2.3.1 Social Media Defined for Healthcare

Keeping the definition from social media in mind, social media in healthcare, is defined as an

> "[…] open and interactive, mobile platform with social networking features and functions that enables: (1) easy patient-to-provider, and patient-to-patient formal and informal synchronous communication and unencumbered collaboration; (2) providers to easily create and moderate high-quality, multimedia, personalized clinical content for patients; (3) patients to easily create and consume content; (4) patients to forge online relationships with minimal editorial control or oversight; and (5) patients to easily keep family and friends informed using their device of choice." (Gamache-OLeary & Grant, 2017, p. 3776).

This definition differentiates social media used for health purposes from traditional/industrial media in many aspects. Reach, frequency, usability, immediacy, permanence and quality are highlighted as one of themes' („Healthcare and Social Media", 2016). In general, the common denominator of

[9] Lurker is a term for those users who passively follow the course of discussions, but do not participate themselves.

social media within an information society is the dissemination and diffusion of information. Therefore, social media is a powerful tool for health communication to pass on information and promote health.

2.3.2 Social Media in Health Communication

The diffusion of information and counselling is a key element in promoting health competencies within the public or private sector. Health communication in general has various attributes (see Figure 4), such as inform and influence individual/community decisions, motivating individuals, change behaviours, increase knowledge and facilitate an understanding of health-related issues, or empower people. Hence, Schiavo (2007, p. 7) defines health communication as:

> "[…] a multifaceted and multidisciplinary approach to reach different audiences and share health-related information with the goal of influencing, engaging, and supporting individuals, communities, health professionals, special groups, policymakers and the public to champion, introduce, adopt, or sustain a behaviour, practice, or policy that will ultimately improve health outcomes."

The role of communication is to create a receptive environment in which information can be discussed, shared, understood and absorbed by the audience. In doing so, an understanding of the beliefs, needs, attitudes, lifestyle, taboos and social norms is needed to inform the intended audience.

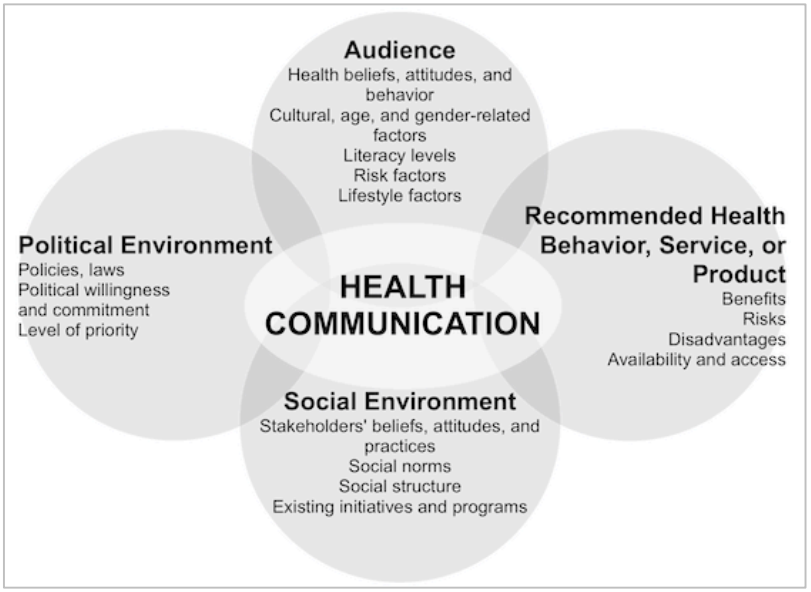


Figure 4 The representation of the health communication environment illustrates where change should occur and be sustained. All factors are interconnected and can mutually affect each other. Graphic based on Schiavo (2007, p. 23).

The social media used as a tool in the category of health communication is a powerful connector between communicators, such as health organizations, and the audience such as patients or a specific population. As social media belongs to a specific form of mass media, it has the power to "[…] portray a behaviour and make it socially acceptable by shaping public perceptions and feelings toward that behaviour." (Schiavo, 2007, p. 46). Through continuous message exposure and nurturing the audiences' feelings, social media can produce long-term effects on the intended individuals. For instance, following a healthcare organization or group of heath care experts on social media secures individuals' involvement in health issues and its solutions.

2.3.2.1 Health communication theory

As seen above, the usage of social media for clinical health communication can be an influential tool to promote health and change behaviours as well as support and sustain this kind of change in a society (Maher et al., 2014, p. 9). This section should illustrate why behavioural change is possible.

Ajzen and Fishbein formulated *the theory of reasoned action* (see Figure 5). They suggested that behavioural performance is determined by a person's intention to perform a specific behaviour. Therefore, the authors specify that two major determinants contribute the behavioural intention: (1) a person's attitude toward the behaviour; and (2) a person's perception of social norms about the behaviour (Fishbein & Ajzen, 1975, p. 13).

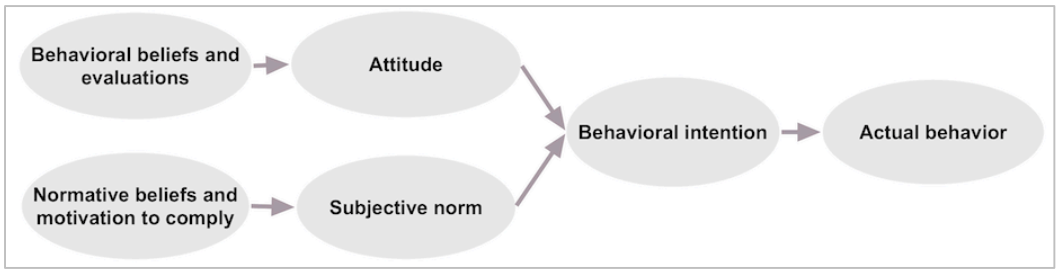


Figure 5 Representation of Fishbein's and Ajzen's model of the theory of reasoned action. The target size of the model is the behaviour. It is assumed that the person's actual behaviour is determined by the behavioural intention. It can be seen that the behavioural intention does not necessarily lead to behaviour.

First, the attitude toward behaviour results from the assumption about the outcome of the behaviour and the evaluation of the result. It is a function of personal beliefs about the consequences of such a behaviour, termed *behavioural beliefs,* "[…] an individual's feelings about performing the target behaviour." (Fishbein & Ajzen, 1975, p. 216). The attitude toward behaviour can

be formulated as an evaluation of negative/positive emotions or feelings toward a behaviour, a concept, a person, or an idea.

Second, subjective norms are the sum of subjective social and normative assumptions and intentions that affect the intentions of action. Subjective norms are defined "[…] as the opinion or judgement, positive or negative, that loved ones, friends, family, colleagues, professional organization, or the key influential may have about a potential behaviour (for example, 'My doctor recommends that I exercise at least twice a week')." (Schiavo, 2007, p. 40). These norms are influenced by *normative beliefs* and *motivation to comply*. Beliefs are the expectations that others will agree or approve of the person's behaviour. Motivation to comply means, to comply with other people's ideas and potential approval. Subjective norm is "[…] the person's perception that most people who are important to him think he should not perform the behaviour in question." (Fishbein & Ajzen, 1975, p. 302).

With an understanding of the theory of reasoned action, it can be said that health communication using social media, can have an important influence in supporting behavioural intention and increase the translation from intention to actual behavioural performance change. Social media, as a tool to facilitate and make it easy for people to try, adopt and integrate new health behaviours in their lifestyle (Apps and platforms), can support the change. Therefore, Fishbein's and Ajzen's model is useful to analyse and identify audiences, reasons and information that are in the likelihood to change one's attitude in combination with the technical possibilities of social media processes.

2.3.2.2 Digital healthcare landscape change health communication

A look at the consideration of the various aspects and technical possibilities of social media shows that there is an increased participation, like an increased intended audience activity, on social networking sites. In Austria, the number of social media users has increased fivefold. In the year 2008 about 9% of the Austrian society used social media, in contrast, there are nowadays about 49% who participate in social network platforms („Social Media in Österreich - Statista-Dossier", 2016). Therefore, 13% are frequently using social media and about 41% use them occasionally to inform themselves on social issues, such as healthcare. This numbers illustrate that more than the half of the Austrian society get their information of social issues using social online networks. Asking participants about which channels they use to clarify health issues, 65% answer that they use online platforms.

The international view on the topic of social media in health care illustrates that: (1) Physicians spend twice as much time using online resources as compared to print media when making clinical decisions; (2) in 2009, 72% of internet users looked up online for health-related information, and 92% of those used the search engine Google, rather than a health portal to gather this information; (3) Facebook is reported as the fourth most popular source of health information in the U.K.; (4) Physicians on average spend three hours per week watching online videos for professional purposes and cite YouTube as the most important source of video; and (5) In the U.S., interest in specific diseases receives the greatest amount of attention in social media relating to healthcare („Healthcare and Social Media“, 2016). Moreover, Almaiman et al. (2015, p. 1) reported in their study that seeking web-based medical information through social media is popular among healthcare professionals and about one-third of social media users are using social networking sites as a natural space for health discussions.

A further factor why social media become an influential tool for healthcare communication is, that healthcare is getting more mobile and ubiquitous. The increased prevalence of smart and mobile devices, such as tablets and smartphones, and thus resulting in increased supply of software applications (Apps), which enable a collection, archiving and evaluation of health data, makes health everywhere and at any time more tangible. Thus, users of social networking sites and mobile devices receive permanent feedback and information on their activities and behaviour, regardless of location or time. For instance, studies suggest that about 53% who own a mobile device have looked up health-related issues on their device (Fox & Duggan, 2013, p. 17). Looking at medical professionals, 83% of physicians used their smart devices for professional purposes. Therefore, the most frequently retrieved health-related information were clinical contents, articles for further education and new developments in the field of medical technology („Digital Health - Statista-Dossier“, 2016).

The stated figures above underline the statement of the health communication community, that particularly the participative internet has transformed the pattern of communication, including health-related communications (Chou, Hunt, Beckjord, Moser, & Hesse, 2009, p. 2). Health communication programs can use the increased individuals’ connectivity and the enabled users’ participation to impact populations’ health.

2.3.2.3 Changing health behaviour

Adopting social network platforms, as health promotion communication sites show, increased success in recent times by using them for planned health

campaigns, public relations or as advocacy groups to realize health goals (Chou u. a., 2009, p. 2). The aim of many health related campaigns is to change ones' health harming behaviour. Health communication communities are of the opinion, that people change their health related behaviour at least partly by the information and clarification they receive from the media. Especially health-related information, but also establishing social support factors by health communication can contribute to health promotion. Social media can support this effect, as it allows to reach rapidly a large number of people from all groups of the population, and the information can be tailored to specific objectives. To achieve change in health behaviour, one cannot rely exclusively on health campaigns. Online health campaigns can develop their effects when combined with other strategies, such as political changes in social life and environmental conditions. Therefore, a new problem awareness is easier to achieve, than influencing or changing attitudes. Even more difficult is the achievement of change in health behaviour.

Wangberg et al. (2008, p. 70) could show in their study that online social networks increase perceived *social support* and interconnectivity among users. With the increase of informational content, which is mostly user-generated, information sharing is seen as more democratic and patient controlled, enabling actors to exchange health-related information that they need and therefore making the information more user or patient centred.

However, expanding the information media through social online networks does not necessarily mean, that people are better informed about health problems. At present, there are many uncertainties, such as privacy issues and whether people desire to use social media to change and improve their health behaviour. Nevertheless, social media offers considerable potential for delivering public health campaigns for several reasons. The first one was already mentioned above, a large number of people can be reached. For instance, Facebook with about 1.1 billion users each month, figures rising. The second one, social online networks achieve high levels of user engagement and retention. Third, receiving information from existing, well-known contacts may be more influential than health content delivered by industrial media. Finally, the users on social platforms are more actively engaged by the communication process than in traditional media, which may be more influential than industrial advertisement (Maher et al., 2014, p. 2).

The systematic review from Maher et al. (2014, p. 9) illustrates that stand-alone health-focused social network sites can be effective for the actors who retain over a period of time. User retention is the main problem, because the engagement for

staying in the intervention for its duration is generally low. One further problem, is that health-related social networking sites are likely to attract people who are already motivated to change their behaviour or have a healthy lifestyle. Therefore, people who suffer from life style diseases are more difficult to achieve. In contrast to this, it can be argued that social media is anonymous, without an unwanted face-to-face contact, whereby the accessibility can be reduced. Social media can help to demonstrate health problems and provide suitable platforms that support audience-related health programs.

In order to publish efficient and effective health programs via social media, one has to admit that long-lasting change is "[…] determined by the individual motivation to become directly involved with the process of change." (Schiavo, 2007, p. 53). Hence, individuals are influenced by their social structures and communities in order to change their lifestyle by feeling empowered to do so. Health promotion programs have to address the importance of considering the individual as part of the social environment. It should enable people to control and improve their own health with larger public health goals. Therefore, the program has to take care of *predisposing factors*, such as individual's knowledge, attitude and beliefs; *enabling factors*, such as social environmental factors that facilitate obstacles to change; and *reinforcing factors*, which determine person's continuing behavioural change by receiving positive or negative feedback, including social support (Porter, 2015, p. 5). In order to meet these points in health communication, one has to analyse the environment and the situation in which the mediated health program should occur. There are several planning and evaluation frameworks in health communication, which will not be discussed in detail[10].

Although these media can be used to disseminate information, there is often a lack of quality controls, and if there are those, their criteria are mostly vague (Naidoo & Wills, 2010, p. 303). The generally accepted criteria include the up-to-dateness, the use of trustworthy sources of information and the requirement that this information is reliable, relevant, accurate and generally understandable.

2.3.3 Participation in Social Media and Healthcare

Traditional health communication is transforming into a more digital landscape. Hence, the use of social media for health-related purposes results in a changing

[10] For more information, please refer to the *logic modelling* framework for health education („University of Wisconsin, Extension Program Development, 2005").

healthcare participation. The following chapters deal with the participation and use of social media in health professions as well as their applications to patients.

2.3.3.1 Usage and presence of social media channels

The Web 2.0 with its social demands is increasingly becoming a source for general and specific health information. As the internet could become the first point of contact for health information, thus has the power to replace healthcare professionals for obtaining first health information. Fox & Duggan (2013, p. 3) illustrate in their study that about 72% of the internet users looked online for health information and about 35% of the interviewed specified that they have gone online to figure out what medical condition they or someone else might have. Hence, 41% of people had their conditions confirmed by a clinician. These findings underline the statement that people use the internet as a diagnostic tool. In addition, among the online health information seekers, 16% tried to find others who might share the same health concerns, 30% consulted online reviews, treatments or healthcare services, and 26% read about some else's healthcare experience.

Based on this figures and the conceptual viewpoint of digital activities (see Figure 6), one can see that the usage and presence of social media channels are increasing with different impact and activity levels.

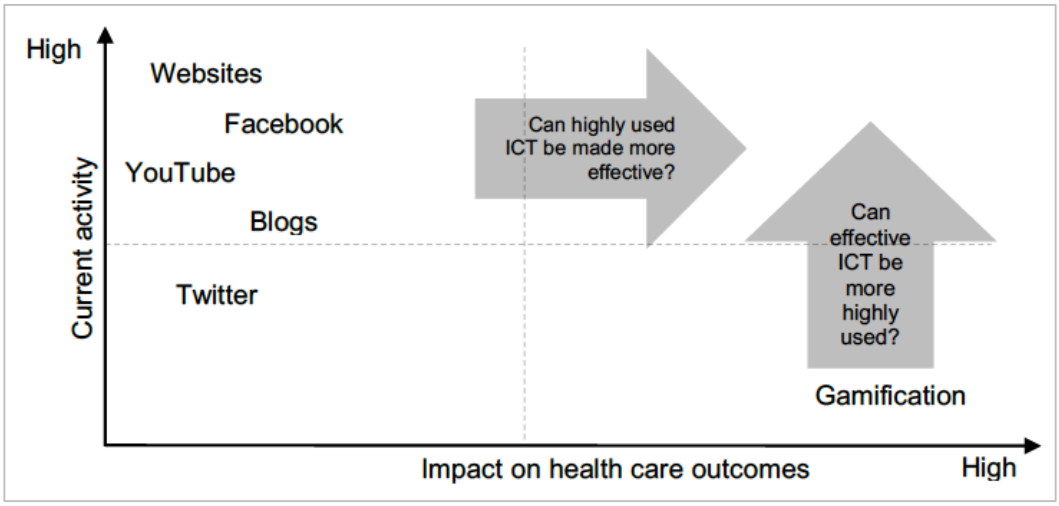


Figure 6 The conceptual viewpoint of digital activities clarifies the relationship between the impact on healthcare outcomes and audience activities. It illustrates that social media tools, such as Facebook, Blogs and YouTube, have a low healthcare impact („Healthcare and Social Media", 2016). The minor effects can be attributed to the lower quality criteria of the published health information, which is mostly user-generated, as well as the low quality of distributed healthcare programs.

The most common channels for viewing health-related information are YouTube and Facebook (Bjerglund, 2012, p. 8). Facebook is with 94% of respondents the most visited social network site to gather health information. Second is YouTube, with 32%, and finally, Twitter, an emerging micro-blog site for B2C communication, landed in third with 18% of users („Market Insights"). A look at the healthcare professionals shows that 70% of junior physicians use Wikipedia, whereas 50% of practicing physicians use wikis as an information seeking source in providing healthcare (Heilman et al., 2011, p. 4).

These findings illustrate that social media has become an important health information seeking source for healthcare professionals and patients, as well as the public. In addition to information seeking, further effects can be lucrative for healthcare professionals and patients.

2.3.3.2 Social media and health professionals

Healthcare professionals and health organizations use social media channels in various ways, personally or professional, although personal use, with about 90%, is more common. As mentioned above, health information seeking is just one key element of social networking sites, further health professionals use them to (1) communicate and network with colleagues, (2) market their practice, (3) engage in health advocacy, or (4) disseminate their research (Chretien & Kind, 2013, p. 1). In contrast, healthcare organizations pay attention to social media, because of (5) fundraising, (6) customer service and support, (7) provision of information and news, (8) advertising new services and (9) patient education. Hence, it is important to differentiate between what is possible for individual healthcare professionals and healthcare organizations, taking into account economic factors such as time to answer questions for a large number of persons online.

An organizational perspective illustrates that social networking sites increase visibility and improve an overall image. Particularly hospitals or health institutions become online stakeholders, because of their structured and commercial approach to social media. This in case can attract new patients and build relationships. Social media allows organizations to improve their knowledge and permit better filtering of information by getting feedback from the costumers. Every costumer can comment or discuss their treatment on the provider’s social media site. Whereas good comments can increase business and result in positive publicity, negative comments can be used to improve shortcomings of the provider and fulfil costumers’ needs. As some health providers fear that social media lead to a large number of negative comments, it can be said that costumers are more likely to share positive health-related experiences and comments tend to be positive (Anderson et al., 2012, p. 10f).

Furthermore, healthcare organizations can distribute health-related information and instructions for the users, in order to provide valuable information about healthcare concerns, issues and topics. The communication on social networking sites is beneficial, because the health organization can follow the correspondence on an issue. Hence, it allows the institution to develop a trusting relationship with their consumers by answering posts or comments immediately and honestly. As consumers / patients take advantage of social media to express themselves, they expect a fast responsiveness from health providers / hospitals. PwC's study recommended that 70% of the consumers expect a response within a day to a request for information through social media. The insights of what people said and felt on products and services can be used to adopt and improve these services (Anderson et al., 2012, p. 13).

In general, social media use by patients can be beneficial to health organizations/providers, as it strengthens the market position and stimulates conversation for brand building and improved service delivery (Smailhodzic, Hooijsma, Boonstra, & Langley, 2016, p. 2).

The trustful relationship between healthcare professionals and patients puts the clinicians in a prime position to drive health related topics on social networking sites. Therefore, they are able to *share information* to empower patients to make informed decisions. In contrast, information sharing has to be treated with caution when it comes to worried patients. Aitken et al. („Healthcare and Social Media", 2016) reported in their article a relation of 2:1 between positive comments on the impact of social media on consultations to negative comments. This objection leads to a far-reaching dilemma of information sharing.

An asynchronous communication between health professionals and patients generates an asymmetry of information towards the patient[11]. This asymmetry provides a flexibility in the decision-making for clinicians. This advantage would only be given up when the useful value of synchronous and transparent communication, as it is the case with the application of social media, is increased. The advantage of information is at the same time a competitive advantage within the health market, as well as customer loyalty, when one neglects emotional aspects of a relationship network. An active interaction between patient and health professionals also means an organizational change.

As mentioned under the section social media in health communication (see section 2.3.2), the relationship between health professional and patient is changing with

[11] For further information, see the principle-agent-theory for information asymmetries.

new digital technologies. The informed patient wants to enter into a dialogue. In contrast, health professionals are interested in the fact that their treatments and diagnoses are accepted and put into practice. The informed patient will be able to question the treatment objectives and methods of the doctor in a more detailed way. The patients want to participate actively in their treatments and diagnoses. Schneider (2002, p. 1) could show in his investigations that an asynchronous reciprocal communication with an insufficient flow of information leads to a lower self-responsibility and low understanding of the patients compliance. In order to improve patient-centred communication and shared decision making, it is recommended to make more comprehensive and understandable information available to patients and develop decision aids to facilitate this kind of communication. This can be made by sharing information through social media. With social media as a tool, healthcare professionals can inform the patient, resulting in more informed and empowered patients. As a result, the patients are able to communicate in a better way with the doctor as they have an increased understanding of their conditions (Smailhodzic et al., 2016, p. 9f). Thus, the empowered patients take more responsibility for their own condition and the empowerment affects the patients' confidence, ability and willingness to actively participate in clinical interactions. An active communication can lead to an increased sense of empowerment.

From the figures stated above, the conclusion can be drawn that the willingness and acceptance to use social media for health purposes is tending to increase. The usage of social media will raise the importance of social media for an active interaction between health professionals and patients. Hence, a reciprocal interaction is necessary to engage a patient-centred communication. Health professionals have to use a more collaborative and understandable approach to fulfil patient´s needs.

In fact, 65% of individual healthcare professionals use social media for health purposes. A review from Rolls, Hansen, Jackson, & Elliott (2016, p. 5) reported that 52% of physicians currently used online communities, 25% used wikis, and about 20% used Facebook, podcasts, blogs, or Twitter for professional issues, but they rarely used social media to communicate with patients.

Therefore, a growing minor favours the interactions with patients via social networking sites to support patients' education, monitor patients' health and behaviour, or to give care advice to groups that would lead to "better education, increased compliance, and better outcomes." (Courtney, Shabestari, & Kuo, 2013, p. 244ff). However, it is mainly up to healthcare and non-profit

organizations to promote health information to engage a shared-decision making, because of structural and economic factors.

The most widely used social media venues for individual health professionals are online communities where they can listen to experts, network, communicate with colleagues, research new developments and discuss patient related issues. The most common activity is the exchange of specific knowledge, which is facilitated by trust, collectivism, reciprocity and altruism, as well as a respectful non-competitive environment. An effective information transfer occurs in social networks with high density and weak ties to gather novel information.

Professional networking encourages the exchange of social and professional skills between professional groups. For instance, crowdsourcing is a method on social online platforms, which involves harnessing the skills and knowledge of health communities to solve health-related problems or gather opinions on a specific issue. Social media also play an important role *in professional education*. Therefore, they are used to enhance students' understanding of professionalism, ethics and communications. Universities use social networking sites to create a virtual learning space, whereas students can exchange information or discuss topics anonymously. Further, health professional's students use social media to exchange experiences and enhance their clinical decision-making skills, by viewing videos and giving feedback on their observations (Ventola, 2014, p. 4f).

Taking a closer look how health professionals participate in online communities, it can be said that healthcare online communities share similar characteristics as other communities, with a mixture of lurkers, observers, active and passive contributors (Rolls et al., 2016, p. 10). Passive contributors belong to these platforms in order to get a potential access to important information.

The favour usage of social media among healthcare professionals is to communicate within their own profession and within a clinical speciality. Whereas group behaviours are perceived as negative because of the large number of discussions and contentious issues. Therefore, smaller groups are preferred which is reflected in willingness to share information and retention of online members. Taking into account that homophilia in groups can inhibit multidisciplinary and information transfer, as described by the weak-tie-theory.

2.3.3.3 Social media and patients

As mentioned before, a patient-centred communication is essential to identify patients' needs and reach health goals in agreement with patients. This requires informed patients. Therefore, ICT can be a global player to identify how

individuals manage their health, to encourage them in their medical decision-making and to engage the transition from *informed patient* to *participative patient*. Social networking sites offer new possibilities for costumers / patients to research particular health issues, join health groups such as cancer groups and facilitate the social support, or to exchange / share information and experiences on a certain health issue. Particularly sharing information is based on a user-generated content within an anonymous environment and therefore, the quality of health information can be low, but on the other hand, people can be connected with other people's stories. In this content, one has to understand the neutrality and validity of the information searched through social media.

An study from the PwC's health research institute (Anderson et al., 2012, p. 8f) reported that mostly young people, aged between 18 up to 24 years, are more likely to share information via social media, than 45 up to 64 year olds. People in good health conditions are more likely to share their health experiences and trust information posted on social media, whereas persons with poor health are more engaged. Thus, patients related to specific health issues develop online communities to deliver their information about treatments, occurred problems and other health-related information, or to seek health information. According to PwC's study, 42% of social media consumers used social media to access health-related consumer reviews, 32% used online sites to view friend health experiences, and 24% sought information related to other patients' experiences. This, in case social media becomes an important tool for social support; even one is not willing to share his/her information. A closer look at the social media participation in health-related issues underlines the topic of social support and the transition from informed patient to participative patient. Nearly thirty percent of social media costumers commented on others' health experiences and supported health related causes. Twenty-four percent posted about health experiences and 20% joined health communities. The fact that mainly user-generated content is transferred through social media is strengthened by the figure that only about one quarter of people post reviews of doctors, medical treatments or health insurers. Thus, the fear of many healthcare professionals that social media use by patients for health-related issues spread misinformation among users, is entitled.

In general, a growing health exchange takes place via social media. This fosters the patients' autonomy by complementing knowledge translated by healthcare professionals and by social support. Although there is mixture of different audience activity level in social media (see section 2.2.5), the democratisation of information via social networking sites shapes the clinical encounters and the patient-provider relationship.

It can be highlighted that patients do not use social networking sites to obviate healthcare professionals, but rather use it as a complementary tool to fulfil their needs that cannot be met by health providers. Clinicians mostly transfer a sort of expert knowledge of the forthcoming treatment and examination, but not their first hand experience. The differences between patients' and health providers' culture and language, influence the providers' ability to understand the patients' informational, cultural and emotional needs.

These differences, particularly the patients' emotional and informational needs, termed as *social support*, are the main reason why they join online health communities and use social media. *Social support* is represented by four common, namely emotional support, esteem support, information support and network support (Smailhodzic et al., 2016, p. 7). Other types are emotional expression and social comparison. Further, Smailhodzic et al. (2016, p. 8) analysed the effects of social media for health related reasons. They consider that the most common effect of social media usage is patient empowerment, represented by enhanced subjective well-being, enhanced psychological well-being and improved self-management and control. These mentioned effects and reasons illustrate the changing of health communication and can have an influencing impact on the patients' decision-making and health outcomes.

Social media usage is not just influencing the patients themselves, but also the relationship between them and health providers. First, social media can lead to a more equal communication. The patient enters into a dialogue with healthcare professionals, which lead to a confident feeling in their relationship with their health provider and increase the active communication between them. Second, it can lead to an increased switching of healthcare professionals with shorter relationships. This can be a result of discussions about healthcare professionals or treatments in virtual communities, whereas negative comments or reactions can lead to a doctor's change, or look up for a second opinion. Finally, the relationship between healthcare professionals and patients can be influenced by social media. Information gathered by online communities can be a threat for clinicians during the consultation. If health professionals react negatively to online community contents during the interaction, patients can feel disempowered, but will not change their online behaviour.

2.3.4 Benefits and Limitations

The outlined social media usage behaviour from patients and health professionals can lead to positive benefits as well as limiting barriers for health-related purposes.

What social media, as a tool for health communication, can do in particular, is to make health problems more conscious, make health a public issue, communicate uncomplicated health messages and to change ones' health behaviours when other factors that are capable of doing so, are already present (Naidoo & Wills, 2010, p. 301). Factors which support a health changing behaviour are motivation, a supportive environment, such as types of social support (see section 2.1.1) and a behavioural economic approach, to make it easier for patients, to do the right thing. These things can be addressed by social networking platforms. Therefore, the major beneficial aspect for the use of social media in healthcare is the accessibility and sharing of information to various population groups, regardless of education, race, ethnicity, locality and age (Moorhead et al., 2013, p. 9). Hence, information has to fulfil certain criteria to improve health competency. The fact that most of the information is user generated, addresses the aspect that many patients seek information of first hand experiences. These contents help to meet patients' needs, such as social support. Furthermore, social media strengthens the relationship between health consumer and provider, offers new marketing strategies, facilitates life-long learning, improves healthcare via information sharing and multidisciplinary approach and supports the access to scientific media (Gholami-Kordkheili, Wild, & Strech, 2013, p. 5). On the other hand, social media in health communication cannot replace a lack of local health infrastructure. It is not a tool to circumvent healthcare providers or professionals. Therefore, it cannot compensate incommensurate medical solutions, to treat, diagnose, or prevent diseases.

Social media can be a useful tool that also results into limitations and challenges. The primary identified limitations for social media usage consist of quality concerns, lack of reliability, confidentiality and privacy (Moorhead et al., 2013, p. 9).

The *poor quality of information* is one of the biggest downsides of social networking platforms. To seek and find valid, valuable and useful information can be difficult and time-consuming for non-professional people. Hence, information competencies within a society get more and more important, as everybody produces information about their own health and publishes user-generated content. It is a matter of finding the right health-related information. Therefore, professional hosted platforms/social sites, or health-related virtual communities

have their own informal policing, provided by a small group who update and host the site or by members who mind the community norm and netiquette. Social networking sites could provide high-quality information when there exists a balance between professionals and patients who ensure the quality by providing professionally authored and reviewed content.

Concerns about the usage of social media by health professionals for health-related purposes and patient-centred communication are centred on the potential negative consequence resulting from the breach of *patients' privacy and confidentiality*. Violations of privacy and data protection lead to liability of health providers. Hence, health professionals have to be educated to the state privacy laws. All personal identifying information have to be removed before posting this health-related information concerning patients (Ventola, 2014, p. 497). In general, it can be said that the boundary between public and private sphere blurs. This raises the question of what is to be understood in the future under private sphere and autonomy.

In order to close the issue of social media and their barriers for healthcare services, two further studies mentioned professional responsibilities, managing conflicts, improving access to technology, maintaining appropriate relations with patients and professional competence as important factors, one has to discuss in the near future, when it comes to the use of social media for medical professionalism (Gholami-Kordkheili et al., 2013, p. 4f; Ventola, 2014, p. 496f). Professional responsibilities and professional competence are discussed in the upcoming chapter.

2.4 Media Ethics as Ethics of Responsibilities

There is an increasing usage of social media for healthcare purposes, as the barriers to use them as a health communication tool are low. Limited privacy, security and the changing concept of autonomy lead to problems from an ethical point of view. Therefore, the application of social media in a healthcare context needs a precise reflexion of roles, responsibilities and media/digital competence.

2.4.1 Digital Competence

As social media has various benefits and limitations, it can be widely used in health communication to influence healthcare services, health professionals and patients. In order to use them in an efficient and effective way, one has to develop certain competencies. These competencies are qualified by the term

media or *digital competence*. Digital competence belongs to different disciplines, such as media studies, communication theories, and information sciences. To use social media in a professional way means to be digitally competent. This implies "[…] the ability to understand media (as most media have been /are being digitalized), to search for information and be critical about what is retrieved and to be able to communicate with others using a variety of digital tools and applications." (Ferrari, 2012, p. 3). The report from Ferrari analysed fifteen frameworks of digital competence to give comprehensive definition of *digital competence*:

> "Digital Competence is the set of knowledge, skills, attitudes (thus including abilities, strategies, values and awareness) that are required when using ICT and digital media to perform tasks; solve problems; communicate; manage information; collaborate; create and share content; and build knowledge effectively, efficiently, appropriately, critically, creatively, autonomously, flexibly, ethically, reflectively for work, leisure, participation, learning, socialising, consuming, and empowerment." (Ferrari, 2012, p. 3).

The definition from Ferrari covers much more than developing technical skills to use digital technologies in a competent way. Digital competence should not be reduced to technical skills alone, since social media, which meet all the criteria of digital technologies, have a very low application threshold and are designed to be user-friendly. Hence, the report took seven areas, as this approach is more adapted to the current needs: (1) information management; (2) collaboration; (3) communication and sharing; (4) creation of content and knowledge; (5) ethics and responsibility; (6) evaluation and problem solving; and (7) technical operations.

To elucidate all seven areas in detail would go beyond the scope of this thesis. As the ethical perspective is a focal point of this thesis, it will be discussed in the following chapter.

2.4.2 Actors and Responsibilities

Ethics as a science of morality, deals with the valuation of actions and their consequences. It is a progress of seeking suitable norms for a morally responsible cohabitation. Media ethics as an independent discipline is proclaimed as an ethics of actors responsibilities, which refers to the field of mass media.

Media ethic cannot be founded by a pure ethics of actors as media-users. The responsibilities of the users are covered by their general, ethical obligation to inform themselves. This in case means that the users have to inform and reflect

themselves before performing an action. To inform oneself is an important basic, moral responsibility to be able to know the best and to act with a certain degree. Information obligation is a partial requirement for any moral action and therefore, it cannot be the specific characteristic for a media ethics.

With regard to the responsibility of media-users, a distinction must be made between an *individualistic-ethical* and a *social-ethical* function. From the individualistic-ethical perspective the media-users use the media in a kind of way that their actions do not lead to restrictions of their own ability for responsiveness and therefore, their action has to fulfil their own moral criteria.

From a social-ethical perspective, the media-users as a critical public form a control and sanctioning authority. Thus, it is a constituent part of a public discourse, which reacts critically to processes and developments in the media system (Debatin, 2003, p. 39ff). The group of media-users thus bears responsibility for public media communication. However, their responsibility is only reactive, since it is subordinated in time to the content who was made available by actors as media-makers. The question of whether a content should be shared or not is therefore already before its publication. The media-makers, who produce the content, have to think about this, before sharing an information. Which makes them responsible for the production and dissemination. Likely due to this argument, it becomes clear that a prospective concept of responsibility is recommended, whose ethical reflexion is already anchored in the process of production (Debatin, 2003, p 42).

A solely media-user oriented approach cannot establish a media ethic. Recipient share a responsibility, but the main responsibility rest with the media-makers. As described in the chapters above, the participants in social networking sites are defined as producers (media-makers), as well as consumers (media-users). They are *produsers*. Therefore, the roles that they occupy in social media must be adapted to the particular situation and specific context.

Actors who produce informational content must be able to justify their actions and behaviours, as they get active on social networking platforms, at any time. Actors on social media are answerable to other persons for their actions. That said, if an actor assumes responsibility for her/his action, the actor recognizes another subject as a moral entity. Hence, a reciprocal relationship exists and users are mutually responsible for each other. The reason for this lies in the affiliation to a social community. Moral actions always take place in a system of social relationships. In a society, actors are committed to wanting that all members of a community with which they are in a social context, embody basic ethical values i.e.: become autonomous persons (Debatin, 2003, p. 45). To be able to be

responsible and autonomous means to be able to make use of an adequate basis of information, in order to make morally autonomous judgments. Actors have an ethical obligation to inform themselves before they judge.

This information acquisition also highlights the special emphasis on responsibility of the media-makers. With the novel communication structures such as Facebook and Twitter, and the resulting increasing possibilities for influencing a large number of media-users, the responsibility of those who decide on the selection and dissemination of information grows. At this moment it should be pointed out that the communication structures are increasingly asymmetrical. This means that few actors provide information that can influence a large number of actors in their decision-making process. Therefore, media-makers can contribute to a greater disturbance or play a more decisive role in the production of possible harm, so they must also exercise greater care in order to avoid this (Debatin, 2003, p. 45f).

If one takes a closer look at the context of social media, it can be illustrated that even social networking sites are not to a pure symmetric communication structure. It may facilitate the democratization of knowledge, but in case of active participation in social media, the diffusion of information tends to a more asymmetric communication structure, following a *90-9-1-rule* in which few people share information to a large number of members within an online health community. If health professionals share information within their social environment, their moral responsibility is set by prospective characteristics and it is essentially determined by their professional role.

2.4.3 Responsibility as a Multi-Stage Model

Due to the asymmetric communication structures and the beneficial position of actors as media-makers, media norms are necessary. This necessary belongs to the adoption that information is an essential good within a society. Social media are a key-tool to provide information within an information society. The *multi-stage-model* refers to a linkage of a *professional ethics, corporative ethics* and the concept of media-users as critical public, also called *public ethics*.

The concept of *public ethics* means that the actors in social media have a partial responsibility. It belongs to the adoption that social media get their moral value by their actors and their intentions. Hence, the usage of media refers to single moral values of each actor. As a result, digital/media competencies have to be enhanced for each actor, in order to encourage a responsible handling with information. Individual subjects of actions bear the responsibility for the action itself, as well as its consequences. Although, the normative image of an ideal

actor, who is an active seeking, conscious decision-making and critically evaluating actor, can be made, but this actor cannot take the whole responsibility for the ongoing processes in social networking sites. Therefore, a *communal responsibility* of the collective body is necessary (Stapf, 2006, p. 151ff).

The *communal responsibility* is seen as a moral obligation of the public to monitor, control and discuss processes on social media. It is the obligation and responsibility of a collective body to react on critical contributions, such as breaches against normative conducts. The public is given the opportunity to issue sanctions against media-makers. To be aware of this is the responsibility of the public, as media-users.

Corporative responsibility and normative expectations can be attributed to *corporations*, since they are viewed as a moral subject of actions. Accordingly, if a corporation acts through the individuals, who are active in it, the product of these individual acts is to be understood as a corporate action, which must also be held by the corporate (Stapf, 2006, p. 156).

The *professional ethics* relate to media-makers, which produce content and share it on social media. It is a task-oriented responsibility, which is linked to professional obligations. When using social media by an actor to share information, a greater group of actors can be reached and therefore, a higher level of responsibility belongs to the media-makers. This is promoted by the asymmetrical communication structure. Professional ethics refer in particular to norms of a professional ethos. These norms pretend an ideal, which should be reached within the praxis.

The *multi-stage-model* mediates between ideal ethical specifications and practical implications of ethical norms, through the concept of responsibility. The concept is suitable as a practical measure of an action and decision with the framework of this model. Therefore, responsibility is a key factor to analyse the field of tension between ideal values and practical applications. As social media is a complex structure, where actors can play the role of an individual, a corporate member, or a member of a collective body. Therefore, a careful reflexion of roles is required to use social media in a responsible way. The multi-stage-model (see Table 3) issues the responsibilities to the single roles. It can be emphasised that the concept of responsibility is a relational term which refers to several elements: an acting subject (Who) is responsible for an action (What) and its consequences (Wherefore) against those who are concerned (To whom) or normative aspects (Why) (Stapf, 2006, p. 148).

Who (acting subject)	**Individual**	**Corporation**	**Collective body**
What (action)	Single action & decisions; professionalism; usage behaviour; criticism behaviour, media competence	Actions of members as a whole; action patterns; professionalism	Actions of a profession as a whole; social discourse; transparency
Wherefore (consequences)	Causal attributable direct action consequences and side-effects	Action products; synergistic & cumulative effects	Action products; synergistic & cumulative effects
To whom (persons concerned)	Individual media participants; peer-groups, society & community, oneself	Individual media participants; peer-groups, society & community; profession	Profession, society & community
Why (normative values)	Responsibility of roles	Responsibility of roles, corporate objectives	Professional objectives, responsibility of roles

Table 3 Responsibilities within the multi-stage-model. Table based on Stapf (2006, p. 187).

It is important to separate possible responsibilities between individuals, corporative members and members of collective bodies. A corporative responsibility is not allowed to free the individuals from their responsibilities of actions within a corporation. It is not up to a shift of responsibilities, but rather to a practicable arrangement of responsibilities within single roles.

2.4.4 Ethical Challenges of Social Media in Healthcare

Due to the use of social media as a communication tool between patient and healthcare professional, ethical issues of data security, patient security, justice, privacy, confidence and informational self-determination occur within healthcare (Denecke et al., 2015, p. 145).

Social media used for healthcare purposes is influencing the patient-healthcare professional relationship. The relationship is characterized by trust and confidentiality. Therefore, healthcare professionals have to uphold the standards of professionalism, which include competence and integrity by providing expert advices to patients (Chretien & Kind, 2013, p. 1415). Healthcare professionals are viewed by patients or health society in their professional role. This is up to the fact, that the relationship is complementary and healthcare professionals identify themselves about the profession. Hence, professionals are judged by their self-representation in public or online. Social media has the effect that they blur the boarders of professional and personal content. Professional or personal interactions are less clear than in healthcare organizations. Shared personal content in social media can be interpreted as inappropriate professional behaviour. Furthermore, social media have the side effect to may convert the

complementary relationship into a more reciprocal relationship, communicating on a friendship based level, such as in Facebook. Professional behaviour can then fade.

Another point of professionalism is the quality of the information to be shared on social media. Health information is an important good. Their dissemination through communication has a considerable influence on the perception of certain diseases and the health behaviour. They provide the basis for an enlightened decision of an individual for health matters. False or discriminatory information or the misunderstanding of correct information can harm the individual. Healthcare professionals can share content that may be harmful to patients. Due to the responsibility of professionalism, healthcare professionals should report this misbehaviour of unprofessionalism. This include "[…] advertising false claims, misrepresentation of credentials, or posting grossly unprofessional content online." (Chretien & Kind, 2013, p. 1415). Because health-related information affects the behaviour and decisions of individuals, it is necessary that the shared content meet the criteria of correctness (evidence based), completeness and balance. Any form of manipulation is therefore to be omitted. This includes lobbying. The promotion of products in online communities represented by health professionals should be disclosed, as they do not meet the criteria of information quality and may harm professionalism. The aim is to strengthen the patient's self-determination. The problem is not primarily the communication of health using social media, but rather the *how* information is selected, represented and mediated.

To provide information, the safety of the individual must be given. Healthcare professionals using social media to communicate with patients have to ensure their security. The privacy of patients and the security of patient related health information is mandatory. The literature shows breaches of healthcare professionals involving social media or e-mail correspondence (Denecke et al., 2015, p. 145). The direct communication with patients must ensure that health information is protected. Facebook and other unsecure open platforms lead to well-known privacy breaches.

Writing about patients on health related web sites or blogs and looking up information about patients on social media are difficult ethical issues. On the one hand, it can be argued that writing about patients who were deidentified on social platforms is not a dishonest behaviour, because the intent can be to facilitate the understanding and the empathy. The intent is not to harm the patient, like releasing frustration or entertainment. If now the consequences of the action are also estimated and the undesirable effects, such as identification and lobbying

are reduced, the action can be morally justified. On the other side, experts argue that the privacy is not fully secured, because patients can be identified by include sufficient information within the narrative. As with writing about patients, the looking up of information about patients depends on the intentions of the action, the attitude against the action and the consequences and their reduction of negative effects.

General, relevant information should be made available to patients, healthcare professionals and the public, but at the same time, actors have to consider the issue of responsibility of their actions and justify them morally. As a result, ethical principles for health communication can be formulated, such as: (1) correctness, completeness and balance, (2) transparency, (3) participation, (4) respect to human dignity and (5) social justice.

2.5 Summary

Resumed, it can be shown that the effects of social media as enlargement of social networks can be attributed to the asymmetric complementary relationship between patients and healthcare professionals. The most common positive effect of social networks is to gain social capital. Social capital can be provided by weak ties, in order to receive novel and valuable information, or by closing structural holes. Actors of structural holes benefit from their unique position within a network. Dense networks are beneficial to change behaviours or facilitate actions. Due to their close connection, actors are subjected to a high social pressure and determined by expectations of the social norm proclaimed within the network. This can also turn into compulsion. Social capital is yet profitable within relationships formed by trust, reciprocity and complementarity. This is yielded by the mechanisms of homophilia and activity-foci. These mechanisms are also found in online healthcare communities. Therefore, social capital is used in the form of social support to fulfil the patients' emotional and informational needs. In contrast, healthcare professionals use social media to meet their needs of information acquisition, maintaining and establishing relationships and gain status or social capital. Likewise, there is a similar participation of healthcare professionals in social media platforms for health purposes as in normal online communities. The participation is higher in the acquisition of information, but lower in activities that require a higher cognitive and temporal effort, such as writing, posting or commenting. The literature shows that social media are primarily used by healthcare professionals to improve their own professional competence and exchange within their professional occupation. The communication and exchange with patients is in the background. The theoretical

background illustrates that social media is beneficial in terms of making health more deliberate in public health, informational seeking and exchange within the community. In contrast, limitations of social media are poor quality and concerns about patients' privacy and confidence as well as legal issues. The limitations of social media lead to ethical issues. To use social media for health related issues, digital competencies are a crucial condition for healthcare professionals. Digital competencies are defined by many different skills. As a result, digital competencies have to be enhanced for each healthcare professional, in order to encourage a responsible handling with information. How the responsibility is distributed to an individual, to a corporation or to the public is illustrated by the multi-stage model of responsibility. The actions of individual actors are in the foreground of this study. It turns out that an action is morally justified only if the actor can state the purpose of the action purpose of the action and the consequences were sufficiently taken into account. On this basis, individual actions can be discussed, such as writing about patients in social media or looking up information about patients. At the same time, privacy, data security, professionalism and patient safety are at the forefront of ethical considerations.

3 Requirements / Methodology

This chapter follows the description of requirements and methodology. A descriptive, explorative study design was chosen to achieve the formulated goals of the work and answer the defined questions of research. A mixed method was used to examine the research questions. The research questions were analysed through an online survey, containing closed and half-open questions. The questionnaire was developed after the findings described in the theoretical part. Healthcare professionals were questioned about the actual general and professional usage, the digital competence with focus on ethical dealings and the benefits and limitations of social media for healthcare. The following chapters describe the research method in detail.

3.1 Research Questions

The first research question investigates the actual usage of social media by healthcare professionals. Actual usage was defined as general and professional usage of social media. The research question contains the participation in social media of healthcare professionals to health-related issues and their reasons for using or not using them.

RQ#1	What is the current status quo in the use of social media regarding to the specific professional group?

Table 4 Research question 1 (RQ#1) investigates the actual usage of social media by healthcare professionals.

The second research question investigates the digital self-competencies of healthcare professionals. The focus was on the ethical dealings of healthcare professionals using social media. Ethics and responsibility were defined as collaboration, responsibility and action, conflict solving, privacy and data protection, and threats and risks using social media.

RQ#2	How competent, in an ethical and responsible way, are the healthcare professionals themselves in dealing with social media for professional purposes?

Table 5 Research question 2 (RQ#2) deals with digital competencies with a focus on ethical issues.

The third research question follows an investigation of benefits and limitations of social media for healthcare services. The main goal of the question was to identify the advantages and disadvantages described in the literature. The healthcare professional rated them.

RQ#3	What benefits and limitations arise through the application of social media in the specific occupational group to the health services?

Table 6 Research question 3 (RQ#3) discusses the benefits and limitations of social media for healthcare purposes.

3.2 Study Design

A descriptive, explorative study design was chosen. The data is analysed by an explorative-descriptive statistic. The power of this method lies in the ability to graphically display data and create a deeper understanding of the interrelationships. Thus, social media can be understood better in healthcare services. The results should provide further hypotheses.

For this study, the term *social media* was defined as an interactive internet-based site, platform or application which allows the respondents to create, share, or exchange information or user-generated content, and to create online communities or virtual networks in order to establish and/or maintain social relationships. Professional usage was defined by using social media for health-related, medical, healthcare, or academic issues.

A mixed-method was used to analyse the data. This method was based on an online survey, containing open as well as half-open questions. Therefore, it is a mixed method, including quantitative as well as qualitative elements.

Healthcare professionals were surveyed. The questionnaire asked specific questions regarding respondents' actual use of social media for both private and professional reasons, their digital competence and their opinion about the benefits and limitations of social media for healthcare services.

The questionnaire was developed for this study and evaluated for completeness and clarity by healthcare professionals with the aid of a pre-test. A literature research was done to develop the questionnaire. The literature review proceeded in the months of October and November 2016. The development of the questionnaire took place between beginning of December 2016 until end of January 2017.

The survey was created with *UniPark*[12] and distributed by a generated link[13] via email, instant messenger and social media. The survey had to be filled in online using a mobile device (for example, a tablet/smart phone) or a computer/laptop. The survey was published in German language, as the main participants were German speaking. The online survey was open for a total of six weeks. The questionnaire started at the beginning of February 2017 and ended in mid-March 2017.

An ethics committee and the University of Sankt Pölten, study programme digital healthcare, approved the study. The online survey was completely anonymous. Personal data were not queried.

3.3 Questionnaire

A questionnaire survey was developed for this study following the checklist for reporting results of internet E-surveys (Eysenbach, 2004, p. 2) and the best practices for survey research reports (Draugalis, Coons, & Plaza, 2008, p. 5f).

A literature research was done to elaborate the specific questions in order to analyse the research questions. The survey covered six broad areas of social media behaviours of healthcare professionals: (1) current general participants' usage, (2) participation in social media for health-related issues, (3) current professional participants' usage, (4) digital competencies in an ethical and responsible way, (5) limitations and (6) benefits of social media for health-care services. Each question and item is particularized in the register (see Table 7).

The survey contained type of questions referred to as closed and half-open questions with a point for users' supplements. Half-open questions were particularly asked in the part of general and professional use, as well as in the area of participation in social media. Closed questions were conceptualized for digital competencies, as well as for benefits and limitations for healthcare services.

Each question was defined as a mandatory question. Thus, the participants cannot avoid questions asked within the survey by skipping to the next question. This ensured that every participant completely filled out all the questions, when finishing the questionnaire survey.

[12] UniPark distributes a professional online survey-software, namely Questback. http://www.unipark.com/de/

[13] Survey-URL: https://ww3.unipark.de/uc/DHC/ebb0/

Scale-Number	Scale-Formulation	Item-Number	Item-Formulation
Research Question 1: Actual usage of social media			
1	**Professional group**	1.1	Which professional group or course of studies do you belong to?
2	**General usage**	2.1	Do you use social networking sites?
		2.2	What social networking sites do you use?
		2.3	How often do you use social networking sites in general?
3	**Participation**	3.1	Are you interested in social networking sites about health issues?
		3.2	Do you belong to a group on a social networking platform that is involved in health issues or is working to promote health interests?
		3.3	Do you follow health professionals, health organizations or health interest groups on a social networking site?
		3.4	How often do you use the following functions from social networking sites to…? [posting links, posting own thougths, commenting, encouraging others, sharing, promoting]
		3.5	Have you read an article in social networking sites in the past 12 months that gave you an opportunity to learn more about a certain health issue?
		3.6	In the past 12 months, have you read an article in the social networking sites that gave you an opportunity to become more active in the area of health?
4	**Professional usage**	4.1	How would you describe your use of social networking sites?
		4.2	Why do you not use social networking sites for professional or academic purposes? [data security, complicated, liability concerns, time-consuming, uninformed, no engagement]
		4.3	What social networking sites do you use for medical, professional or academic purposes? [Facebook, Twitter, YouTube, Messenger services, Wikis, online communities, Blogs]
		4.4	For what medical, professional or academic main reasons do you use social networking sites? [marketing, education, patient care, health promotion, health science, share information, networking]
		4.5	With whom are you mainly connected? [journals, interest groups, health organizations, own profession, other profession, study colleagues]
		4.6	Which device do you use most often [computer, mobile device]
		4.7	Where do you use social networking sites most frequently for professional purposes? [home, office, on the way]
		4.8	How often do you use the following social networking sites for professional purposes?[day, week, month, rare, never]
Research Question 2: Digital competencies			
5	**Security and data protection**	5.1	I have a common knowledge of privacy laws and privacy policies, and keep them up to date on a regular basis.
		5.2	I regularly monitor the security settings of my device and the applications I use.
6	**Utilization and technology**	6.1	I have a general technical or digital knowledge to actively use social networking sites and keep them up to date on a regular basis.
7	**Risks and dangers**	7.1	I am aware of the risks of dealing with social networks.
		7.2	I understand the dangers of cyber-mobbing and trolling.
		7.3	I am informed about the impact of social platforms on my environment.
8	**Legal framework**	8.1	I have an understanding of the intellectual property.
		8.2	I know and retain the personality rights of another person.

9	**Information**	9.1	I can assess the reliability and credibility of information through certain criteria.
		9.2	Before I share a post or comment, I critically reflect about it.
10	**Conflict management**	10.1	I can deal with conflicts that arise on social media.
		10.2	If I notice social media detrimental opinions, or a dissemination of false facts against myself or others, then I know how to deal with it.
11	**Collaboration**	11.1	I am looking for a responsible and fair deal with other people via social networking sites.
		11.2	I know the social media guidelines of my healthcare institution.
		11.3	Have you ever read or heard of any negative entries or comments about others on social networking sites?
12	**Action and responsibility**	12.1	I include the integrity of others in my own actions on social networking sites.
		12.2	Before I decide for an action on social networking sites, I weigh the consequences.
		12.3	I recognize when personal rights are infringed and I take a position on them.
		12.4	If I read provocative or offensive content, then I draw attention, report or block it.
		12.5	I believe that people are responsible for their actions on social networking sites.
Research Question 3: Benefits and limitation of social networking sites in the area of healthcare			
13	**Concerns and trust**	13.1	To what extent do you have concerns to use social networking sites in the area of healthcare? [have concerns, have little, no concerns]
14	**Benefits and limitations**	14.1	What are the main barriers to the use of social networking sites in the healthcare sector? [access equality, prof. liability, communication, reliability, professionalism, quality of information, lack of training]
		14.2	What are the main benefits of using social networking sites in the area of healthcare? [public health, interaction, prof. education, access to information, patient care and education]
Demographic data			
15	**Guidelines**	15.1	Would you like to have more information about the issue “social media in healthcare”?
16	**Demographic data**	16.1	Age
		16.2	Sex
		16.3	In which state are you working or studying at the time?
		16.4	Your current therapeutic employment relationship? [self employed, studying, employed]
		16.5	Please enter your main activity field. [hospital, practice, University, rehabilitation, ambulatory]
		16.6	How long have you been a therapist?

Table 7 Overview and register of each item and its formulation. For the German translation, please see appendix A.

The survey questionnaire contained several filter questions, in order to customize the survey. Filter questions were stated at the scale *professional group, general usage, participation* and *professional usage*. The filter questions were from the type single choice. All other questions, except for the questions of demographic data, were from the type multiple-choice. In the case of multiple choice questions, it was noted how many can be chosen in total. A note explained every particular

term of a specific question. The path, with the filter questions, and the structure of the survey are shown in the graph below (see Figure 7). A draft survey was done and revised by several healthcare professionals. The final questionnaire consisted of 36 items, including the demographic data. That took on average 15 minutes to complete the questions, including the filter questions.

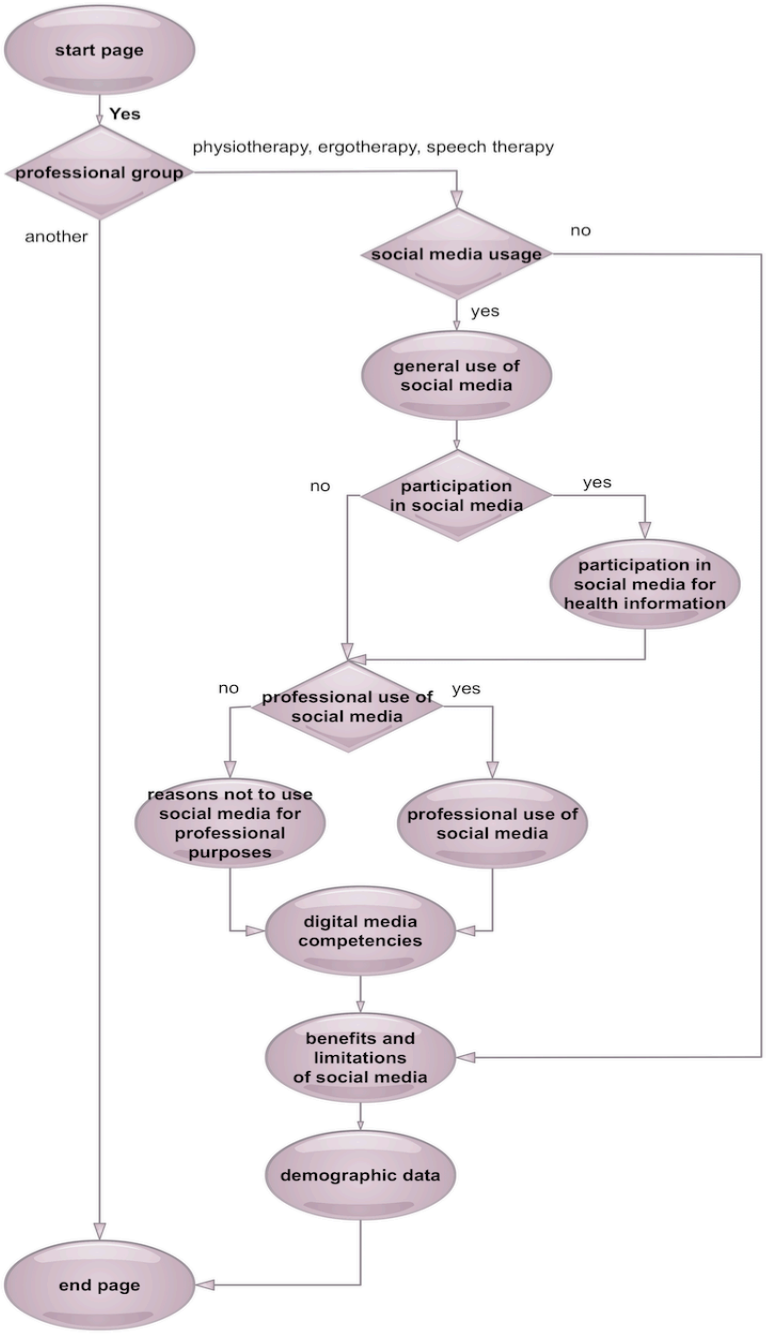


Figure 7 Path and structure of the survey questionnaire. The rhomboid mark the decision-making paths': (1) professional group; (2) general usage; (3) participation; and (4) professional usage. The oval fields mark the six broad areas of social media behaviours of healthcare professionals: (1)

actual general social media use; (2) participation in social media for health-related issues; (3) actual professional social media use; (4) digital competencies in an ethical and responsible way; (5) limitations and (6) benefits of social media for healthcare services.

3.3.1 Actual Use of Social Media – RQ1

The survey started with a *welcome site*. The welcome site explained the topic of the online survey, the required time, and the steps to ensure data privacy. In case of agreement, the participant was passed on to the first question.

The first part of the survey questionnaire – social media behaviour of healthcare professionals – is about the actual use of social media. Actual use is described by three categories: (1) general usage of social media; (2) participation; and (3) professional usage of social media. Questions were from the type open and half-open. The usage-frequency was measured on a five-part scale indexed by a monthly basis.

The determinant *professional group* (*Scale-number 1*) implied three healthcare professions (see section 3.4) for the selection to continue the survey questionnaire. The response *other group of professionals* resulted in exclusion from the survey.

The determinant general usage of social media (*Scale-number 2*) was classified by five questions of type and form of usage (who, what, where), as well as frequency and purpose (when, how). These items provided general information about the usage behaviour of social media platforms. Form and type provided information about the preference of social media platforms. Frequency was an item to measure the intensity of social media usage (see Figure 3). These items emerged from the literature review of participation in social media (see section 2.2.5.). Frequency was measured on a five-part scale indexed by a monthly basis. In case of not using social media at all, respondents were passed on to the items of benefits and limitations of social media for healthcare services (*Scale-number 13–14)*.

The determinant participation (*Scale-number 3*) was measured to examine the active participation in social networking sites for health-related issues. Participation was a filter question. The questions were reserved for respondents, which agreed using social media for health-related issues. If not, the participant was passed on to the determinant professional usage. The items provided information about the users' activity levels in social networking sites. The five items implied: (1) active group affiliation; (2) passive group affiliation; (3)

communication activities[14]; (4) change behaviour - education; and (5) change behaviour – active health promotion. The items focus on the active participation in social media by expressing actions, and they focus on the impact of social media on their professional health behaviour. Participation is a determinant to measure the participants' activity level.

The determinant professional usage of social media (*Scale-number 4*) was classified by questions of type and form of usage, as well as frequency and purpose (see Figure 8). The questions to measure the purposes were based on the uses-and-gratifications-approach (see section 2.2.4.1). The purposes were identified through a literature review (see section 2.3.3.2). Professional usage of social media was a filter question. Participants, who did not use social media for professional purposes, were asked for their reasons for not using them. The professional participation in social media was represented by their frequency of communication activities. The used device for accessing social media provided information, if the participants share health-related information from distance, using a more mobile communication.

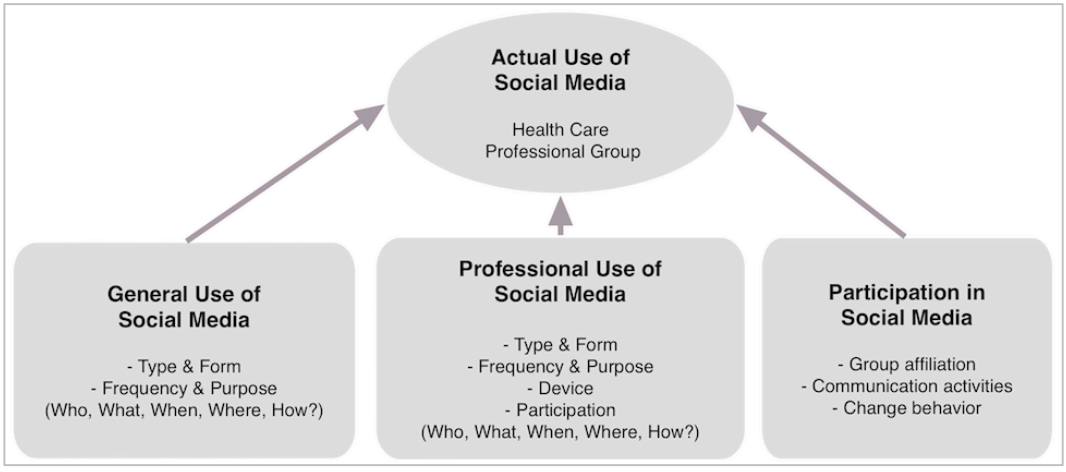


Figure 8 Actual Usage of social media described by three categories.

[14] Communication activities are represented by social media functions: (1) produce content; (2) publish content; (3) comment; (4) annotate; (5) transmit; (6) subscribe; and (7) network.

3.3.2 Digital Competencies – RQ2

The determinant digital competencies (*Scale-number 5*) were defined by eight independent variables, based on the model of Ferrari (2012, p. 3ff) and the multi-stage model of responsibilities as media ethics (see section 2.4).

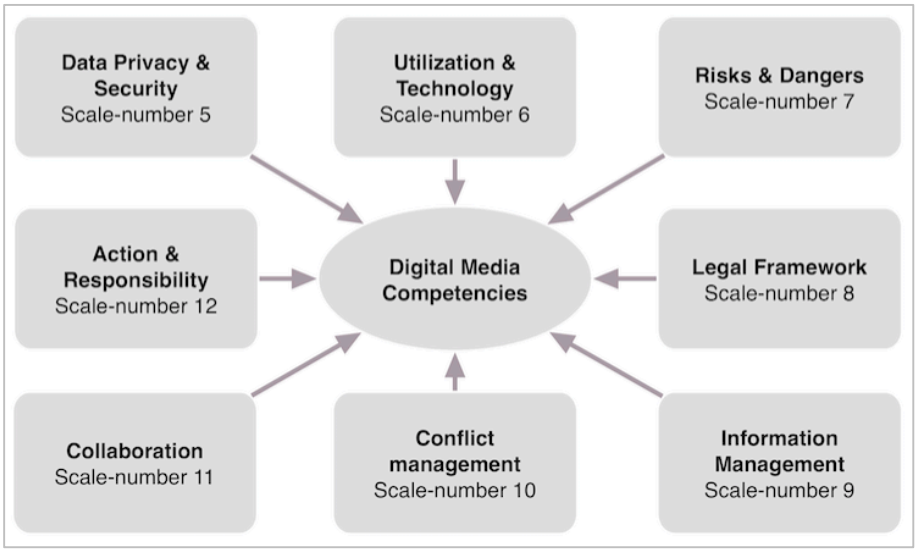


Figure 9 Digital competencies defined by eight elements.

The digital competencies refer to the items of ethical issues: (1) risks and dangers (*Item-number 7.1–3*); (2) legal framework (*Item-number 8.1; 8.2*); (3) information (*Item-number 9.1; 9.2*); (4) conflict management (*Item-number 10.1; 10.2*); (5) communication (*Item-number 11.1; 11.2*); and (6) action and responsibility (*Item-number 12.1–5*). Three further items measured the technical knowledge referring to the utilization of social media and the general knowledge of data privacy and security. The stated figure (see Figure 9) provides a graphical overview of digital competencies measured within the survey questionnaire.

A six-point rating scale measured all items represented in Figure 9. By using this type of scale, the participants had to commit to either the positive or the negative end of the scale. Therefore, an even number of response categories forces respondents to a more approving or rejecting decision. The decision to use a six-point Likert-Scale was made as the literature showed that real neutral answers are rare and there are no unequivocally statistical measured differences in validity and reliability to an odd rating scale.

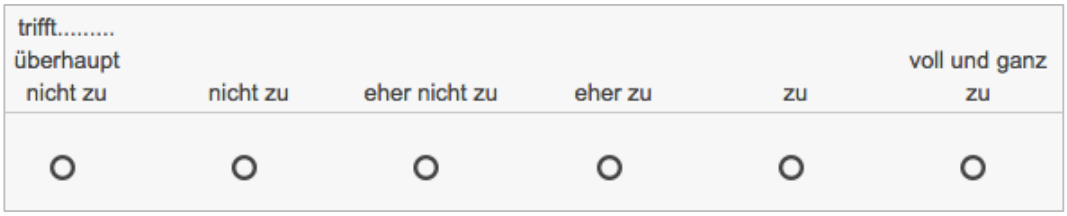


Figure 10 The six-point rating scale fulfils the criteria of an appropriate number of response categories and a label for every answer category.

Furthermore, odd rating scales include a neutral or middle answer option. The neutral category is not always clear to interpret. It could also be chosen by respondents who have no opinion on the subject, which would then lead to errors. A selection of a “do not know” category, to express the indecision of a respondent, is described in the literature as critical. The category increases the proportion of respondents who say they have no opinion to the certain issue. The category is used to reduce the cognitive effort, or to understand and answer a question (Baur, 2014, p.669ff). Furthermore, the literature recommends a higher number of response categories, since these have a higher reliability and validity. The labelling of each answer category is recommended (Preston & Colman, 2000, p. 6ff). The described criteria are met within this study.

3.3.3 Benefits and Limitations – RQ3

The two determinants (benefits and limitations*; Scale-number 13–14*) were emerged by literature review (see Table 8). The items implied half-open questions from the type multiple choice. A total number of four answers was possible to select.

4.1 Limitations	**4.2 Benefits**
Lack of training for professional use	Support for patient empowerment
Low quality of medical information	Promotion of patient care
Lack of reliability, confidentiality and privacy	Improved access to health information and scientific publications
Preservation of professionalism in the public	Education and training
Harmful communication and interaction	Increasing interaction and communication in the health sector
Lack of regulation of legal and professional liability	Improve healthcare
No suitable access to social media sites	Promoting public health competency and health promotion

Table 8 Comparison of benefits and limitations identified by literature review.

3.3.4 Demographic Data

The demographic data collection was inserted at the end of the questionnaire, because of the expected dropout rate when asking for personal issues at the

beginning of the survey. Demographic standards were primarily concerned with determining age, gender, nationality and socioeconomic status[15]. Demographic data was fundamental to build cohorts and make comparisons between them.

3.4 Study Population

The survey was conceptualized for healthcare professionals. The group of test subjects included therapists: practicing physiotherapists, ergotherapists and speech therapists, as well as students of these health professions. The survey was distributed to the participants via e-mail, social media (Facebook, Twitter, Xing) and instant messenger (WhatsApp, Telegram and Viber). The participants were contacted through three universities: *FH St. Pölten*, *FH IMC Krems* and *FH Joanneum Graz*; three organizations: *Physiotherapie Österreich*, *Ergotherapie Österreich* and *Logotherapie Österreich*; the hospitals in Lower Austria: to the leading physiotherapists of these hospitals; and the author's own social online network of physiotherapists, ergotherapists and speech therapists. For this study, a sample size of 100 participants was determined to analyse the social media usage behaviour of healthcare professionals. Every defined therapist or student could participate in the survey, regardless of age, gender, location, and years of professional experience.

Inclusion criteria	Healthcare professionals: physiotherapists, ergotherapists, speech therapists, students of these defined professions, regardless of age, gender, location, and years of professional experience.
Exclusion criteria	Non-therapists, who are not defined in the inclusion criteria; Therapists who do not have internet access

Table 9 Inclusion and exclusion criteria for the study design

3.5 Analysis

All data were analysed and graphically illustrated with MS Excel. A descriptive-explorative statistic was used to analyse the behaviour between social media and healthcare professionals: physiotherapists, ergotherapists and speech therapists. Statistical tests were performed to identify determinants that may predict social media usage. Thus, hypotheses were formulated for further investigations.

[15] The collection and description of the demographic standards have been taken from the literature. For detailed information please see (Baur, 2014, p. 54ff).

4 Evaluation Results

This chapter represents the evaluation results from the online questionnaire survey. Data are exchanged by an explorative-descriptive statistic. Data are evaluated and presented graphically. The designations and numbering stated in the register above (see Table 7) for the individual elements and graphs were retained to enable any reader to refer to the original designations and questions.

Overall, 674 healthcare professionals logged on to the online questionnaire survey. 180 participants completed the questionnaire. This resulted in a response rate of 26.7%. The site with the most common dropout rate was the *welcome site* (questionnaire start page), with 463 dropouts. Overall, 494 cancelled the questionnaire. The net participation was 213 participants. Thus 84.5% filled out the entire questionnaire. Of the 180 participants, 27 were excluded due to the exclusion/inclusion criteria requested in *professional group* (*Scale-number 1; Item-number 1.1*). Thus, 153 healthcare professionals completed the questionnaire survey.

The evaluation is based on the quantitative collected data. These data were plotted. The key provides information about the graphics presented on the following pages.

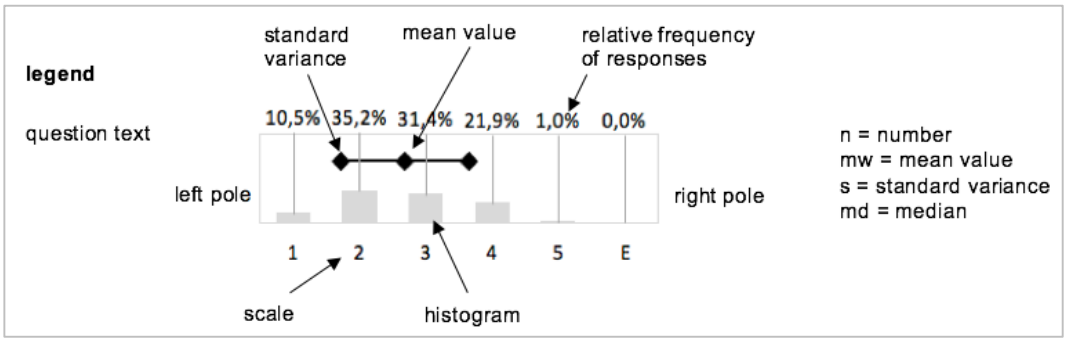


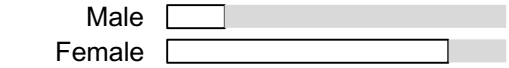
Figure 11 Key for the graphic evaluation

16. Demographic Data

16.1 Age

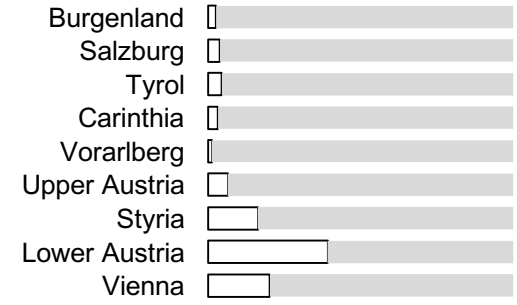
		n
< 25	30,1%	n = 153
25 - 35	50,3%	
36 - 45	14,4%	
46 - 55	3,3%	
56 - 65	2,0%	
> 65	0,0%	

16.2 Gender



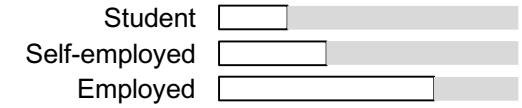
		n
Male	17,0%	n = 153
Female	83,0%	

16.3 Work Region



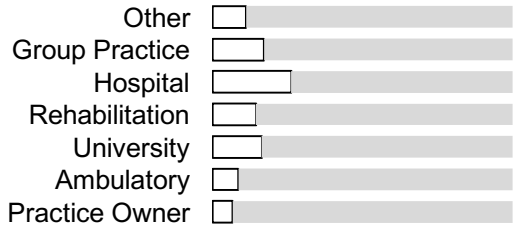
		n
Burgenland	2,6%	n = 153
Salzburg	3,9%	
Tyrol	4,6%	
Carinthia	3,3%	
Vorarlberg	1,3%	
Upper Austria	6,5%	
Styria	16,3%	
Lower Austria	39,2%	
Vienna	20,3%	

16.4 Employment



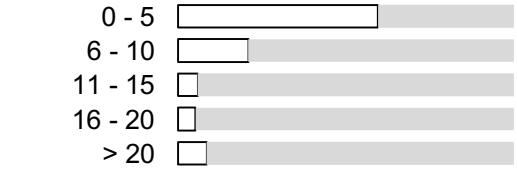
		n
Student	22,9%	n = 153
Self-employed	35,9%	
Employed	71,9%	

16.5 Activity



		n
Other	11,1%	n = 153
Group Practice	17,0%	
Hospital	26,1%	
Rehabilitation	14,4%	
University	16,3%	
Ambulatory	8,5%	
Practice Owner	6,5%	

16.6 Professional Experience



		n
0 - 5	59,5%	n = 153
6 - 10	20,9%	
11 - 15	5,9%	
16 - 20	5,2%	
> 20	8,5%	

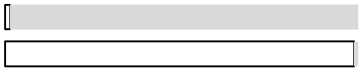
1. Healthcare Professional Group

1.1 Which professional group or study programme do you belong to?

n = 153

2. General social media usage

2.1 Do you use social media?

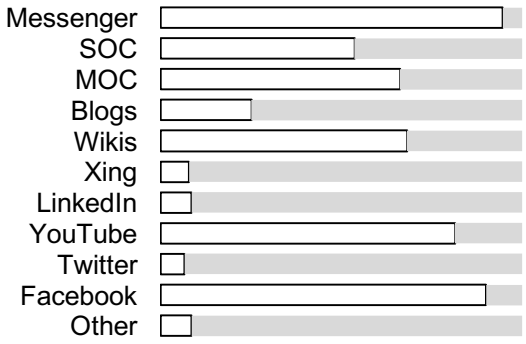


n = 153

2.2 What kind of social media do you use?

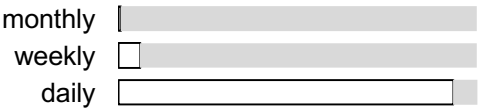
SOC (Science Online Communities)

MOC (Medicine Online Communities)



n = 151

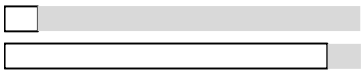
2.3 How often do you use social media in general?



n = 151

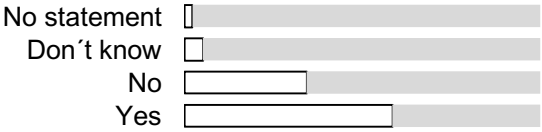
3. Participation in Social Media

3.1 Are you interested in social media about health issues?



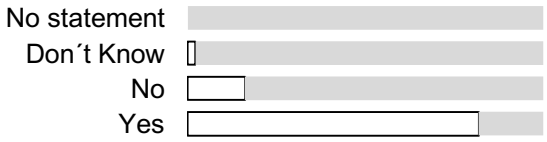
n = 151

3.2 Do you belong to a group on a social networking site that is involved in health issues or is working to promote health issues?



n = 137

3.3 Do you follow health professionals, health organizations or health interest groups on a social networking site?

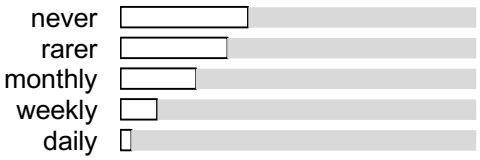


No statement	0,0%
Don´t Know	2,2%
No	16,1%
Yes	81,8%

n = 137

3.4 How often do you use the following applications from social networking sites to…?

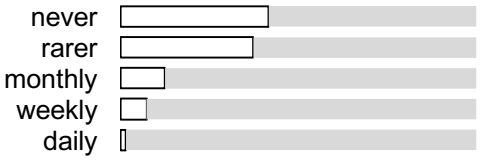
3.4.1 post links to health articles or reports so that others can read it



never	35,8%
rarer	29,9%
monthly	21,2%
weekly	10,2%
daily	2,9%

n = 137

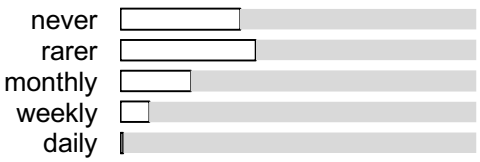
3.4.2 post own thoughts and comments on health issues



never	41,6%
rarer	37,2%
monthly	12,4%
weekly	7,3%
daily	1,5%

n = 137

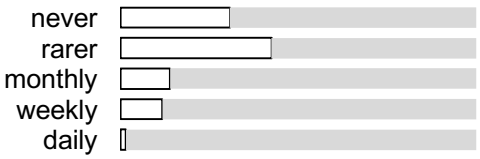
3.4.3 encourage other people to participate in health issues



never	33,6%
rarer	38,0%
monthly	19,7%
weekly	8,0%
daily	0,7%

n = 137

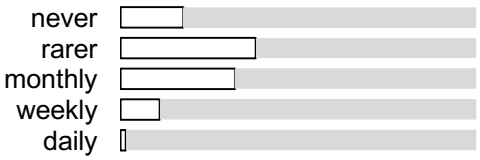
3.4.4 encourage other people to do more for their health



never	30,7%
rarer	42,3%
monthly	13,9%
weekly	11,7%
daily	1,5%

n = 137

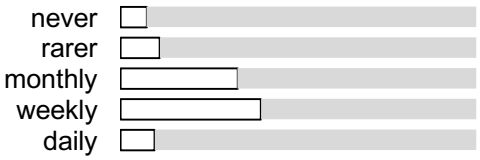
3.4.5 share health-related content that was originally posted by others



never	17,5%
rarer	38,0%
monthly	32,1%
weekly	10,9%
daily	1,5%

n = 137

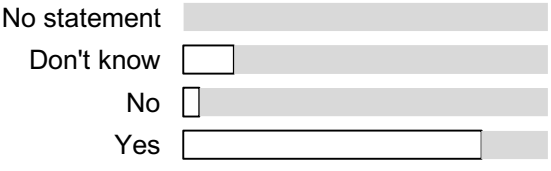
3.4.6 promote or “like” health issues posted by others



never	7,3%
rarer	10,9%
monthly	32,8%
weekly	39,4%
daily	9,5%

n = 137

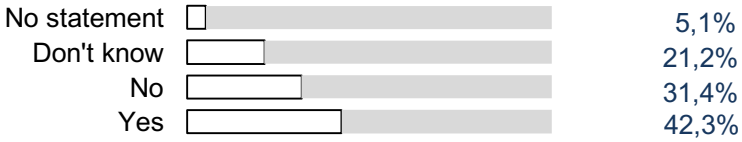
3.5 In the past 12 months, have you read a content in the social networking sites that gave you an opportunity to learn more about a health issue?



No statement	0,0%
Don't know	13,9%
No	4,4%
Yes	81,8%

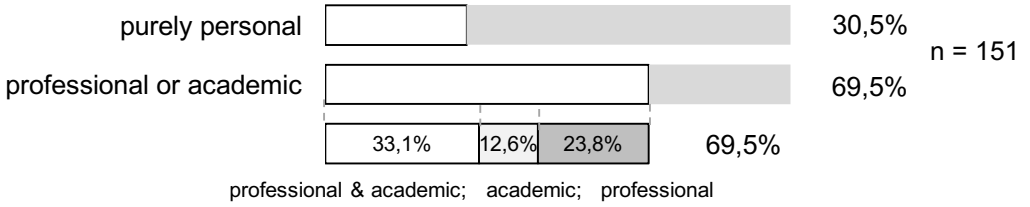
n = 137

3.6 And in the last 12 months, have you read a content in the social networking sites that gave you an opportunity to become more active in health promotion?

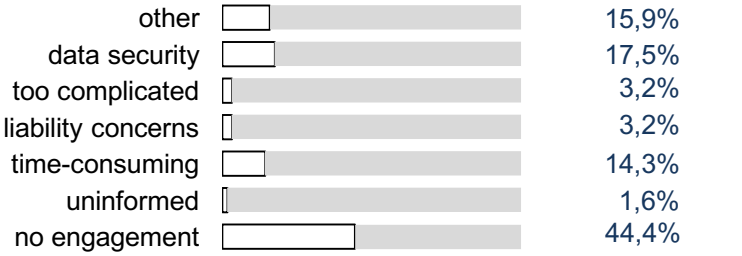


4. Professional use of social media

4.1 How would you describe your use of social media?



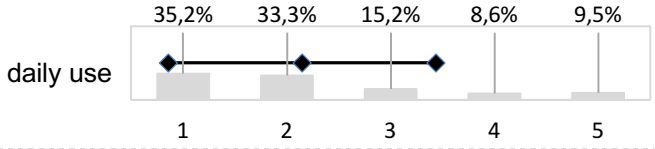
4.2 Why don't you use social media for professional or academic purposes?



Other: Blocked; Quality of Information; No interest; Do not use it in leisure time

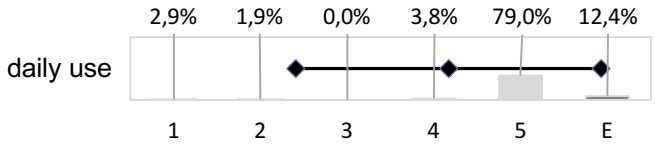
4.3 What kind of social media do you use for medical, professional or academic purposes?

4.3.1 Facebook



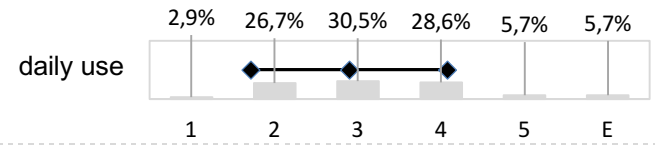
n = 105
mw = 2,15
s = 1,29
md = 2

4.3.2 Twitter



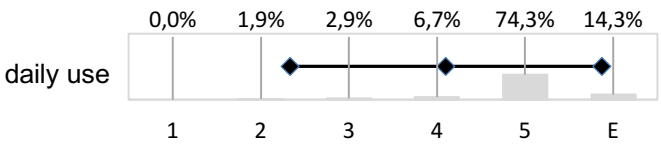
n = 105
mw = 4,17
s = 1,76
md = 5

4.3.3 YouTube



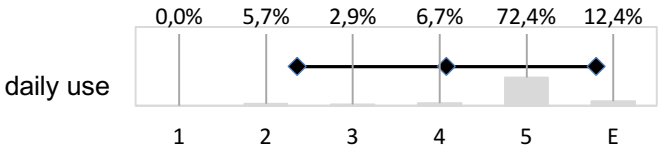
n = 105
mw = 2,9
s = 1,72
md = 2

4.3.4 Xing



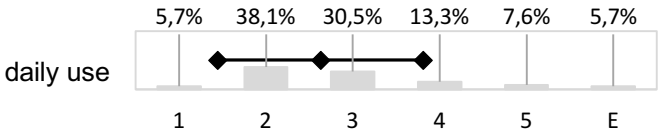
n = 105
mw = 4,10
s = 1,76
md = 5

4.3.5 LinkedIn



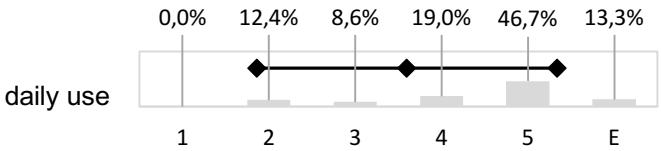
n = 105
mw = 4,08
s = 1,72
md = 5

4.3.6 Wikis



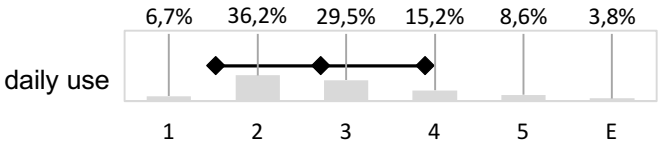
n = 105
mw = 2,63
s = 1,18
md = 2

4.3.7 Blogs



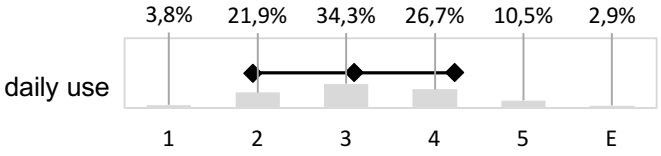
n = 105
mw = 3,6
s = 1,74
md = 3

4.3.8 Medicine online communities



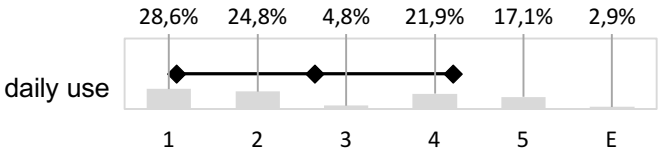
n = 105
mw = 2,71
s = 1,18
md = 2

4.3.9 Science Online Communities



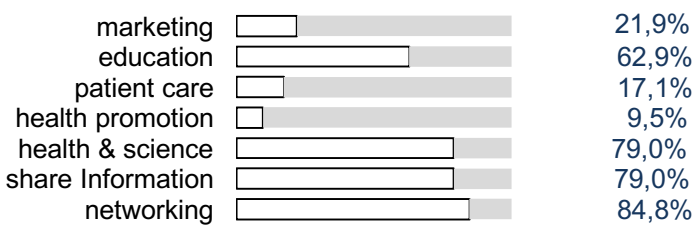
n = 105
mw = 3,09
s = 1,14
md = 3

4.3.10 Messenger



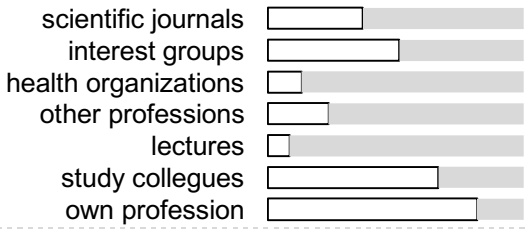
n = 105
mw = 2,65
s = 1,56
md = 1

4.4 For what medical, professional or academic MAIN REASONS do you use social media?



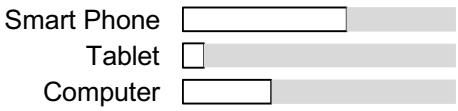
n = 105

4.5 With whom are you MAINLY connected?



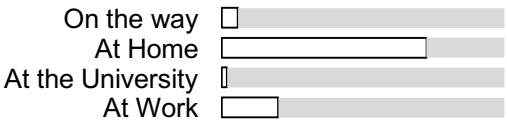
n = 105

4.6 Which device do you use most often for accessing social media?



n = 105

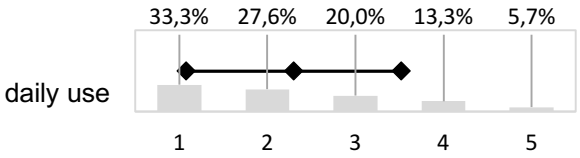
4.7 Where do you use social media most frequently for professional or academic purposes?



n = 105

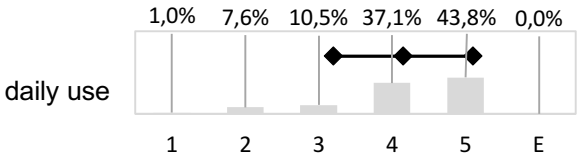
4.8 How often do you use the following social media functions for professional or academic purposes?

4.8.1 communication / exchange



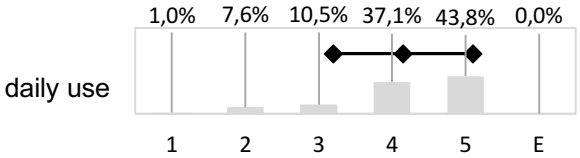
n = 105
mw = 2,3
s = 1,22
md = 1

4.8.2 write posts on other profile pages



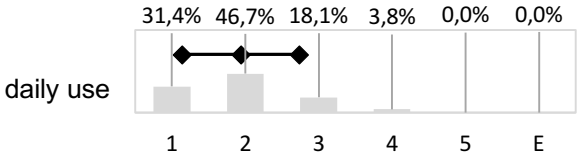
n = 105
mw = 4,15
s = 0,95
md = 4

4.8.3 write comments on content



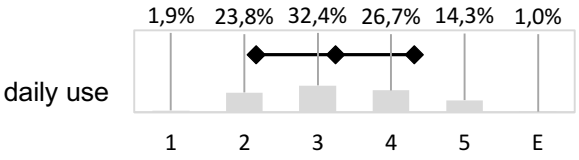
n = 105
mw = 3,45
s = 1,15
md = 3

4.8.4 search information



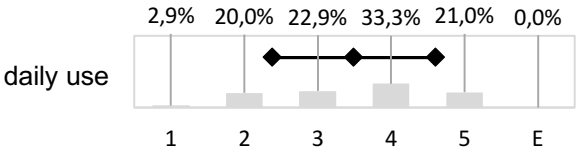
n = 105
mw = 1,94
s = 0,80
md = 1

4.8.5 search for contacts, networks



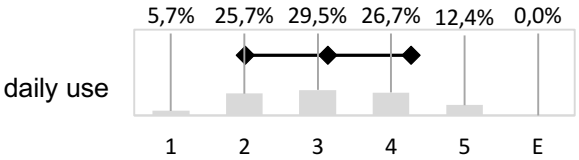
n = 105
mw = 3,24
s = 1,08
md = 3

4.8.6 share links, information, articles



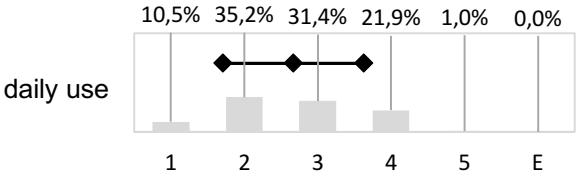
n = 105
mw = 3,49
s = 1,11
md = 3

4.8.7 "like" and comment professional healthcare pages



n = 105
mw = 3,14
s = 1,13
md = 2

4.8.8 listen to audios or watch videos

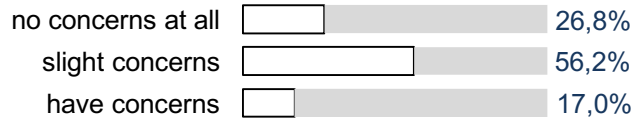


n = 105
mw = 2,67
s = 0,96
md = 2

Benefits and Limitations

13. Concerns and Trust

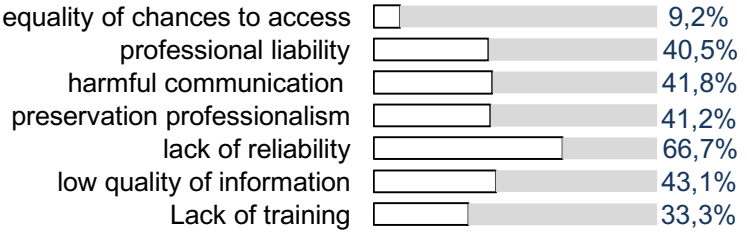
13.1 To what extent do you have concerns to use social media in the health sector?



n = 153

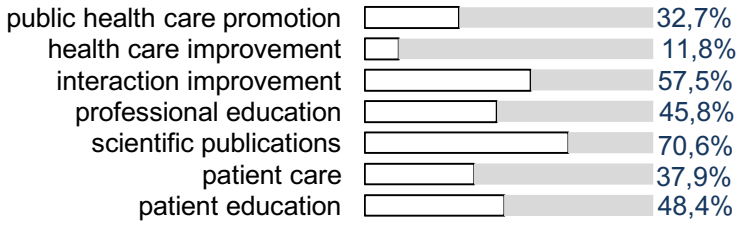
14. Limitations and Benefits

14.1 What are the MAIN barriers to use social media in healthcare?



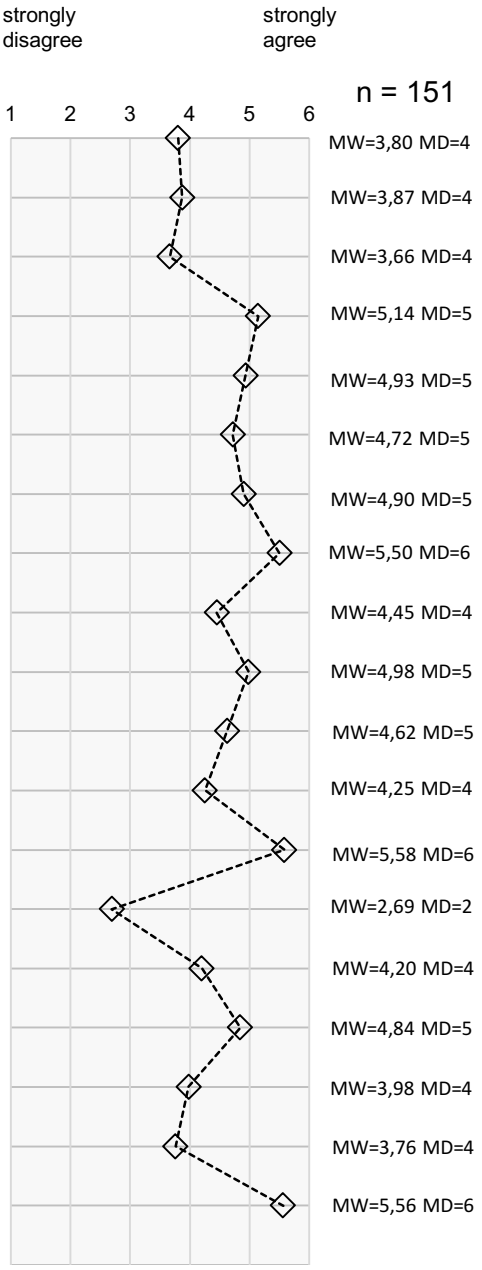
n = 153

14.2 What are the MAIN benefits of using social media in healthcare?



n = 153

Digital Competence



5.1I have a common knowledge of privacy policies, and keep them up to date.

5.2 I regularly monitor the security settings of my devices and applications I use.

6.1 I have a general technical knowledge to actively use social media.

7.1 I am aware of the risks of dealing with social media

7.2 I understand the dangers of cyber-mobbing and trolling

7.3 I am informed about the impact of social media on my environment

8.1 I have an understanding of the intellectual property, downloading and releasing content.

8.2 I know and retain the personality rights of another person

9.1 I can assess the reliability and credibility of information through certain criteria

9.2 Before I share a post, I reflect the content critically

10.1 I can deal with conflicts that arise on social media

10.2 If I notice a dissemination of false facts against myself or others, I know how to deal with it

11.1 I am looking for a responsible and fair deal with other people via social media

11.2 I know the social media guidelines for healthcare institutions

12.1 I include the integrity of others in my own actions on social media.

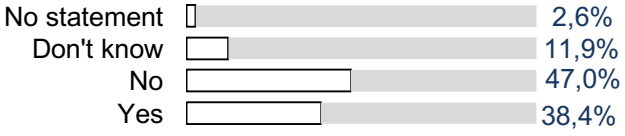
12.2 Before I decide for an action on social media, I weigh the consequences.

12.3 I recognize when personal rights are infringed and I take a position on them.

12.4 If I read provocative or offensive content, then I draw attention, report or block it.

12.5 I believe that people are responsible for their actions on social media.

11.3 Have you ever read or heard of any negative entries / comments about others on social media?



n = 151

5 Discussion

The main aspect of this paper was to investigate whether healthcare professionals use social media for professional aspects to facilitate health and professional purposes, including ethical issues of using social media for their profession.

The explored data showed that 99 percent of the participants used social media for general purposes and 95 percent of them used social media on a daily basis. Therefore, the most common social media were (1) messenger services, (2) Facebook and (3) YouTube. The applications ascertained for primer information retrieval: Wikis, medical online communities and academic online communities were located in the middle third of the surveyed data for general use.

The results showed that most of the healthcare professionals in this survey used social media platforms. Over two third of the participants (70%) used them for professional or academic reasons. Those who did not use social media for professional purposes had not dealt with this issue yet. A lower percentage, about 20%, of healthcare professionals indicated data security and privacy as a reason not to use social media.

Facebook and YouTube were the most stated social media platforms for professional purposes. Messenger services, together with Wikis, medical and academic online communities, were reported in the upper third of the collected data. About 35% of healthcare professionals used Facebook and almost 30% of professionals used messenger services for health related issues on a daily basis. Wikis and medical online communities were used weekly or monthly to retrieve information. Academic online communities and YouTube had a tendency to be used on a monthly basis for professional purposes. These results are likely due to the users' reasons of using social media for professional purposes.

The main reasons were (1) networking; (2) share information; (3) stay up to date with the health research and (4) education. Of those who reported using social media platforms for networking purposes, about 80% were connected with their own profession, followed by advocacy groups and scientific journals. Almost 60% belong to a group on social media platforms that is involved in health issues or is

working to promote health issues and 81% follow a health organization. Professional purposes such as patient care, health promotion and marketing had the lowest values. Furthermore, business platforms like LinkedIn and Xing also had a low number of users. This is due to the low number of users in general. Blogs were also largely unused.

The reported purposes were reflected in the healthcare professionals' participations in social media. Therefore, information procurement was at the centre of professional activity in social media platforms. About one third of health professionals (32%) searched professional related information on a daily basis. Almost the half of them (47%) did weekly retrieved professional information via social media. Video and audio files were a common source to obtain information for health professionals. Over two third (68%) reported to listen to audio files or watch videos on a weekly or monthly basis. Social media functions categorized with a high effort like producing or publishing content were rarely used, whereas functions of commenting, transmitting, subscribing and networking were settled in the midfield of application frequency. The data showed that health related information is sought and shared, rather than being actively generated. Social media functions were most commonly used at home (72.4%), and 20% of the participants used social media for health-related issues at work. About 35% of the participants used the computer, and 60% used mobile devices to access social media platforms. A small percentage used social media for professional purposes on the way (5.7%) or at the university (2%).

As far as health information was concerned, it had been shown that 91% of health professionals used social media platforms to inform themselves about health issues. 81% of the healthcare professionals reported that they had read an article and wanted to learn more about the explained health issue and almost 60% wanted to participate more actively to promote health issues. These results showed an indisputable impact of social media content on healthcare professionals.

The activity and participation of the healthcare professionals in social media lead to the skills of digital competencies in order to communicate and interact in social networking sites properly. The digital competence showed a mean value of 4.5 on a six-point rating scale of these items. The healthcare professionals showed a high stated self-assessment regarding ethical digital competencies. The lowest values were reported by the issues of data security, data privacy and technical skills (mean = 3.75). The skills risks, legal framework, information management, conflict management, collaboration, action and responsibility showed values between 4 and 5 points. The lowest points were expressed by the factor of

collaboration. Most healthcare professionals had a tendency to not knowing the social media guidelines for their profession and almost 40% of them reported that they had read a negative content about health professionals or patients on social media platforms. This result is problematically, as healthcare professionals showed comparatively low values in reacting properly on dissemination and false facts (mean = 3.8).

Over half of the healthcare professionals (57%) mentioned slight concerns to use social media for health related issues, 17% had concerns and about 27% had no concerns at all. The concerns are likely due to the lack of reliability, confidentiality and privacy. Two third of health professionals stated these factors as a barrier to use social media for healthcare purposes. The low quality of information, preservation of professionalism and professional liability were located around 40% of the mentioned barriers.

The greatest advantage of social media was seen in the access to scientific publications (70%) shared over social networking sites by healthcare professionals. The improving interaction and the exchange between healthcare professionals (57%) was reported to be beneficial for health services. The patient care, patient education and health promotion was valued on average with 40% of the participants. The data illustrated that social media platforms showed to be more beneficial for healthcare professionals, rather than directly for patients.

Similar results are obtained with other studies. Rolls, Hansen, Jackson, & Elliott, (2016, p. 10ff) emphasize that the most common activity on social media is the exchange among health professionals. They also confirm that the effective transfer of information and knowledge is the most beneficial and an essential feature of the use of social media in the area of healthcare. Sharing information within online communities is characterized by reciprocity, altruism, trust and respectful interaction. The findings of a low usage for the exchange with patients is supported by Courtney, Shabestari, & Kuo (2013, p. 244ff). They concluded in their article that the primary use is not to share with patients, but the exchange over patients in certain professional online communities. The main activities were reading articles and researching new medical developments and networking. The study also shows a passive participation reduced to information gathering.

The paper represents the actual social media usage behaviour of healthcare professionals. However, this work had several limitations that legitimize discussion. The major limitations were the selection bias and the sample size. The primary limitation was the low response rate of 153 healthcare professionals who completed the survey. For a representative study of the Austrian health professionals' population, a higher number of participants must be achieved. The

demographic data showed no homogeneous composition of healthcare professionals, age cohorts or work region. There were more physiotherapists involved. 80% of the participants were between 20 and 35 years old. Most of the participants came from the eastern region of Austria and most of them were healthcare professionals with little professional experience (50%; less than 5 years' professional experience). A high number of participants was may reached via social media platforms rather than via email. The risk of selection bias was given, as healthcare professionals who are not familiar to social media had been less likely to participate in the survey. The majority of respondents were women (83%), which may limit the applicability of the results. The survey questionnaire was not a validated tool. It was developed for the purpose of this study. Hence, the questionnaire was pre-tested by several healthcare professionals.

6 Conclusion

The paper illustrates that the majority of young healthcare professionals, physiotherapists, ergotherapists and speech therapists, in Austria attending this study use social media for professional and health related purposes. Facebook, messenger services, YouTube, Wikis and medical online communities were the most common utilized social media platforms for professional reasons. The reasons for the use of social media are specified by the healthcare professionals' needs. Main needs of health professionals were information seeking and networking. Networking is not only meant to be searching and maintaining contacts, but also the profiteering of social capital and the expectation of social support. Information seeking, as an essential gratification of healthcare professionals, is likely due to committing to life-long learning, which can be supported by the use of social media. The gratification of information seeking is sustained by terms of social media benefits. Social media platforms were perceived as being most beneficial for improving access to health-related issues and scientific publications, as well as improving the interaction and communication between healthcare professionals. Information seeking is shown as a unidirectional action. Hence, healthcare professionals receive information about health issues to support their personal development, but patients do not benefit directly from the use of social media by healthcare professionals. This conclusion is supported by the fact that healthcare professionals reported low values in terms of health promotion and patient care and compared to other social media advantages, public health promotion and facilitation of patient care are low. This can be explained by the fact that social media may not be seen as a proper communication tool to interact with patients and exchange patient-related data. This can be attributed to the fact that lack of reliability, confidentiality and privacy are the most common barriers to use social media in healthcare. Further limitations stated by healthcare professionals are harmful communication and interaction by social media in the healthcare sector, and the lack of regulation of legal and professional liability. These issues have to be clarified before professional usage is provided.

Another reason why an active participation in social media does not occur is the high temporal and cognitive effort. Healthcare professionals tend to a more

passive participation. The survey shows that participation in social media platforms is higher in reception-intensity, than in production-intensity. Therefore, social media functions with less effort, like listening to audio files, watch videos or to “like” health related issues posted on platforms, are more commonly used than publishing and producing health content on social media. In the survey of participation in social media for health related issues, healthcare professionals remain in the seeking of information, rather than sharing information. Although 90% of the professionals use social media for health issues, the active distribution of content is low (monthly or rarely sharing information). There can be economic reasons for this. The analysed data show that social media are used in the professional context primarily at home (72.4%) or at the working place (20%). Therefore, the additional work of generating health related content is not remunerated, but can create social status and social capital. The sharing of information is a kind of investment, which depends on reciprocity and is beneficial to self-expression, maintain relationships, or to acquire new clients. On the other side health organizations like hospitals have to develop new strategies to improve their knowledge transfer. Otherwise health professionals will build denser social online networks in publicly accessible social platforms controlled by major corporations. However, an increased interactive exchange using new digital technologies to install a company network would be beneficial. The technical and economic implementation of such internal social networks is the task of multidisciplinary scientific disciplines.

In addition, social networks offer the possibility of a communicative, solution-oriented exchange of health related professional information, which can cause a negative impact on professional associations, resulting in reduced membership figures. The first point of contact for professional problems are social online networks, and not professional associations. It may become apparent that specific professional questions and problems will primarily be discussed on social online networks. This poses the risk that questions are answered inadequately in their complexity and are based solely on experience of other actors. Furthermore, intransparent lobbying can influence the answers and factual issues more intensively. This may result in affected patient-oriented decisions made by health professionals. The investigation of the impact of social media on the social position of professional associations represents a future centre of research.

However, easily and general accessible information is rather shared than insights that are difficult to access and provide a competitive advantage. The study illustrates that the low quality of medical information is a further limitation of social media utilization in healthcare, and will become an issue for patients on social media. As information seeking is one main professional purpose of healthcare

professionals to use social media, one has to deal with the issue of quality concerns. The high number of healthcare professionals who use social media and the increasing participation and information seeking lead to the skills of digital competencies in ethical and responsible ways, to use social media properly. In general, the self-assessed digital competencies of healthcare professionals are continuously above average. The paper illustrates comparatively low values in the section of data privacy, data security and technical skills. This point, however, requires a closer examination, as it is crucial to actively engage in an interaction with patients or health communities. This conclusion is supported by the fact that there are low values in terms of reacting properly on dissemination, false facts or negative commendations. Negative reports about colleagues and patients take place on social media, but these tend to result in not to be sanctioned by the public healthcare society. One possible measure to keep the maintenance of professional behaviour by healthcare professionals would be to develop guidelines for social media in the healthcare sector. This proposal is evidenced by the fact that many healthcare professionals do not know social media guidelines and there is a great interest in such guidelines by the healthcare professionals (70%).

The paper illustrates that there is a possible potential in the field of patient and health communication, as well as participation in social media for health related issues. At present, the use of social media is limited mainly to information procurement and promote healthcare professionals own professional, health-related interests. The study raises questions in the research of social media in the healthcare sector. First, there is an economic and educational question about social media to operate professionally and to produce and publish high quality information. Second, ethical and technical questions regarding data security and privacy are to be deepened.

The study is a comprehensive description of the actual social media behaviour of speech therapists, physiotherapists and ergotherapists. The paper underlines the importance of continuing social media research to improve social media and digital skills, as well as to develop guidelines to improve the health communication and interaction in social media platforms. Since social media show a relevance in clinical practice and in the daily life of young healthcare professionals, ethical aspects should be discussed in the future.

Literature

Almaiman, S., Bahkali, S., Al Farhan, A., Bamuhair, S., Househ, M., & Alsurimi, K. (2015). The Prevalence of Using Social Media among Healthcare Professionals in Saudi Arabia: A Pilot Study. *Studies in Health Technology and Informatics*, *213*, 263–266.

Anderson, K., Smith, L., & Garett, D. (2012). Social media "likes" healthcare. Abgerufen 27. Februar 2017, von http://www.museion.ku.dk/2012/05/social-media-likes-healthcare/

Angermeyer, M. C., & Angst, J. (1989). *Soziales Netzwerk: ein neues Konzept für die Psychiatrie*. Berlin [u.a.]: Springer.

Baur, N. (2014). *Handbuch Methoden der empirischen Sozialforschung*. Wiesbaden: Springer VS.

Belbey, J. (2016). Is Social Media The Future Of Healthcare? Abgerufen 13. Mai 2017, von http://www.forbes.com/sites/joannabelbey/2016/01/31/is-social-media-the-future-of-healthcare/

Blogs, Wikipedia, Second Life, and beyond: from production to produsage. (2009). *Choice Reviews Online*, *46*(6), 46–2978–46–2978. https://doi.org/10.5860/CHOICE.46-2978

Boyd, D. (2010). Tweet, Tweet, Retweet: Conversational Aspects of Retweeting on Twitter. *Microsoft Research*. Abgerufen von https://www.microsoft.com/en-us/research/publication/tweet-tweet-retweet-conversational-aspects-of-retweeting-on-twitter/

Boyd, D. M., & Ellison, N. B. (2007). Social Network Sites: Definition, History, and Scholarship. *Journal of Computer-Mediated Communication*, *13*(1), 210–230. https://doi.org/10.1111/j.1083-6101.2007.00393.x

Camerini, L., Diviani, N., & Tardini, S. (2010). Health virtual communities: is the Self lost in the Net? *Social Semiotics*, *20*(1), 87–102. https://doi.org/10.1080/10350330903507230

Chou, W.-Y. S., Hunt, Y. M., Beckjord, E. B., Moser, R. P., & Hesse, B. W. (2009). Social Media Use in the United States: Implications for Health Communication. *Journal of Medical Internet Research*, *11*(4), e48. https://doi.org/10.2196/jmir.1249

Chretien, K. C., & Kind, T. (2013). Social media and clinical care: ethical, professional,

and social implications. *Circulation*, *127*(13), 1413–1421. https://doi.org/10.1161/CIRCULATIONAHA.112.128017

Constant, D., Kiesler, S., & Sproull, L. (1994). What's Mine Is Ours, or Is It? A Study of Attitudes about Information Sharing. *Information Systems Research*, *5*(4), 400–421. https://doi.org/10.1287/isre.5.4.400

Courtney, K. L., Shabestari, O., & Kuo, A. M.-H. (2013). *Enabling Health and Healthcare Through ICT: Available, Tailored and Closer*. IOS Press.

Coviello, L., Sohn, Y., Kramer, A. D. I., Marlow, C., Franceschetti, M., Christakis, N. A., & Fowler, J. H. (2014). Detecting emotional contagion in massive social networks. *PloS One*, *9*(3), e90315. https://doi.org/10.1371/journal.pone.0090315

Debatin, B. (2003). *Kommunikations- und Medienethik*. Konstanz: UVK-Verl-Ges.

Denecke, K., Bamidis, P., Bond, C., Gabarron, E., Househ, M., Lau, A. Y. S., … Hansen, M. (2015). Ethical Issues of Social Media Usage in Healthcare. *Yearbook of Medical Informatics*, *10*(1), 137–147. https://doi.org/10.15265/IY-2015-001

Digital Health - Statista-Dossier. (o. J.). Abgerufen 24. Februar 2017, von https://de.statista.com/statistik/studie/id/27442/dokument/digital-health-statista-dossier/

Draugalis, J. R., Coons, S. J., & Plaza, C. M. (2008). Best Practices for Survey Research Reports: A Synopsis for Authors and Reviewers. *American Journal of Pharmaceutical Education*, *72*(1). Abgerufen von http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2254236/

Einspänner-Pflock, J., Dang-Anh, M., & Thimm, C. (2014). *Digitale Gesellschaft - Partizipationskulturen im Netz*. LIT Verlag Münster.

Eysenbach, G. (2004). Improving the Quality of Web Surveys: The Checklist for Reporting Results of Internet E-Surveys (CHERRIES). *Journal of Medical Internet Research*, *6*(3). https://doi.org/10.2196/jmir.6.3.e34

Ferrari, A. (2012). *Digital Competence in practice: An analysis of frameworks* (No. EUR 25351 EN) (S. 91). Luxemburg: Institute for Prospective Technological Studies. Abgerufen von https://ec.europa.eu/digital-single-market/en/news/digital-competence-practice-analysis-frameworks

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: an introduction to theory and research*. Reading, Mass.: Addison-Wesley Pub. Co.

Fox, S., & Duggan, M. (2013, Jänner 15). Health Online 2013. Abgerufen 24. Februar 2017, von http://www.pewinternet.org/2013/01/15/health-online-2013/

Fuhse, J. A. (2016). *Soziale Netzwerke: Konzepte und Forschungsmethoden*. Konstanz, UVK Verlagsgesellschaft mbH, 2016, München, UVK/Lucius.

Gamache-OLeary, V., & Grant, G. (2017). Social Media in Healthcare. Abgerufen von http://scholarspace.manoa.hawaii.edu/handle/10125/41614

Gholami-Kordkheili, F., Wild, V., & Strech, D. (2013). The Impact of Social Media on Medical Professionalism: A Systematic Qualitative Review of Challenges and Opportunities. *Journal of Medical Internet Research*, *15*(8), e184. https://doi.org/10.2196/jmir.2708

Gleich, U. (2014). Motive und Funktionen der Internetnutzung. Abgerufen 22. Februar 2017, von https://www.rlp-forschung.de/public/people/Uli_Gleich/publications/75955

Healthcare and Social Media. (2016, November 7). Abgerufen 23. Februar 2017, von http://www.imshealth.com/en/thought-leadership/ims-institute/reports/engaging-patients-through-social-media

Heilman, J. M., Kemmann, E., Bonert, M., Chatterjee, A., Ragar, B., Beards, G. M., … Laurent, M. R. (2011). Wikipedia: A Key Tool for Global Public Health Promotion. *Journal of Medical Internet Research*, *13*(1), e14. https://doi.org/10.2196/jmir.1589

Hollstein, B. (2010). Strukturen, Akteure, Wechselwirkungen. Georg Simmels Beiträge zur Netzwerkforschung. In C. Stegbauer (Hrsg.), *Netzwerkanalyse und Netzwerktheorie* (S. 91–103). VS Verlag für Sozialwissenschaften. https://doi.org/10.1007/978-3-531-92029-0_6

Holzer, B. (2006). *Netzwerke*. Bielefeld: transcript-Verl.

Hugger, P. D. habil K.-U. (2008). Uses-and-Gratification-Approach und Nutzenansatz. In U. Sander, F. von Gross, & K.-U. Hugger (Hrsg.), *Handbuch Medienpädagogik* (S. 173–178). VS Verlag für Sozialwissenschaften. https://doi.org/10.1007/978-3-531-91158-8_22

Joinson, A. N. (2008). Looking at, Looking Up or Keeping Up with People?: Motives and Use of Facebook. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (S. 1027–1036). New York, NY, USA: ACM. https://doi.org/10.1145/1357054.1357213

Keupp, H. (1987). *Soziale Netzwerke*. Frankfurt, Main [u.a.]: Campus-Verl.

König, C. (2014). *Soziale Medien: Gegenstand und Instrument der Forschung*. Wiesbaden: Springer Fachmedien Wiesbaden. Abgerufen von http://dx.doi.org/10.1007/978-3-658-05327-7

Lee, C. S., & Ma, L. (2012). News Sharing in Social Media: The Effect of Gratifications

and Prior Experience. *Comput. Hum. Behav.*, *28*(2), 331–339. https://doi.org/10.1016/j.chb.2011.10.002

Logic Models. (o. J.). Abgerufen 26. Februar 2017, von http://fyi.uwex.edu/programdevelopment/logic-models/

Maher, C. A., Lewis, L. K., Ferrar, K., Marshall, S., Bourdeaudhuij, I. D., & Vandelanotte, C. (2014). Are Health Behavior Change Interventions That Use Online Social Networks Effective? A Systematic Review. *Journal of Medical Internet Research*, *16*(2), e40. https://doi.org/10.2196/jmir.2952

Market Insights - Latest News. (o. J.). Abgerufen 27. Februar 2017, von https://hcmg.nationalresearch.com/public/News.aspx?ID=9

Moorhead, S. A., Hazlett, D. E., Harrison, L., Carroll, J. K., Irwin, A., & Hoving, C. (2013). A New Dimension of Health Care: Systematic Review of the Uses, Benefits, and Limitations of Social Media for Health Communication. *Journal of Medical Internet Research*, *15*(4), e85. https://doi.org/10.2196/jmir.1933

Naidoo, J., & Wills, J. (2010). *Lehrbuch der Gesundheitsförderung* (Überarb., aktualisierte und durch Beitr. zum Entwicklungsstand in Deutschland erw. Neuaufl., 2. Aufl. der dt. Ausg.). Gamburg: Verlfür Gesundheitsförderung.

Participation Inequality: Encouraging More Users to Contribute. (2006).

Porter, C. (2015). Revisiting Precede-Proceed: A leading model for ecological and ethical health promotion. *Health Education Journal*, (75(6)), 1–12. https://doi.org/http://dx.doi.org/10.1177/0017896915619645

Porter, C. E. (2004). A Typology of Virtual Communities: A Multi-Disciplinary Foundation for Future Research. *Journal of Computer-Mediated Communication*, *10*(1), 00–00. https://doi.org/10.1111/j.1083-6101.2004.tb00228.x

Preston, C. C., & Colman, A. M. (2000). Optimal number of response categories in rating scales: reliability, validity, discriminating power, and respondent preferences. *Acta Psychologica*, *104*(1), 1–15.

Puschmann, C., & Peters, I. (2017). Informationsverbreitung in sozialen Medien. In J.-H. Schmidt & M. Taddicken (Hrsg.), *Handbuch Soziale Medien* (S. 211–232). Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-03765-9_12

Rolls, K., Hansen, M., Jackson, D., & Elliott, D. (2016). How Health Care Professionals Use Social Media to Create Virtual Communities: An Integrative Review. *Journal of Medical Internet Research*, *18*(6). https://doi.org/10.2196/jmir.5312

Rosengren, K. E. (1985). *Media gratifications research: current perspectives* (1. print.). Beverly Hills, Calif. [u.a.]: Sage Publ.

Schiavo, R. (2007). *Health communication: from theory to practice* (1. ed.). Chichester: Wiley.

Schmidt, J.-H. (2009). *Das neue Netz: Merkmale, Praktiken und Folgen des Web 2.0*. Konstanz: UVK-Verl-Ges.

Schmidt, J.-H. (2013). *Social Media*. Wiesbaden: Springer Fachmedien Wiesbaden. Abgerufen von http://dx.doi.org/10.1007/978-3-658-02096-5

Schmidt, J.-H., & Taddicken, M. (2017). *Handbuch Soziale Medien*. Wiesbaden, Springer VS, 2017.

Schneider, U. (2002). Beidseitige Informationsasymmetrien in der Arzt-Patient-Beziehung: Implikationen für die GKV. *Vierteljahrshefte zur Wirtschaftsforschung*, *71*(4), 447–458. https://doi.org/10.3790/vjh.71.4.447

Smailhodzic, E., Hooijsma, W., Boonstra, A., & Langley, D. J. (2016). Social media use in healthcare: A systematic review of effects on patients and on their relationship with healthcare professionals. *BMC Health Services Research*, *16*, 442. https://doi.org/10.1186/s12913-016-1691-0

Social Media in Österreich - Statista-Dossier. (o. J.). Abgerufen 22. Februar 2017, von https://de.statista.com/statistik/studie/id/34139/dokument/social-media-in-oesterreich-statista-dossier/

Stapf, I. (2006). *Medien-Selbstkontrolle: Ethik und Institutionalisierung*. Konstanz: UVK-Verl-Ges.

Stegbauer, C. (2008). *Netzwerkanalyse und Netzwerktheorie: ein neues Paradigma in den Sozialwissenschaften* (1. Aufl.). Wiesbaden: VS, Verlfür Sozialwiss.

Ventola, C. L. (2014). Social Media and Health Care Professionals: Benefits, Risks, and Best Practices. *Pharmacy and Therapeutics*, *39*(7), 491–520.

Wangberg, S. C., Andreassen, H. K., Prokosch, H.-U., Santana, S. M. V., Sørensen, T., & Chronaki, C. E. (2008). Relations between Internet use, socio-economic status (SES), social support and subjective health. *Health Promotion International*, *23*(1), 70–77. https://doi.org/10.1093/heapro/dam039

Wasserman, S., & Faust, K. (1994). *Social Network Analysis: Methods and Applications*. Cambridge University Press.

Weller, K., Bruns, A., Burgess, J., Mahrt, M., & Puschmann, C. (2013). *Twitter and Society* (New.). New York: Peter Lang Publishing Inc. New York.

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Appendix

A. German Translation of the Survey Questionnaire

Skalen-nummer	Skalen-formulierung	Item-Nummer	Item-Formulierung
Forschungsfrage: Aktuelle Nutzung von sozialen Medien			
1	**Berufsgruppe**	1.1	Welcher Berufsgruppe bzw. welchem Studiengang gehörst du an?
2	**Allgemeine Nutzung**	2.1	Nutzt du Social Networking Sites?
		2.2	Welche Social Networking Sites nutzt du?
		2.3	Wie oft nutzt du Social Networking Sites im Allgemeinen?
3	**Partizipation**	3.1	Informierst du dich in Social Networking Sites über gesundheitliche Interessen?
		3.2	Gehörst du zu einer Gruppe auf einer Social Networking Plattform, die an gesundheitlichen Themen beteiligt ist oder daran arbeitet gesundheitliche Interessen voranzutreiben?
		3.3	Folgst du GesundheitsexpertInnen, Gesundheitsorganisationen oder gesundheitlichen Interessenvertretungen auf einer Social Networking Site oder auf Twitter?
		3.4	Wie oft nutzt du die folgenden Anwendungen von Social Networking Plattformen, um....?
		3.5	Hast du in den letzten 12 Monaten einen Beitrag in den Social Networking Plattformen gelesen, der dir einen Anlass dazu gab, mehr über ein gesundheitliches Thema zu lernen?
		3.6	Und hast du in den letzten 12 Monaten einen Beitrag in den Social Networking Plattformen gelesen, der dir einen Anlass dazu gab, aktiver im Gesundheitsbereich zu werden?
4	**Professionelle Nutzung**	4.1	Wie würdest du deine Nutzung von Social Networking Sites beschreiben?
		4.2	Warum nutzt du keine Social Networking Sites zu beruflichen und / oder akademischen Zwecken?
		4.3	Welche Social Networking Plattform nutzt du HAUPTSÄCHLICH für medizinische, berufliche und / oder akademische Zwecke?
		4.4	Aus welchen medizinischen, beruflichen und / oder akademischen HAUPTGRÜNDEN nutzt du Social Networking Plattformen?
		4.5	Mit Wem bist du HAUPTSÄCHLICH vernetzt?
		4.6	Mit welchem Gerät nutzt du soziale Plattformen am HÄUFIGSTEN?
		4.7	Wo nutzt du Social Networking Sites am HÄUFIGSTEN für berufliche und / oder akademische Zwecke?
		4.8	Wie oft nutzt du beruflich und / oder akademisch die folgenden Anwendungen von Social Networking Plattformen?
Forschungsfrage: Digitale-/Medienkompetenz			
5	**Sicherheit und Datenschutz**	5.1	Ich verfüge über ein allgemeines Wissen zu Datenschutzgesetzen und Privatsphäre-Richtlinien und bringe dieses regelmäßig auf den neuesten Stand

		5.2	Ich kontrolliere regelmäßig die Sicherheitseinstellungen und Sicherheitssysteme meiner Geräte und/oder der Anwendungen, die ich benutze.
6	**Anwendung und Technik**	6.1	Ich verfüge über ein allgemeines technisches/digitales Wissen, um Social Networking Sites aktiv zu nutzen und bringe dieses regelmäßig auf den neuesten Stand.
7	**Risiken und Gefahren**	7.1	Ich bin mir der Risiken des Umgangs mit sozialen Netzwerken bewusst.
		7.2	Ich verstehe die Gefahren von Cybermobbing und Trolling.
		7.3	Ich bin informiert über die Wirkung von sozialen Plattformen auf meine Umwelt.
8	**Rechtlicher Rahmen**	8.1	Ich habe ein Verständnis über das geistige Eigentum, Herunterladen und Freigeben von Inhalten.
		8.2	Ich kenne und bewahre die Persönlichkeitsrechte einer anderen Person.
9	**Informationen**	9.1	Ich kann durch bestimmte Kriterien die Zuverlässigkeit und Glaubwürdigkeit von Informationen einschätzen.
		9.2	Bevor ich einen Beitrag teile oder poste, setze ich mich nochmals kritisch damit auseinander.
10	**Konfliktlösung**	10.1	Ich kann mit Konflikten, die auf sozialen Medien entstehen, umgehen.
		10.2	Bemerke ich auf sozialen Medien herabwürdigende Meinungen, oder eine Verbreitung falscher Tatsachen gegenüber meiner Person oder die anderer, dann weiß ich, wie ich damit umzugehen habe.
11	**Kollaboration**	11.1	Ich achte auf einen verantwortungsvollen und fairen Umgang mit anderen Menschen via Social Networking Sites.
		11.2	Ich kenne die Social Media-Leitlinien für Gesundheitsinstitutionen.
		11.3	Hast du schon einmal auf Social Networking Sites negative Einträge/Kommentare über andere gelesen oder davon erfahren?
12	**Handlung und Verantwortung**	12.1	Ich beziehe die Integrität anderer in mein eigenes Handeln auf SNS mit ein.
		12.2	Bevor ich mich für eine Handlung auf SNS entscheide, wiege ich deren Folgen ab.
		12.3	Ich erkenne, wenn Persönlichkeitsrechte verletzt werden und beziehe dazu Stellung.
		12.4	Wenn ich Inhalte lese die provokativ oder beleidigend wirken, dann mache ich darauf aufmerksam, melde oder blockiere sie.
		12.5	Ich bin der Meinung, dass Personen für ihre Handlungen auf SNS verantwortlich sind.
Forschungsfrage: Vor- und Nachteile sozialer Medien im Gesundheitswesen			
13	**Bedenken und Vertrauen**	13.1	Inwieweit hast du Bedenken, Social Networking Sites im Gesundheitsbereich zu verwenden?
14	**Nachteile/Vorteile**	14.1	Welche HAUPTSÄCHLICHEN Barrieren zur Nutzung von Social Networking Sites im Gesundheitsbereich bestehen aus deiner Sicht?
		14.2	Welche HAUPTSÄCHLICHEN Vorteile zur Nutzung von Social Networking Sites im Gesundheitsbereich bestehen aus deiner Sicht?
Abschluss und Demographische Daten			
15	**Leitlinien**	15.1	Würdest du dir mehr Informationen zu dem Thema "Social Media im Gesundheitswesen" wünschen?
16	**Demographische Daten**	16.1	Alter
		16.2	Geschlecht
		16.3	In welchem Bundesland arbeitest / studierst du zur Zeit?
		16.4	Dein derzeitiges therapeutisches Beschäftigungsverhältnis?
		16.5	Bitte gib dein Haupttätigkeitsfeld an.
		16.6	Wie lange bist du bereits TherapeutIn?

B. Survey Questionnaire

Herzlich Willkommen!
Im Rahmen meiner Masterarbeit im Studiengang Digital Healthcare an der Fachhochschule St. Pölten führe ich eine Studie über das Nutzungsverhalten von Social Networking Plattformen (Facebook, Twitter, LinkedIn, Xing etc.) im Gesundheitssektor durch.

Du kannst mir dabei helfen, interessante Forschungsergebnisse zu erarbeiten, indem du einen Fragebogen ausfu¨llst.
Dies sollte nicht la¨nger als 15 - 20 Minuten in Anspruch nehmen. Alle Daten werden vertraulich und anonym behandelt.

Vielen Dank!
Simon Pusswald

Welcher Berufsgruppe bzw. welchem Studiengang gehörst du an?

- ○ Physiotherapie
- ○ Ergotherapie
- ○ Logopädie
- ○ Andere

Nutzt du Social Networking Sites? z.B.: Facebook, Twitter, LinkedIn, Wikipedia, WhatsApp etc.

- ○ Ja
- ○ Nein

Welche Social Networking Sites nutzt du?

- ☐ Facebook
- ☐ Twitter
- ☐ YouTube
- ☐ Xing
- ☐ LinkedIn
- ☐ Wikis / Wikipedia
- ☐ Blogs (z.B.: Wordpress, blogspot.com)
- ☐ Medizinische Online Communities (z.B.: DocCheck, Netdoktor)
- ☐ Wissenschaftliche Online Communities (z.B.: ResearchGate, Academia, PubMed)
- ☐ Messenger (z.B.: WhatsApp, Viber, Telegram etc.)
- ☐ Sonstiges (bitte angeben)

1

Wie oft nutzt du Social Networking Sites im Allgemeinen?

- ○ täglich
- ○ wöchentlich
- ○ monatlich
- ○ seltener
- ○ nie

Informierst du dich in Social Networking Sites über gesundheitliche Interessen? z.B.: zu Gesundheitsförderung, gesundheitsbezogene Themen, etc.

- ○ Ja
- ○ Nein

Überlege bitte, wie du Social Networking Plattformen im gesundheitlichen Kontext verwendest:

Gehörst du zu einer Gruppe auf einer Social Networking Plattform, die an gesundheitlichen Themen beteiligt ist oder daran arbeitet gesundheitliche Interessen voranzutreiben?

- ○ Ja
- ○ Nein
- ○ Weiß ich nicht
- ○ keine Aussage

Folgst du GesundheitsexpertInnen, Gesundheitsorganisationen oder gesundheitlichen Interessenvertretungen auf einer Social Networking Site oder auf Twitter?

- ○ Ja
- ○ Nein
- ○ Weiß ich nicht
- ○ Keine Aussage

Wie oft nutzt du die folgenden Anwendungen von Social Networking Plattformen, um....?

	täglich	wöchentlich	monatlich	seltener	nie
Links zu gesundheitlichen Artikeln oder Berichten zu posten, damit andere ihn lesen	○	○	○	○	○
eigene Gedanken und Kommentare zu gesundheitlichen Fragen und Themen zu posten	○	○	○	○	○

andere Menschen dazu zu ermutigen, an gesundheitlichen Themen und Veranstaltungen teilzuhaben	○	○	○	○	○
andere Menschen zu ermutigen, mehr für ihre Gesundheit zu unternehmen	○	○	○	○	○
gesundheitsbezogene Inhalte, die ursprünglich von anderen gepostet wurden, zu teilen	○	○	○	○	○
Beiträge zu gesundheitlichen Fragen und Themen, die von anderen gepostet wurden, zu fördern und / oder zu "liken"	○	○	○	○	○

Hast du in den letzten 12 Monaten einen Beitrag in den Social Networking Plattformen gelesen, der dir einen Anlass dazu gab, mehr über ein gesundheitliches Thema zu lernen?

- ○ Ja
- ○ Nein
- ○ Weiß ich nicht
- ○ Keine Aussage

Und hast du in den letzten 12 Monaten einen Beitrag in den Social Networking Plattformen gelesen, der dir einen Anlass dazu gab, aktiver im Gesundheitsbereich zu werden?

- ○ Ja
- ○ Nein
- ○ Weiß ich nicht
- ○ Keine Aussage

Wie würdest du deine Nutzung von Social Networking Sites beschreiben?

- ☐ persönlich
- ☐ beruflich
- ☐ universitär, akademisch (z.B.: Verwendung für Forschung, Wissenschaft, Bildung, Studium)

Warum nutzt du keine Social Networking Sites zu beruflichen und / oder akademischen Zwecken?

- ☐ Ich habe mich noch nicht damit beschäftigt
- ☐ Ich wusste nicht, dass man soziale Netzwerke für berufliche und / oder akademische Zwecke einsetzen kann
- ☐ Das ist mir zu zeitaufwendig
- ☐ Das ist mir zu kompliziert
- ☐ Ich bin besorgt wegen der beruflichen Haftung
- ☐ Ich habe Bedenken, dass der Datenschutz und die Privatsphäre verletzt werden

☐ Sonstiges (bitte angeben)

Dieser Abschnitt beschäftigt sich mit der beruflichen und / oder akademischen Nutzung von Social Networking Sites.

Welche Social Networking Plattform nutzt du HAUPTSÄCHLICH für medizinische, berufliche und / oder akademische Zwecke?

	täglich	wöchentlich	monatlich	seltener	nie
Facebook	○	○	○	○	○
Twitter	○	○	○	○	○
YouTube	○	○	○	○	○
Xing	○	○	○	○	○
LinkedIn	○	○	○	○	○
Wikis / Wikipedia	○	○	○	○	○
Blogs (z.B.: Wordpress)	○	○	○	○	○
Medizinische Online Communities (z.B.: DocCheck, Netdoktor)	○	○	○	○	○
Wissenschaftliche Online Communities (z.B.: ResearchGate, Academia, PubMed)	○	○	○	○	○
Messenger (z.B.: WhatsApp, Viber, Telegram etc.)	○	○	○	○	○
Sonstiges (bitte angeben)	○	○	○	○	○

Aus welchen medizinischen, beruflichen und / oder akademischen HAUPTGRÜNDEN nutzt du Social Networking Plattformen?

☐ Netzwerken (z.B.: Kontakte zur eigenen Berufsgruppe, StudienkollegInnen, PatientInnen, Personen / Organisationen aus anderen Fachbereichen)

☐ Informations- und Erfahrungsaustausch (z.B.: mit KollegInnen, Gesundheitsorganisationen, anderen med. Berufsgruppen)

☐ Zugang zu wissenschaftlichen Publikationen und Gesundheitsinformationen (z.B.: Diagnosen, Krankheitsbilder, Studien, Fachartikel)

☐ Gesundheitsförderung und Entwicklung öffentlicher Gesundheitskompetenzen

☐ Patientenversorgung und Patientenaufklärung (z.B.: Patient Empowerment)

☐ Bildung, Weiterbildung und berufliche Entwicklung (z.B.: im Studium, postgraduell, Unterstützung beim Lernen)

☐ Marketing und Steigerung des Bekanntheitsgrades (z.B.: eigene Person, Praxis, etc.)

☐ Sonstiges (bitte angeben)

Mit Wem bist du HAUPTSÄCHLICH vernetzt?

- ☐ Eigene Berufsgruppe (Ergo-, Logo-, Physiotherapie)
- ☐ StudienkollegInnen
- ☐ ProfessorInnen, DozentInnen
- ☐ Andere Medizinische Fachbereiche (z.B.: DiätologInnen, ÄrztInnen)
- ☐ Gesundheitsorganisationen (z.B.: Praxen, Krankenhäuser)
- ☐ Berufliche Interessensvertretungen (z.B.: Physio Austria, Ergotherapie Austria, Logopädieaustria)
- ☐ Medizinsiche Fachzeitschriften (z.B.: Ergotherapie-, Physiotherapie-, Logopädiefachzeitschriften)
- ☐ Sonstige berufliche Netzwerke

Mit welchem Gerät nutzt du soziale Plattformen am HÄUFIGSTEN? (für medizinische, berufliche bzw. akademische Zwecke)

- ○ Computer (z.B.: Desktop, Laptop)
- ○ Tablet (z.B.: iPad, Galaxy)
- ○ Smartphone (z.B.: Android, iPhone)
- ○ Sonstiges (bitte angeben)

Wo nutzt du Social Networking Sites am HÄUFIGSTEN für berufliche und / oder akademische Zwecke?

- ○ Am Arbeitsplatz
- ○ Auf der Universität
- ○ Zu Hause
- ○ Unterwegs

Wie oft nutzt du beruflich und / oder akademisch die folgenden Anwendungen von Social Networking Plattformen?

	täglich	wöchentlich	monatlich	seltener	nie
Kommunikation / Austausch (z.B.: Nachrichten schicken, Chat, etc.)	○	○	○	○	○
Schreiben von Beiträgen auf anderen Profilseiten	○	○	○	○	○
Kommentieren von Beiträgen	○	○	○	○	○
Suche nach Informationen	○	○	○	○	○
Suche nach Kontakten, PatientInnen, Netzwerken	○	○	○	○	○
Teilen von Links, Artikeln, Informationen	○	○	○	○	○
Berufliche Seiten liken und kommentieren	○	○	○	○	○
Audios und Videos anhören, ansehen	○	○	○	○	○

Der vorletzte Teil des Fragebogens erfasst den Umgang mit Sozialen Medien.

Bitte bewerte folgende Aussagen:

	trifft....-..... überh-aupt nicht zu	nicht zu	eher nicht zu	eher zu	zu	voll und ganz zu
Ich verfüge über ein allgemeines Wissen zu Datenschutzgesetzen und Privatsphäre-Richtlinien und bringe dieses regelmäßig auf den neuesten Stand.	○	○	○	○	○	○
Ich kontrolliere regelmäßig die Sicherheitseinstellungen und Sicherheitssysteme meiner Geräte und/oder der Anwendungen, die ich benutze.	○	○	○	○	○	○
Ich verfüge über ein allgemeines technisches/ digitales Wissen, um Social Networking Sites aktiv zu nutzen und bringe dieses regelmäßig auf den neuesten Stand. (z.B.: Datenaustausch und gezielte, regelmäßige Informationsgewinnung über soziale Netzwerke; Aufbau und Betreuung von Sozialen Netzwerken, Blogs und Micro-Blogs)	○	○	○	○	○	○

Bitte bewerte folgende Aussagen:

	trifft....-..... überh-aupt nicht zu	nicht zu	eher nicht zu	eher zu	zu	voll und ganz zu
Ich bin mir der Risiken des Umgangs mit sozialen Netzwerken bewusst. (z.B.: Weitergabe von personenbezogenen Daten)	○	○	○	○	○	○
Ich verstehe die Gefahren von Cybermobbing und Trolling.	○	○	○	○	○	○
Ich bin informiert über die Wirkung von sozialen Plattformen auf meine Umwelt.	○	○	○	○	○	○

Bitte bewerte folgende Aussagen:

	trifft....-..... überh-aupt nicht zu	nicht zu	eher nicht zu	eher zu	zu	voll und ganz zu
Ich habe ein Verständnis über das geistige Eigentum, Herunterladen und Freigeben von Inhalten. (z.B.: Urheber-Nutzungsrecht)	○	○	○	○	○	○
Ich kenne und bewahre die Persönlichkeitsrechte einer anderen Person. (z. B.: Fotos von anderen online stellen, Schutz der Privatsphäre)	○	○	○	○	○	○

Bitte bewerte folgende Aussagen:

	trifft....-.....überh-aupt nicht zu	nicht zu	eher nicht zu	eher zu	zu	voll und ganz zu
Ich kann durch bestimmte Kriterien die Zuverlässigkeit und Glaubwürdigkeit von Informationen einschätzen.	○	○	○	○	○	○
Bevor ich einen Beitrag teile oder poste, setze ich mich nochmals kritisch damit auseinander.	○	○	○	○	○	○

Bitte bewerte folgende Aussagen:

	trifft....-.....überh-aupt nicht zu	nicht zu	eher nicht zu	eher zu	zu	voll und ganz zu
Ich kann mit Konflikten, die auf sozialen Medien entstehen, umgehen.	○	○	○	○	○	○
Bemerke ich auf sozialen Medien herabwürdigende Meinungen, oder eine Verbreitung falscher Tatsachen gegenüber meiner Person oder die anderer, dann weiss ich, wie ich damit umzugehen habe.	○	○	○	○	○	○

Bitte bewerte folgende Aussagen:

	trifft....-.....überh-aupt nicht zu	nicht zu	eher nicht zu	eher zu	zu	voll und ganz zu
Ich achte auf einen verantwortungsvollen und fairen Umgang mit anderen Menschen via Social Networking Sites.	○	○	○	○	○	○
Ich kenne die Social Media-Leitlinien für Gesundheitsinstitutionen.	○	○	○	○	○	○

Bitte bewerte folgende Aussagen:

	trifft....-.....überh-aupt nicht zu	nicht zu	eher nicht zu	eher zu	zu	voll und ganz zu
Ich beziehe die Integrität anderer in mein eigenes Handeln auf SNS mitein.	○	○	○	○	○	○
Bevor ich mich für eine Handlung auf SNS entscheide, wiege ich deren Folgen ab.	○	○	○	○	○	○
Ich erkenne, wenn Persönlichkeitsrechte verletzt werden und beziehe dazu Stellung.	○	○	○	○	○	○
Wenn ich Inhalte lese die provokativ oder beleidigend wirken, dann mache ich darauf aufmerksam, melde oder blockiere sie.	○	○	○	○	○	○
Ich bin der Meinung, dass Personen für ihre Handlungen auf SNS verantwortlich sind.	○	○	○	○	○	○

Hast du schon einmal auf Social Networking Sites negative Einträge/ Kommentare über andere (z.B.: KollegInnen, PatientInnen, Vortragende) gelesen oder davon erfahren?

- ○ Ja
- ○ Nein
- ○ Weiß ich nicht
- ○ Keine Angabe

Der letzte Abschnitt des Fragebogens bezieht sich auf die Vor- und Nachteile von Social Networking Sites.

Inwieweit hast du Bedenken, Social Networking Sites im Gesundheitsbereich zu verwenden?

- ○ Habe Bedenken
- ○ Habe leichte Bedenken
- ○ Habe überhaupt keine Bedenken

Gleich geschafft. Die vorletzte Seite der Umfrage.

Welche HAUPTSÄCHLICHEN Barrieren zur Nutzung von Social Networking Sites im Gesundheitsbereich bestehen aus deiner Sicht?

- ☐ Mangelnde Aus- / Weiterbildung für professionelle SNS - Nutzung
- ☐ Geringe Qualität der medizinischen Informationen
- ☐ Mangelnde Zuverlässigkeit, Vertraulichkeit und Privatsphäre
- ☐ Bewahrung der Professionalität in der Öffentlichkeit (z.B.: Berufsbild, Selbstdarstellung in SNS)
- ☐ Schadhafte Kommunikation und Interaktion durch SNS im Gesundheitsbereich (Werbung, Trolling, keine angemessene Patienten-Therapeuten-Beziehung)
- ☐ Mangelnde Regelung rechtlicher Fragen und beruflicher Haftung
- ☐ Kein chancengerechter Zugang zu SNS (z.B.: fehlende technische Vorraussetzungen)
- ☐ Sonstiges (bitte angeben) |

Welche HAUPTSÄCHLICHEN Vorteile zur Nutzung von Social Networking Sites im Gesundheitsbereich bestehen aus deiner Sicht?

- ☐ Unterstützung der PatientInnenaufklärung (z.B.: Videos auf SNS)
- ☐ Förderung der PatientInnenversorgung (z.B.: Selbsthilfegruppen)
- ☐ Verbesserter Zugang und Ausweitung des Zugangs zu Gesundheitsinformationen und wissenschaftlichen Publikationen
- ☐ Bildung und Weiterbildung (z.B.: Einsatz im Studium und postgraduell)
- ☐ Erhöhte Interaktion und Kommunikation im Gesundheitssektor (z.B.: zwischen GesundheitsexpertInnen, PatientInnen)
- ☐ Verbesserung der Gesundheitsversorgung (z.B.: Online-Feedback an Dienstleister, multidisziplinärer Informationsaustausch)
- ☐ Förderung öffentlicher Gesundheitskompetenz und Gesundheitsförderung (z.B.: Gesundheitsprogramme)
- ☐ Sonstiges (bitte angeben) |

Am Ziel. Die letzte Seite der Umfrage.

Würdest du dir mehr Informationen zu dem Thema "Social Media im Gesundheitswesen" wünschen? z.B.: Leitlinien zur Nutzung von Social Networking Sites.

- ○ Ja
- ○ Nein
- ○ Weiss ich nicht
- ○ Keine Angabe

Wie alt bist du?

- ○ < 25
- ○ 25 - 35
- ○ 36 - 45
- ○ 46 - 55
- ○ 56 - 65
- ○ > 65

Geschlecht

- ○ Männlich
- ○ Weiblich
- ○ Anderes (bitte angeben)

In welchem Bundesland arbeitest / studierst du zur Zeit?

- ☐ Wien
- ☐ Niederösterreich
- ☐ Anderes Bundesland (bitte angeben)

Dein derzeitiges therapeutisches Beschäftigungsverhältnis?

- ☐ Angestellt
- ☐ Selbständig, Freiberuflich
- ☐ StudentIn

Bitte gib dein Haupttätigkeitsfeld an.

- ○ PraxisinhaberIn
- ○ Ambulante Klinik
- ○ Universität, Forschung, Administration
- ○ Rehabilitationszentrum
- ○ Krankenhaus
- ○ Gemeinschaftspraxis
- ○ Sonstiges (bitte angeben)

Wie lange bist du bereits TherapeutIn?

- ○ 0-5
- ○ 6-10
- ○ 11-15
- ○ 16-20
- ○ 20+

Geschafft!

Vielen Dank fu¨r die Teilnahme an der Studie!
Deine Antworten sind fu¨r mich hilfreich, um die Forschungsarbeit zu Social Networking voranzutreiben.

C. Report and Survey Data

Anmerkung: ProbandInnen, die Fragen unbeantwortet ließen, wurden im internen Report von UniPark nicht explizit aufgelistet. In der graphischen Darstellung wurden diese ProbandInnen explizit angeführt und ausgewertet.

Social Media and Healthcare Professionals – Report			
Autor	Pusswald Simon, BSc		
Beginn der Entwicklung	01. 11. 2016		
Ende der Entwicklung	31. 01. 2017		
Beginn der Umfrage	01. 02. 2017		
Ende der Umfrage	31. 03. 2017		
Gesamtsample	674		
Nettobeteiligung	213		
Inhaltsverzeichnis			
01.	Demographische Daten		
02.	Allgemeine Nutzung		
03.	Partizipation		
04.	Berufliche Nutzung		
05.	Ethik		
06.	Vorteile		
07.	Nachteile		
01.	**Demographische Daten**		
16.1 Alter	**Wie alt bist du?**		
Reportfilter	n = 155		
Code	Antwortoption [Jahre]	n	%
1	<25	47	30%
2	25-35	78	50%
3	36-45	22	14%
4	46-55	5	3%
5	56-65	3	2%
6	>65	0	0%
16.2 Geschlecht			
Reportfilter	n = 155		
Code	Antwortoption	n	%
1	Männlich	26	17%
2	Weiblich	129	83%
6	Anderes	0	0%
16.3 Arbeitsort	**In welchem Bundesland arbeitest / studierst du zur Zeit?**		
Reportfilter	n = 155		
Code	Antwortoption	n	%
1	Wien	31	20%
1	Niederösterreich	61	39%
1	Anderes Bundesland	67	43%

16.4 Beschäftigungsverhältnis	**Dein derzeitiges therapeutisches Beschäftigungsverhältnis?**		
Reportfilter	n = 155		
Code	Antwortoption	n	%
1	Angestellt	112	72%
1	Selbstständig, Freiberuflich	55	35%
1	StudentIn	35	23%
16.5 Tätigkeitsfeld	**Bitte gib dein Haupttätigkeitsfeld an.**		
Reportfilter	n = 155		
Code	Antwortoption	n	%
1	Praxis-InhaberIn	10	6%
2	Ambulante Klinik	13	8%
3	Universität, Forschung, Administration	15	10%
4	Rehabilitationszentrum	22	14%
5	Krankenhaus	42	27%
6	Gemeinschaftspraxis	26	17%
7	Sonstiges	27	17%
16.6 Berufserfahrung	**Wie lange bist du bereits TherapeutIn?**		
Reportfilter	n = 155		
Code	Antwortoption [Jahre]	n	%
1	0-5	93	60%
2	6-10	32	21%
3	11-15	9	6%
4	16-20	8	5%
5	20+	13	8%
1.1 Berufsauswahl	**Welcher Berufsgruppe bzw. welchem Studiengang gehörst du an?**		
Reportfilter	n = 180		
Code	Antwortoption	n	%
1	Physiotherapie	88	49%
2	Ergotherapie	47	26%
3	Logopädie	20	11%
4	Andere	25	14%
02.	**Allgemeine Nutzung**		
2.1 Nutzung Social Media	**Nutzt du Social Networking Sites? z.B.: Facebook, Twitter, LinkedIn, Wikipedia, WhatsApp etc.**		
Reportfilter	n = 155		
Code	Antwortoption	n	%
1	Ja	153	99%
2	Nein	2	1%

2.2 Auswahl Social Media	**Welche Social Networking Sites nutzt du?**		
Reportfilter	n = 153		
Code	Antwortoption	n	%
1	Facebook	138	90%
1	Twitter	10	7%
1	YouTube	125	82%
1	Xing	14	9%
1	LinkedIn	13	8%
1	Wikis	104	68%
1	Blogs	38	25%
1	Medizinische Online Communities	102	67%
1	Wissenschaftliche Online Communities	83	54%
1	Messenger	145	95%
1	Sonstiges	18	12%
2.3 Nutzungshäufigkeit	**Wie oft nutzt du Social Networking Sites im Allgemeinen?**		
Reportfilter	n = 153		
Code	Antwortoption	n	%
1	täglich	143	93%
2	wöchentlich	9	6%
3	monatlich	1	1%
4	seltener	0	0%
5	nie	0	0%
03.	**Partizipation**		
3.1 Partizipation – Auswahl	**Informierst du dich in Social Networking Sites über gesundheitliche Interessen? z.B.: zu Gesundheitsförderung, gesundheitsbezogene Themen, etc.**		
Reportfilter	n = 153		
Code	Antwortoption	n	%
1	Ja	139	91%
2	Nein	14	9%
3.2 Gruppenzugehörigkeit	**Gehörst du zu einer Gruppe auf einer Social Networking Plattform, die an gesundheitlichen Themen beteiligt ist oder daran arbeitet gesundheitliche Interessen voran?**		
Reportfilter	n = 139		
Code	Antwortoption	n	%
1	Ja	81	58%
2	Nein	48	35%
3	Weiß ich nicht	7	5%
4	Keine Aussage	3	2%

3.3 Informationsbezug	**Folgst du GesundheitsexpertInnen, Gesundheitsorganisationen oder gesundheitlichen Interessensvertretungen auf einer Social Networking Site oder auf Twitter?**		
Reportfilter	n = 139		
Code	Antwortoption	n	%
1	Ja	113	81%
2	Nein	23	17%
3	Weiß ich nicht	3	2%
4	Keine Aussage	0	0%
3.4 Nutzung von Funktionen	**Wie oft nutzt du die folgenden Anwendungen von Social Networking Plattformen, um...?**		
Reportfilter	n = 139		
Code	Antwortoption	n	%
Links zu gesundheitlichen Artikeln oder Berichten zu posten, damit andere ihn lesen			
1	täglich	4	3%
2	wöchentlich	14	10%
3	monatlich	30	22%
4	seltener	41	29%
5	nie	50	36%
Eigene Gedanken und Kommentare zu gesundheitlichen Fragen und Themen zu posten			
1	täglich	2	1%
2	wöchentlich	10	7%
3	monatlich	18	13%
4	seltener	51	37%
5	nie	58	42%
Andere Menschen dazu zu ermutigen, an gesundheitlichen Themen und Veranstaltungen teilzuhaben			
1	täglich	1	1%
2	wöchentlich	11	8%
3	monatlich	27	19%
4	seltener	53	38%
5	nie	47	34%
Andere Menschen zu ermutigen, mehr für ihre Gesundheit zu unternehmen			
1	täglich	2	1%
2	wöchentlich	16	12%
3	monatlich	19	14%
4	seltener	59	42%
5	nie	43	31%
Gesundheitsbezogene Inhalte, die ursprünglich von anderen gepostet wurden, zu teilen			
1	täglich	2	1%
2	wöchentlich	15	11%
3	monatlich	45	32%
4	seltener	52	37%
5	nie	25	18%

Beiträge zu gesundheitlichen Fragen und Themen, die von anderen gepostet wurden, zu fördern und / oder zu "liken"			
1	täglich	13	9%
2	wöchentlich	55	40%
3	monatlich	45	32%
4	seltener	15	11%
5	nie	11	8%
3.5 Verhalten – Veränderung1	**Hast du in den letzten 12 Monaten einen Beitrag in den Social Networking Plattformen gelesen, der dir einen Anlass dazu gab, mehr über ein gesundheitliches Thema zu lernen?**		
Reportfilter	n = 139		
Code	Antwortoption	n	%
1	Ja	113	81%
2	Nein	7	5%
3	Weiß ich nicht	19	14%
4	Keine Aussage	0	0%
3.6 Verhalten – Veränderung2	**Und hast du in den letzten 12 Monaten einen Beitrag in den Social Networking Plattformen gelesen, der dir einen Anlass dazu gab, aktiver im Gesundheitsbereich zu werden?**		
Reportfilter	n = 139		
Code	Antwortoption	n	%
1	Ja	60	43%
2	Nein	43	31%
3	Weiß ich nicht	29	21%
4	Keine Aussage	7	5%
04.	**Berufliche Nutzung**		
4.1 Professionelle Nutzung – Auswahl	**Wie würdest du deine Nutzung von Social Networking Sites beschreiben?**		
Reportfilter	n = 153		
Code	Antwortoption	n	%
1	Persönlich	149	97%
1	Beruflich	87	57%
1	Universitär, akademisch (z.B.: für Forschung, Wissenschaft, Bildung, Studium)	56	37%
4.2 Gründe Nicht-Nutzung	**Warum nutzt du keine Social Networking Sites zu beruflichen oder akademischen Zwecken?**		
Reportfilter	n = 47		
Code	Antwortoption	n	%
1	Ich habe mich damit noch nicht beschäftigt	27	57%
1	Ich wusste nicht, dass man soziale Netzwerke für berufliche oder akademische Zwecke einsetzen kann	1	2%
1	Das ist mir zu zeitaufwendig	9	19%
1	Das ist mir zu kompliziert	2	4%
1	Ich bin besorgt wegen der beruflichen Haftung	2	4%
1	Ich habe Bedenken, dass der Datenschutz und die Privatsphäre verletzt werden	11	23%
1	Sonstiges	10	21%

4.3 Nutzungshäufigkeit	**Welche Social Networking Plattform nutzt du HAUPTSÄCHLICH für medizinische, berufliche und / oder akademische Zwecke?**			
Reportfilter	n = 106			
Code	Antwortoption		n	%
Facebook				
1	täglich	36	35%	
2	wöchentlich	35	34%	
3	monatlich	15	15%	
4	seltener	8	8%	
5	nie	9	9%	
Twitter				
1	täglich	3	3%	
2	wöchentlich	2	2%	
3	monatlich	0	0%	
4	seltener	4	4%	
5	nie	84	90%	
YouTube				
1	täglich	3	3%	
2	wöchentlich	28	28%	
3	monatlich	33	33%	
4	seltener	30	30%	
5	nie	6	6%	
Xing				
1	täglich	0	0%	
2	wöchentlich	2	2%	
3	monatlich	3	3%	
4	seltener	7	8%	
5	nie	79	87%	
LinkedIn				
1	täglich	0	0%	
2	wöchentlich	6	6%	
3	monatlich	3	3%	
4	seltener	7	8%	
5	nie	77	83%	
Wikis/Wikipedia				
1	täglich	5	5%	
2	wöchentlich	40	40%	
3	monatlich	33	33%	
4	seltener	14	14%	
5	nie	8	8%	

Reportfilter	n = 106		
Code	Antwortoption	n	%
Blogs (z.B.: Wordpress)			
1	täglich	0	0%
2	wöchentlich	13	14%
3	monatlich	9	10%
4	seltener	20	22%
5	nie	50	54%
Medizinische Online Communities (z.B.: DocCheck, Netdoktor)			
1	täglich	7	7%
2	wöchentlich	38	37%
3	monatlich	32	31%
4	seltener	16	16%
5	nie	9	9%
Wissenschaftliche Online Communities (z.B.: ResearchGate, PubMed)			
1	täglich	4	4%
2	wöchentlich	23	22%
3	monatlich	36	35%
4	seltener	29	28%
5	nie	11	11%
Messenger (z.B.: WhatsApp, Viber, Telegram etc.)			
1	täglich	30	29%
2	wöchentlich	26	25%
3	monatlich	5	5%
4	seltener	24	23%
5	nie	18	17%
Sonstiges			
1	täglich	0	0%
2	wöchentlich	1	3%
3	monatlich	4	13%
4	seltener	1	3%
5	nie	25	81%

4.4 Gründe Nutzung	**Aus welchen medizinischen, beruflichen und / oder akademischen HAUPTGRÜNDEN nutzt du Social Networking Plattformen?**		
Reportfilter	n = 106		
Code	Antwortoption	n	%
1	Netzwerken (z.B.: Kontakte zur eigenen Berufsgruppe, StudienkollegInnen, PatientInnen, Personen / Organisationen aus anderen Fachbereichen)	90	85%
1	Informations- und Erfahrungsaustausch (z.B.: mit KollegInnen, Gesundheitsorganisationen, anderen med. Berufsgruppen)	84	79%
1	Zugang zu wissenschaftlichen Publikationen und Gesundheitsinformationen (z.B.: Diagnosen, Krankheitsbilder, Studien, Fachartikel)	84	79%
1	Gesundheitsförderung und Entwicklung öffentlicher Gesundheitskompetenzen	10	9%
1	Patientenversorgung und Patientenaufklärung (z.B.: Patient Empowerment)	18	17%
1	Bildung, Weiterbildung und berufliche Entwicklung (z.B.: im Studium, postgraduell, Unterstützung beim Lernen)	67	63%
1	Marketing und Steigerung des Bekanntheitsgrades (z.B.: eigene Person, Praxis, etc.)	23	22%
1	Sonstiges (bitte angeben)	0	0%
4.5 Berufliches Netzwerk	**Mit Wem bist du HAUPTSÄCHLICH vernetzt?**		
Reportfilter	n = 90		
Code	Antwortoption	n	%
1	Eigene Berufsgruppe (Ergo-, Logo-, Physiotherapie)	87	97%
1	StudienkollegInnen	71	79%
1	ProfessorInnen, DozentInnen	10	11%
1	Andere medizinische Fachbereiche (z.B.: DiätologInnen, ÄrztInnen)	25	28%
1	Gesundheitsorganisationen (z.B.: Praxen, Krankenhäuser)	14	16%
1	Berufliche Interessensvertretungen (z.B.: Physio Austria, Ergotherapie Austria, Logopädieaustria)	55	61%
1	Medizinische Fachzeitschriften (z.B.: Ergotherapie-, Physiotherapie-, Logopädiezeitschriften)	40	44%
1	Sonstiges berufliche Netzwerke	3	3%
4.6 Gerät-Zugriff	**Mit welchem Gerät nutzt du soziale Plattformen am HÄUFIGSTEN? (für medizinische bzw. berufliche akademische Zwecke)**		
Reportfilter	n = 106		
Code	Antwortoption	n	%
1	Computer (z.B.: Laptop, Desktop)	34	32%
2	Tablet (z.B.: iPad, Galaxy)	8	8%
3	Smartphone (z.B.: Android, iPhone)	64	60%
4	Sonstiges	0	0%

4.7 Verwendungsort	Wo nutzt du Social Networking Sites am HÄUFIGSTEN für berufliche und / oder akademische Zwecke?		
Reportfilter	n = 106		
Code	Antwortoption	n	%
1	Am Arbeitsplatz	21	20%
2	Auf der Universität	2	2%
3	Zu Hause	77	73%
4	Unterwegs	6	6%

4.8 Nutzung von Funktionen	Wie oft nutzt du beruflich und / oder akademisch die folgenden Anwendungen von Social Networking Plattformen?		
Reportfilter	n = 106		
Code	Antwortoption	n	%
Kommunikation / Austausch (z.B.: Nachrichten schicken, Chat, etc.)			
1	täglich	35	33%
2	wöchentlich	30	28%
3	monatlich	21	20%
4	seltener	14	13%
5	nie	6	6%
Schreiben von Beiträgen auf anderen Profilseiten			
1	täglich	1	1%
2	wöchentlich	8	8%
3	monatlich	12	11%
4	seltener	39	37%
5	nie	46	43%
Kommentieren von Beiträgen			
1	täglich	4	4%
2	wöchentlich	15	14%
3	monatlich	25	24%
4	seltener	43	41%
5	nie	17	16%
Suche nach Informationen			
1	täglich	33	31%
2	wöchentlich	50	47%
3	monatlich	19	18%
4	seltener	4	4%
5	nie	0	0%
Suche nach Kontakten, PatientInnen, Netzwerken			
1	täglich	2	2%
2	wöchentlich	25	24%
3	monatlich	35	33%
4	seltener	28	27%
5	nie	15	14%

Reportfilter	n = 106		
Code	Antwortoption	n	%
Teilen von Links, Artikeln, Informationen			
1	täglich	3	3%
2	wöchentlich	21	20%
3	monatlich	25	24%
4	seltener	35	33%
5	nie	22	21%
Berufliche Seiten liken und kommentieren			
1	täglich	6	6%
2	wöchentlich	28	26%
3	monatlich	31	29%
4	seltener	28	26%
5	nie	13	12%
Audios und Videos anhören, ansehen			
1	täglich	11	10%
2	wöchentlich	38	36%
3	monatlich	33	31%
4	seltener	23	22%
5	nie	1	1%
05.	**Ethik**		
Sicherheit und Technik	**Bitte bewerte folgende Aussagen**		
Reportfilter	n = 153		
Code	Antwortoption	n	%
5.1 Ich verfüge über ein allgemeines Wissen zu Datenschutzgesetzen und Privatsphäre-Richtlinien und bringe dieses regelmäßig auf den neuesten Stand.			
1	Trifft.... überhaupt nicht zu	2	1%
2	nicht zu	15	10%
3	eher nicht zu	33	22%
4	eher zu	58	38%
5	zu	37	24%
6	voll und ganz zu	8	5%
5.2 Ich kontrolliere regelmäßig die Sicherheitseinstellungen und Sicherheitssysteme meiner Geräte und/oder der Anwendungen, die ich benutze.			
1	Trifft.... überhaupt nicht zu	5	3%
2	nicht zu	15	10%
3	eher nicht zu	33	22%
4	eher zu	51	33%
5	zu	37	24%
6	voll und ganz zu	12	8%

6.1 Ich verfüge über ein allgemeines technisches/digitales Wissen, um Social Networking Sites aktiv zu nutzen und bringe dieses regelmäßig auf den neuesten Stand. (z.B.: Datenaustausch und gezielte, regelmäßige Informationsgewinnung über soziale Netzwerke)			
1	Trifft.... überhaupt nicht zu	10	7%
2	nicht zu	22	14%
3	eher nicht zu	29	19%
4	eher zu	50	33%
5	zu	30	20%
6	voll und ganz zu	12	8%
Risiko und Gefahren	**Bitte bewerte folgende Aussagen**		
Reportfilter	n = 153		
Code	Antwortoption	n	%
7.1 Ich bin mir der Risiken des Umgangs mit sozialen Netzwerken bewusst. (z.B.: Weitergabe von personenbezogenen Daten)			
1	Trifft.... überhaupt nicht zu	1	1%
2	nicht zu	1	1%
3	eher nicht zu	2	1%
4	eher zu	24	16%
5	zu	67	44%
6	voll und ganz zu	58	38%
7.2 Ich verstehe die Gefahren von Cybermobbing und Trolling.			
1	Trifft.... überhaupt nicht zu	1	1%
2	nicht zu	4	3%
3	eher nicht zu	8	5%
4	eher zu	27	18%
5	zu	57	38%
6	voll und ganz zu	55	36%
7.3 Ich bin informiert über die Wirkung von sozialen Plattformen auf meine Umwelt.			
1	Trifft.... überhaupt nicht zu	2	1%
2	nicht zu	0	0%
3	eher nicht zu	15	10%
4	eher zu	34	22%
5	zu	63	41%
6	voll und ganz zu	38	25%
Rechtslage	**Bitte bewerte folgende Aussagen**		
Reportfilter	n = 153		
Code	Antwortoption	n	%
8.1 Ich habe ein Verständnis über das geistige Eigentum, Herunterladen und Freigeben von Inhalten. (z.B.: Urheber-Nutzungsrecht)			
1	Trifft.... überhaupt nicht zu	0	0%
2	nicht zu	0	0%
3	eher nicht zu	7	5%
4	eher zu	39	25%
5	zu	59	39%
6	voll und ganz zu	48	31%

Reportfilter	n = 153		
Code	Antwortoption	n	%
8.2 Ich kenne und bewahre die Persönlichkeitsrechte einer anderen Person. (z.B.: Fotos von anderen online stellen, Schutz der Privatsphäre)			
1	Trifft.... überhaupt nicht zu	0	0%
2	nicht zu	1	1%
3	eher nicht zu	1	1%
4	eher zu	17	11%
5	zu	35	23%
6	voll und ganz zu	99	65%
Medienkritik-Information	**Bitte bewerte folgende Aussagen**		
Reportfilter	n = 153		
Code	Antwortoption	n	%
9.1 Ich kann durch bestimmte Kriterien die Zuverlässigkeit und Glaubwürdigkeit von Informationen einschätzen.			
1	Trifft.... überhaupt nicht zu	0	0%
2	nicht zu	1	1%
3	eher nicht zu	13	9%
4	eher zu	64	42%
5	zu	56	37%
6	voll und ganz zu	18	12%
9.2 Bevor ich einen Beitrag teile oder poste, setze ich mich nochmals kritisch damit auseinander.			
1	Trifft.... überhaupt nicht zu	0	0%
2	nicht zu	2	1%
3	eher nicht zu	7	5%
4	eher zu	33	22%
5	zu	47	31%
6	voll und ganz zu	62	41%
Konfliktlösung	**Bitte bewerte folgende Aussagen**		
Reportfilter	n = 153		
Code	Antwortoption	n	%
10.1 Ich kann mit Konflikten, die auf sozialen Medien entstehen, umgehen.			
1	Trifft.... überhaupt nicht zu	1	1%
2	nicht zu	2	1%
3	eher nicht zu	11	7%
4	eher zu	53	35%
5	zu	57	37%
6	voll und ganz zu	29	19%

10.2 Bemerke ich auf sozialen Medien herabwürdigende Meinungen, oder eine Verbreitung falscher Tatsachen gegenüber meiner Person oder die anderer, dann weiß ich, wie ich damit umzugehen habe.			
1	Trifft.... überhaupt nicht zu	4	3%
2	nicht zu	10	7%
3	eher nicht zu	17	11%
4	eher zu	52	34%
5	zu	43	28%
6	voll und ganz zu	26	17%
Kollaboration	**Bitte bewerte folgende Aussagen**		
Reportfilter	n = 153		
Code	Antwortoption	n	%
11.1 Ich achte auf einen verantwortungsvollen und fairen Umgang mit anderen Menschen via Social Networking Sites.			
1	Trifft.... überhaupt nicht zu	0	0%
2	nicht zu	0	0%
3	eher nicht zu	1	1%
4	eher zu	7	5%
5	zu	40	26%
6	voll und ganz zu	104	68%
11.2 Ich kenne die Social Media-Leitlinien für Gesundheitsinstitutionen.			
1	Trifft.... überhaupt nicht zu	29	19%
2	nicht zu	48	31%
3	eher nicht zu	40	26%
4	eher zu	17	11%
5	zu	13	8%
6	voll und ganz zu	6	4%
Handlung und Verantwortung	**Bitte bewerte folgende Aussagen**		
Reportfilter	n = 153		
Code	Antwortoption	n	%
12.1 Ich beziehe die Integrität anderer in mein eigenes Handeln auf SNS mitein.			
1	Trifft.... überhaupt nicht zu	1	1%
2	nicht zu	8	5%
3	eher nicht zu	13	9%
4	eher zu	64	43%
5	zu	45	30%
6	voll und ganz zu	18	12%
12.2 Bevor ich mich für eine Handlung auf SNS entscheide, wiege ich deren Folgen ab.			
1	Trifft.... überhaupt nicht zu	0	0%
2	nicht zu	4	3%
3	eher nicht zu	8	5%
4	eher zu	33	22%
5	zu	70	46%
6	voll und ganz zu	38	25%

Reportfilter	n = 153		
Code	Antwortoption	n	%
12.3 Ich erkenne, wenn Persönlichkeitsrechte verletzt werden und beziehe dazu Stellung.			
1	Trifft.... überhaupt nicht zu	1	1%
2	nicht zu	13	9%
3	eher nicht zu	36	24%
4	eher zu	48	32%
5	zu	39	26%
6	voll und ganz zu	15	10%
12.4 Wenn ich Inhalte lese die provokativ oder beleidigend wirken, dann mache ich darauf aufmerksam, melde oder blockiere sie.			
1	Trifft.... überhaupt nicht zu	2	1%
2	nicht zu	33	22%
3	eher nicht zu	30	20%
4	eher zu	36	24%
5	zu	30	20%
6	voll und ganz zu	21	14%
12.5 Ich bin der Meinung, dass Personen für ihre Handlungen auf SNS verantwortlich sind.			
1	Trifft.... überhaupt nicht zu	0	0%
2	nicht zu	0	0%
3	eher nicht zu	1	1%
4	eher zu	9	6%
5	zu	46	30%
6	voll und ganz zu	97	63%

11.3 Kommentare	**Hast du schon einmal auf Social Networking Sites negative Einträge/Kommentare über andere (z.B.: KollegInnen, PatientInnen, Vortragende) gelesen oder davon erfahren?**		
Reportfilter	n = 153		
Code	Antwortoption	n	%
1	Ja	59	39%
2	Nein	72	47%
3	Weiß ich nicht	18	12%
4	Keine Aussage	4	3%

15.1 Leitlinien	**Würdest du dir mehr Informationen zu dem Thema "Social Media im Gesundheitswesen" wünschen? z.B.: Leitlinien zur Nutzung von Social Networking Sites.**		
Reportfilter	n = 155		
Code	Antwortoption	n	%
1	Ja	108	70%
2	Nein	20	13%
3	Weiß ich nicht	23	15%
4	Keine Aussage	4	3%

13.1 Bedenken und Vertrauen	Inwieweit hast du Bedenken, Social Networking Sites im Gesundheitsbereich zu verwenden?		
Reportfilter	n = 155		
Code	Antwortoption	n	%
1	Habe Bedenken	26	17%
2	Habe leichte Bedenken	87	56%
3	Habe überhaupt keine Bedenken	42	27%

06.	Vorteile		
14.2 Welche HAUPTSÄCHLICHEN Vorteile zur Nutzung von Social Networking Sites im Gesundheitsbereich bestehen aus deiner Sicht?			
Reportfilter	n = 155		
Code	Antwortoption	n	%
1	Unterstützung der PatientInnenaufklärung (z.B.: Videos auf SNS)	75	48%
1	Förderung der PatientInnenversorgung (z.B.: Selbsthilfegruppen)	59	38%
1	Verbesserter Zugang und Ausweitung des Zugangs zu Gesundheitsinformationen und wissenschaftlichen Publikationen	109	70%
1	Bildung und Weiterbildung (z.B.: Einsatz im Studium und postgraduell)	71	46%
1	Erhöhte Interaktion und Kommunikation im Gesundheitssektor (z.B.: zwischen GesundheitsexpertInnen, PatientInnen)	89	57%
1	Verbesserung der Gesundheitsversorgung (z.B.: Online-Feedback an Dienstleister, multidisziplinärer Informationsaustausch)	18	12%
1	Förderung öffentlicher Gesundheitskompetenz und Gesundheitsförderung (z.B.: Gesundheitsprogramme)	51	33%
1	Sonstiges (bitte angeben)	3	2%

07.	Nachteile		
14.1 Welche HAUPTSÄCHLICHEN Barrieren zur Nutzung von Social Networking Sites im Gesundheitsbereich bestehen aus deiner Sicht?			
Reportfilter	n = 155		
Code	Antwortoption	n	%
1	Mangelnde Aus- / Weiterbildung für professionelle SNS - Nutzung	52	34%
1	Geringe Qualität der medizinischen Informationen	67	43%
1	Mangelnde Zuverlässigkeit, Vertraulichkeit und Privatsphäre	102	66%
1	Bewahrung der Professionalität in der Öffentlichkeit (z.B.: Berufsbild, Selbstdarstellung in SNS)	64	41%
1	Schadhafte Kommunikation und Interaktion durch SNS im Gesundheitsbereich (Werbung, Trolling, keine angemessene Patienten-Therapeuten-Beziehung)	66	43%
1	Mangelnde Regelung rechtlicher Fragen und beruflicher Haftung	62	40%
1	Kein chancengerechter Zugang zu SNS (z.B.: fehlende technische Vorraussetzungen)	15	10%
1	Sonstiges (bitte angeben)	3	2%