


Use of WhatsApp® by health care managers

Usu do WhatsApp® por gestores de serviços de saúde

Usu del WhatsApp® por administradores de servicios de salud

Renata Olszewski Savio¹  <https://orcid.org/0000-0001-6746-5345>Maynara Fernanda Carvalho Barreto¹  <https://orcid.org/0000-0002-3562-8477>Danielli Rafaeli Candido Pedro¹  <https://orcid.org/0000-0003-4141-1220>Raquel Gvozd Costa¹  <https://orcid.org/0000-0002-5816-8215>Mariana Angela Rossaneis¹  <https://orcid.org/0000-0002-8607-0020>Larissa Gutierrez de Carvalho Silva¹  <https://orcid.org/0000-0003-0209-930X>Patrícia Aroni¹  <https://orcid.org/0000-0001-5092-2714>Maria do Carmo Fernandez Lourenço Haddad¹  <https://orcid.org/0000-0001-7564-8563>**How to cite:**

Savio RO, Barreto MF, Pedro DR, Costa RG, Rossaneis MA, Silva LG, et al. Use of WhatsApp® by health care managers. *Acta Paul Enferm.* 2021;34:eAPE001695.

DOI

<http://dx.doi.org/10.37689/acta-ape/2021A0001695>

**Keywords**

Communication; Information dissemination; Health services administration; Health manager; Social networking

Descritores

Comunicação; Disseminação de informação; Administração de serviços de saúde; Gestor de saúde; Rede social

Descriptores

Comunicación; Difusión de la información; Administración de los servicios de salud; Gestor de salud; Red social

Submitted

1 July, 2020

Accepted

9 December, 2020

Corresponding author

Renata Olszewski Savio
E-mail: renatawski@gmail.com

Abstract

Objective: To describe how service managers of different levels of health care use the WhatsApp® application in their professional practice.

Methods: Qualitative, descriptive study developed by means of semi-structured interviews conducted with 14 health care management professionals from a municipality located in the north of the state of Paraná, Brazil. The IRAMUTEQ software was used for data analysis through the Descending Hierarchical Classification method. The main components of each class were analyzed based on a theoretical framework of communication.

Results: Based on participants' responses, the textual corpus was divided into the following six classes: the sender's mistrust in the use of the information sent; the impact of agility and resoluteness on managers' working hours; the use of WhatsApp® as a strategy for integrating services and professionals involved in service management; the utility of WhatsApp® as a management tool; the main strengths and weaknesses in the use of WhatsApp®; and perception of the application utility in decisions that influence the work process.

Conclusion: The study described how health care managers use WhatsApp® in their professional practice, highlighting the importance of the application as a strategic tool in health care management, from real-time sharing and integration of information.

Resumo

Objetivo: Descrever como gestores de serviços de diferentes níveis de atenção à saúde utilizam o aplicativo WhatsApp® na sua atuação profissional.

Métodos: Estudo qualitativo, do tipo descritivo, desenvolvido por entrevistas semi-estruturadas, realizadas com 14 profissionais gestores de serviços de saúde, de um município localizado no Norte do estado do Paraná, Brasil. Para análise dos dados foi utilizado o software IRAMUTEQ, pelo método de Classificação Hierárquica Descendente. Os componentes principais de cada classe foram analisados a partir de um referencial teórico de comunicação.

Resultados: A partir das respostas dos participantes, o corpus textual foi dividido em seis classes, respectivamente: a desconfiança do emissor sobre o uso da informação enviada; o impacto da agilidade e resolutividade na jornada de trabalho dos gestores; o uso do WhatsApp® como estratégia de integração dos serviços e profissionais envolvidos na gestão do serviço; a utilidade do WhatsApp® como ferramenta gerencial; as principais potencialidades e fragilidades no uso do WhatsApp® e a percepção da utilidade do aplicativo em decisões que influenciam o processo de trabalho.

Conclusão: O estudo descreveu como os gestores de serviços de saúde utilizam o WhatsApp® na sua atuação profissional, evidenciando a importância do aplicativo enquanto ferramenta estratégica na gestão dos serviços de saúde, a partir do compartilhamento e integração de informações em tempo real.

¹Universidade Estadual de Londrina, Londrina, PR, Brazil.

Conflicts of interest: none to declare.

Resumen

Objetivo: Describir de qué forma los administradores de servicios de diferentes niveles de atención en salud utilizan la aplicación WhatsApp® en su trabajo profesional.

Métodos: Estudio cualitativo, tipo descriptivo, llevado a cabo mediante entrevistas semiestructuradas, realizadas a 14 profesionales administradores de servicios de salud de un municipio ubicado al norte del estado de Paraná, Brasil. Para el análisis de datos se utilizó el software IRAMUTEQ, con el método de clasificación jerárquica descendiente. Los componentes principales de cada clase fueron analizados a partir de un marco referencial teórico de comunicación.

Resultados: A partir de las respuestas de los participantes, se dividió el corpus textual en seis clases, a saber: la desconfianza del emisor sobre el uso de la información enviada; el impacto de la agilidad y resolución en la jornada de trabajo de los administradores; el uso del WhatsApp® como estrategia de integración de los servicios y profesionales involucrados en la gestión del servicio; la utilidad del WhatsApp® como herramienta administrativa; las principales posibilidades y fragilidades del uso de WhatsApp®, y la percepción de la utilidad de la aplicación en decisiones que influyen en el proceso de trabajo.

Conclusión: El estudio describió de qué forma los administradores de servicios de salud usan el WhatsApp® en su trabajo profesional y demostró la importancia de la aplicación como herramienta estratégica para la gestión de servicios de salud, a partir de la posibilidad de compartir e integrar información en tiempo real.

Introduction

Social media corresponds to channels of information and communication that enable interaction between users by information sharing, content creation, expression of opinions and participation in discussions, for example.⁽¹⁾ Social networks are one of the best known and most used categories, as they allow the connection of individuals through online platforms.⁽²⁾

This has transformed the routine of many people, not only in the personal sphere, but also in professional relationships by favoring instant communication that allows a closer relationship between participants and makes new work methods possible with satisfactory cost-effectiveness.⁽³⁾

The managers' role includes functions of planning, organization, direction and control, considering that their attitudes and decisions directly influence the activities and results obtained in institutions.⁽⁴⁾ Tools such as WhatsApp® help professionals in management positions to maintain effective communication with others involved in the work process, contribute to the development of the organization, especially in daily activities, and dissemination of information related to management actions to other employees.⁽⁵⁾

According to the official website of the WhatsApp® company, the application is free, used by more than one billion of people in more than 180 countries around the world, and has support for sending and receiving media files such as photos, videos, documents, location sharing, texts and voice calls in a simple and safe way.⁽⁶⁾

In the health area, the use of communication technologies became popular and expedited the flow of data and information related to management issues, decision making and communication between teams and managers. In addition, it contributed to quick access to news and important facts about work, enabling timely responses and interventions.⁽⁷⁾

By knowing the application's functionality for various purposes, studies were conducted with the aim to identify the use of social networks in health education,^(8,9) nursing work processes⁽²⁾ and among health professionals.⁽¹⁰⁾ However, no studies on the use of social networks by health care managers were found, especially on the use of WhatsApp®.

Considering the relevance of analyzing how and for what reasons health managers use technological tools such as WhatsApp® in their work process, the aim of this study was to describe how service managers of different levels of health care use the WhatsApp® application in their professional practice.

Methods

This is a qualitative, descriptive study. It was conducted in different health services in a municipality located in the north of the state of Paraná, Brazil. The Consolidated criteria for reporting qualitative research (COREQ), containing 32 items, was used as a guiding tool for writing this article.⁽¹¹⁾

The population of this study was created intentionally in order to include managers working at

the three levels of health care in public and philanthropic health services. Participants were selected from information collected from institutional sites available in the public domain with care not to expose the institutions where professionals work.

The data collection period was between May and June 2019. The selected participants were personally invited by the main researcher, who initially identified herself and presented the study objectives. There were no refusals to invitations. The interview was scheduled at the workplace of each manager according to their choice and respecting their working hours, recorded on an audio device in the presence of the researcher and manager only, ensuring confidentiality during conduction of the interview. The interviews lasted between three and 14 minutes. Then, the audio was transcribed and subsequently deleted permanently from the audio device used.

Fourteen managers took part in the study. Of these, five worked in public secondary hospitals, four in public tertiary hospitals, one in a tertiary philanthropic hospital and four in public services linked to the health department of the municipality under study. Participants filled out a form for socio-demographic and job characterization that included age, sex, professional training time, level of specialization, type of employment relationship, length of service at the institution, management position they occupy, working hours, among others.

The following questions were used to answer the study objective: 1- How do you use WhatsApp® in your professional practice? 2- Do you consider the use of the application essential in your professional practice? Why? 3- Have you made or do you make important decisions via WhatsApp? 4- What is your perception about the security and privacy of the application? 5- What are the strengths and weaknesses in using WhatsApp® in your work process?

Fourteen managers were interviewed until continuous repetition of data that responded to the objectives of the study and equal representation among health care managers at the three levels of care was guaranteed.

Content analysis of data was performed using the IRAMUTEQ Software⁽¹²⁾ (*Interface de R*

pour les Analyses Multidimensionnelles de Textes et de Questionnaires), the Descending Hierarchical Classification (DHC) method was adopted, and the textual corpus was divided into six classes based on the structuring of text segments or elementary context units (ECU) classified according to the most frequent vocabularies and the degree of association with each class by means of the chi-square test.⁽¹³⁾

The main components of each class were analyzed based on the theoretical framework corresponding to the “Communication” chapter of the book “Organizational Behavior” by Stephen P. Robbins.⁽¹⁴⁾

The study was approved by the Research Ethics Committee of a university located in the north of the state of Paraná, Brazil, complying with Resolution 466/2012 and Complementary Resolution 510/2016 of the National Health Council of the Ministry of Health, in defense of subjects participating in the study under Opinion Number 3.251.487. The selected participants were informed about the study and signed the Informed Consent form.

The interviewees were indicated by the letter M for Manager, followed by the corresponding number according to the chronological order of participation (M01, M02, M03...), thereby guaranteeing the anonymity and confidentiality of the information obtained in interviews.

Results

Regarding the sociodemographic characterization of managers, nine out of the 14 participants were female and five were male, aged between 31 and 71 years. With regard to graduation, three managers had their professional training in administration, nine in nursing, one in medicine and one in executive secretariat, and the training time varied between 10 and 47 years. As for the qualification of managers interviewed, all had postgraduate courses (specialization, master's and PhD).

The working time in the manager position ranged between two and 35 years and the current positions correspond to administrator, advisor, co-

ordinator, director and superintendent of the institution. All 14 managers reported working full time, 40 to 60 hours per week on average, with monthly income above four minimum wages. Regarding the type of employment relationship, one manager had a commissioned position, 12 were public servants and one was self-employed (legal entity).

Through the DHC method for analyzing the content of interviews, the textual corpus was divided into two subcorpus, which are divided into two other divisions each. From one of the subcorpus, Class 2 was obtained (the impact of agility and resoluteness on managers' working hours), which made up 20% of the total of ECUs and originated Class 4 (the utility of WhatsApp® as a management tool) with 16.4% of ECUs and Class 5 (the main strengths and weaknesses in the use of WhatsApp®) that concentrated 18.2%.

From the other subcorpus, Class 3 (the use of WhatsApp® as a strategy for integrating services and professionals involved in service management) was originated, representing 12.7% of ECUs and originated Class 1 (the sender's mistrust in the use of information sent) and Class 6 (perception of the application utility in decisions that influence the work process), corresponding to 20% and 12.7% of ECUs of the total corpus, respectively, according to the dendrogram shown in figure 1.

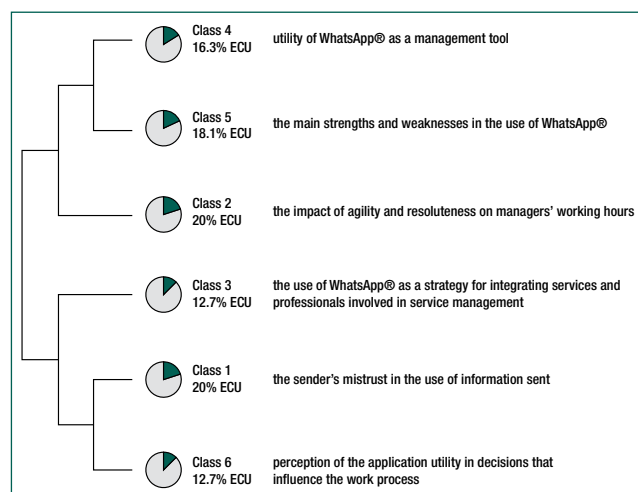


Figure 1. Dendrogram of classes

Class 1, the sender's mistrust in the use of information sent, revealed managers' insecurity

about the use of the message by the recipient, and demonstrates that e-mail messages are still considered the formal channel par excellence among most participants.

There has to be a lot of discretion with what we write because that message can be forwarded and interpreted in another way. G14

I know that when you want to make something official, it has to be at least by e-mail because WhatsApp® does not have the official means for addressing things yet, although in practice it ends up happening. G10

Class 2, the impact of agility and resoluteness on managers' working hours, highlighted the importance of real-time communication in problem solving, although it generated a demand for managers' availability outside working hours.

It has become a work tool, fortunately because you can solve many things very quickly, (...) unfortunately because of that speed, they demand your 24-hour availability, when someone sends a message, they want an immediate reply. G07

I use it a lot and I find it very positive. For example, I am talking to you, but I may be delegating to an employee from maintenance. (...) nowadays, I cannot imagine management without WhatsApp®. However, the immediacy of WhatsApp® is harmful, because when I read it, I have to think before my reply, it seems that everything has become urgent. G05

Class 3, the use of WhatsApp® as a strategy for integrating services and professionals involved in service management, demonstrated that the application has become a fundamental tool for bringing together people involved in the work process, facilitating the manager's performance within the organization.

WhatsApp® is an essential tool because it brings together areas within the administrative and extra-organizational chart. G03

Nowadays, in management practice, you have to communicate with several segments, several people and sectors, and WhatsApp® makes this communication more agile, as it is an element inside a smartphone, portable, wherever you are, you reply, so it helps to facilitate communication and integration, then, you are more connected with the sectors where you most need to act. G13

Class 4, the utility of WhatsApp® as a management tool, refers to its functional use within the work routine, through the various existing resources, such as audio and image that facilitate some work-related activities.

I believe that it is a useful tool for some purposes of our work, given the efficiency that the application offers, speed of information, not only text but audio also, that you can use. G11

I even joke that we get a little addicted to the app because you see what is happening through messages, or even images, pictures, what is happening in the other units, since there is no way to be in all of them at the same time. G05

Class 5, the main strengths and weaknesses in the use of WhatsApp®, corresponds to the strengths and weaknesses reported by managers in the use of the application in health care management.

I think the strength is the speed of communication, (...) we can do more in less time. G02

The weaknesses are that we can expose mainly pictures and some situations that either ridicule others or become gossip, or expose the patient himself; I think this is a great weakness. G09

Class 6, perception of the application utility in decisions that influence the work process, expresses insecurity in the use of the application in confidential and/or secret matters, as well as for important decisions and issues involving permanent changes, since it still is not considered the official means for this type of information.

I guess not for making important decisions, I think nothing replaces a good meeting to discuss, look at people in the face, I guess some decisions you end up making when you need to be quick, but smaller things. G07

So, I had this experience in which I made an important decision via WhatsApp® and it had a very bad impact, so from this experience, I chose to do it personally, for example, a person wanting a change of department, I ask to arrange a meeting. G06

Discussion

Instant messaging has the great advantage of reducing the distance between members and facilitating communication flows,⁽¹⁴⁾ which was emphasized by managers in their speeches, given the possibility of integrating services and professionals involved in the work process, both managers and other employees, and workers in the same department or area, thereby making the exchange of information more agile and facilitating the manager's performance.

Regarding the choice of existing technologies, managers clearly prefer to use e-mails in formal matters. However, a long period passed until e-mails were considered a formal channel for professional use. Therefore, the same process of incorporating a new technology may happen in relation to WhatsApp®, given its rapid dissemination in the professional environment.⁽¹⁵⁾

When questioned, most managers reported the possibilities of real-time communication and performing several tasks at the same time as the main strengths of using the application. The speed of information transmission stems from the ease of forwarding a message with just a click on the screen.⁽¹⁶⁾

In this sense, a study on the use of social media in project management portrayed the importance of using these technologies that provide constant and efficient communication between employees, and is directly related to obtaining immediate results, positively affecting the development and efficiency of work.⁽¹⁾

In their statements, interviewees expressed that by using the application resources, they can know what

happens in other areas of activity in real time, which allows their interventions as needed without physically moving to the place. However, there are many barriers to communication, such as difficulty in understanding, excessive information or cultural differences, which can distort the perception of the message.⁽¹⁴⁾

Recipients, whoever they may be, interpret the message according to their life history, experiences and desires, projecting their interests and expectations. Therefore, the insecurity felt by interviewed managers is understandable depending on the type and complexity of the information issued. Note that the choice for the communication channel results from the type of message to be sent, which can be of simple and direct character, or a complex content with greater chance of misunderstanding.⁽¹⁴⁾

In this sense, face-to-face communication has the advantage of enabling various information signals such as postures, facial expression, gestures and intonations and the opportunity for immediate feedback.⁽¹⁴⁾ This is in line with interviewees' statements, as, when making an important decision or addressing significant changes in the work process, they prefer to communicate in person to avoid communication failures.

Another finding was the impact on managers' working hours, since nowadays, being connected on a smartphone means being available, and allows that you are reached regardless of being in your working hours, including weekends. In addition, the same communication channel is used both in personal and professional matters, thereby crossing the boundary between personal life and work and affecting the time spent with professional matters when one is at home, corroborating the results of other studies.^(15,17,18)

With this change in the concept of professional availability, communication through the application tends towards immediacy, showing a disadvantage of its use that was found in different studies, including the lack of parity on what is considered urgent by subjects in a conversation that can generate a demand for immediate response regardless of the issue or problem.⁽¹⁶⁻¹⁹⁾

The degree of vulnerability of information was a concern of managers, given the possibility of ex-

posing confidential matters, encouraging gossip and other noises that impair communication and may cause damage to the institution and third parties.⁽¹⁸⁻²⁰⁾ However, WhatsApp® guarantees security and privacy through end-to-end encryption, which means that only members of a conversation have access to the messages sent.⁽²¹⁾ The manager must choose to use the application or not, depending on the complexity and importance of the issue.

In addition, health services must be prepared to discuss the proper use of social media in the professional environment, providing guidance and addressing the consequences of misuse, such as policy violations, which include leaking confidential information, whether of patients or the institution itself.⁽¹⁸⁻²⁰⁾

As limitations, no studies addressing the practical implications for health care managers resulting from the use of social networks such as WhatsApp® in their work process were found.

Considering the advantages of using WhatsApp®, it stands out as an essential tool, complementary to the use of e-mails. However, it is necessary to know the labor implications for its formalization as a tool for legal use of communication.

Conclusion

The study described how health service managers use WhatsApp® in their professional practice, highlighting the importance of the application as a strategic tool in health care management from the real-time sharing and integration of information, the approximation of employees and services involved in the work process, facilitating managers' performance through the various resources existing in the application. Despite the innumerable strengths perceived by interviewees, some disadvantages were indicated, such as the tendency to immediacy and the demand for 24-hour availability, showing the importance of imposing limits to preserve the balance between personal and professional life, in addition to the appropriate use of the application, avoiding possible rumors in the workplace.

Acknowledgements

We thank the National Council for Scientific and Technological Development (CNPq) for the financial support through the Institutional Program for Scientific Initiation Scholarships (Portuguese acronym: PIBIC) that made this study possible.

Collaborations

Savio RO, Barreto MFC, Pedro DRC, Costa RG, Rossaneis MA, Silva LGC, Aroni P and Haddad MCFL collaborated with the study design, data analysis and interpretation, writing of the article, relevant critical review of the intellectual content and approval of the final version to be published.

References

- Hysa B, Spalek S. Opportunities and threats presented by social media in project management. *Heliyon*. 2019;5(4):e01488.
- Mesquita AC, Zamarioli CM, Fulquini FL, Carvalho EC, Angerami EL. Social networks in nursing work processes: an integrative literature review. *Rev Esc Enferm USP*. 201;51:e03219.
- Lima IC, Galvão MT, Pedrosa SC, Cunha GH, Costa AK. Uso do aplicativo WhatsApp no acompanhamento em saúde de pessoas com HIV: uma análise temática. *Esc Anna Nery*. 2018;22(3):e20170429.
- Macêdo DF, Romeiro TI, Marsiglia DC. A importância do administrador na gestão hospitalar: Percepção de médicos, enfermeiros e administradores de um hospital universitário. *Rev FOCO*. 2015;8(2):37.
- Senhoras EM. A cultura na organização hospitalar e as políticas culturais de coordenação de comunicação e aprendizagem. *Rev Eletr Comun Inform Inov Saúde*. 2017;1(1):45–55.
- WhatsApp [Internet]. Sobre o WhatsApp. [citado 2020 Dez 5]. Disponível em: <https://www.whatsapp.com/about/>
- Pinto LF, Rocha CM. Inovações na Atenção Primária em Saúde: o uso de ferramentas de tecnologia de comunicação e informação para apoio à gestão local. *Ciênc Saúde Colet*. 2016;21(5):1433-48.
- Paulino DB, Martins CC, Raimondi GA, Hattori WT. WhatsApp® como recurso para a educação em saúde: contextualizando teoria e prática em um novo cenário de ensino-aprendizagem. *Rev Bras Educ Med*. 2018;42(1):171–80.
- Kakushi LE, Evora YD. As redes sociais na educação em enfermagem: revisão integrativa da literatura. *Rev Lat Am Enfermagem*. 2016;24e2709.
- Chan WS, Leung AY. Use of social network sites for communication among health professionals: systematic review. *J Med Internet Res*. 2018;20(3):e117.
- Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care*. 2007;19(6):349–57.
- Ratinaud P. IRAMUTEQ: Interface de R pour les analyses multidimensionnelles de textes et de questionnaires. 2018. [citado 2020 Nov 20]. Disponível em: <http://www.iramuteq.org>
- Camargo BV, Justo AM. Tutorial para uso do software de análise textual IRAMUTEQ. Florianópolis: Universidade Federal de Santa Catarina; 2018. [citado 2020 Nov 20]. Disponível em: <http://www.iramuteq.org/documentation/fichiers/tutoriel-en-portugais>
- Robbins SP. Comunicação. In: Robbins SP, editor. Comportamento organizacional. 11a ed. São Paulo: Pearson Education do Brasil; 2009. p. 231–55.
- Carvalho AP. Midiatização nas relações de trabalho e as práticas de comunicação de grupos organizacionais em dispositivos móveis: o caso WhatsApp [dissertação]. Curitiba: Universidade Tuiuti do Paraná; 2017.
- Khanna V, Sambandam SN, Gul A, Mounasamy V. “WhatsApp”ening in orthopedic care: a concise report from a 300-bedded tertiary care teaching center. *Eur J Orthop Surg Traumatol*. 2015;25(5):821–6.
- Maciel MA, Bobsin D, Behr A. A influência da comunicação eletrônica na vida pessoal e profissional do servidor público da Universidade Federal Do Pampa - Campus Sant'ana Do Livramento. VII Congresso Virtual Brasileiro - Administração. 2012 [citado 2019 Ago 20]. Disponível em: <http://www.convibra.com.br/artigo.asp?ev=22&id=4529>
- Mars M, Scott RE. WhatsApp in clinical practice: a literature review. *Stud Health Technol Inform*. 2016;231:82–90.
- De Benedictis A, Lettieri E, Masella C, Gastaldi L, Macchini G, Santu C, et al. WhatsApp in hospital? An empirical investigation of individual and organizational determinants to use. *PLoS One*. 2019;14(1):e0209873
- Ganasegeran K, Renganathan P, Rashid A, Al-Dubai SA. The m-Health revolution: exploring perceived benefits of WhatsApp use in clinical practice. *Int J Med Inform*. 2017;97:145–51.
- WhatsApp [Internet]. 2020. WhatsApp Encryption Overview: Technical white paper. [citado 2020 Dez 5]. Disponível em <https://www.whatsapp.com/security/WhatsApp-Security-Whitepaper.pdf>