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Social Networks Usage Implications at the Level of Medical Services Consumption in Romania

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Abstract. The social networks usage degree increase is evident in recent years, with a lot of implications for the most types of products and services consumption. A very special field of research is presented by consumption of healthcare services, which, in terms of consumption motivations, decisional buying process or consumer behavior is having peculiarities and specific traits. In this context, the present article aims to investigate the role that social networks usage can have regarding changes within the consumer behavior in case of healthcare services consumption. In order to achieve the scientific endeavor, authors have conducted a quantitative marketing research as a field survey, using a questionnaire administered online to patients from different medical institutions, both from the public and private sector.

The research results reveal key issues from the perspective of emotional involvement within consumption for the patients and the influence of key variables such as level of education, personality and lifestyle within social networks usage context.

Keywords: healthcare services consumption, social networks, consumer behaviour

JEL Codes: M31, I12, P36

1. Introduction

Healthcare services consumption behaviour presents special certain features that are dealing to the intense emotional involvement of the consumers, the complex search of information and the impossibility for patients to measure properly all the aspects concerning the quality of the services provided. In this

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context, the dynamic of consumption is very strong related to the social dimensions of healthcare services also, a high degree of social involvement being correlated with certain perceptions upon providers and consumption satisfaction.

In the last years, the development of social media and especially of social networks users' activity brings in front of the researchers new challenges from the point of view of complex implications that social networks usage can have at the level of goods and services consumption. A large amount of scientific literature is dealing already with this type of correlations, still at the level of healthcare services implications, where there are a lot of things to be done. The specific features of healthcare services consumption are demanding for a careful analysis of implications that social networks can have, from the point of view of the patients' decisional process or from the point of view of effects at the level of attitudes and perception upon the medical act.

The present paper is trying to determine through an exploratory type demarche, the possible effects that social networks usage can have at the level of Romanian urban healthcare services consumers' behaviour taking into account different aspects concerning the way of using the information in and out of the networks, the correlations that can be established with the perception upon formal healthcare treatments and medical staff interactions etc.

2. Social networks and social media influence upon consumer behaviour

The consumer behaviour is evolving continuously because of multiple layers of effects determined by various factors. Among them, factors implying the social influences are contributing a lot to the evolution of consumption patterns for every individual.

Individuals are expressing numerous social needs like the one to self-express or self-present. Many of these social needs are empowering different types of behaviour that also can be related with consumption behaviour patterns. The involvement within social networks was becoming higher and higher as this process offer the possibility for people to build-up and strengthen-up their social ties with the others. Through this type of relationships developed over the network individuals can present a certain social image that highlight certain features of their personality or concerns. People are looking over a feedback when are using social networks, the feedback being perceived more important if it is received from strong ties – friends that are sharing a personal connection [Ryu and Feick, 2007]

Also, studies have shown that for users of Facebook that have strong ties over the network, the use of the social network becomes a significant predictor for behaviours that are showing little self-control. [Wilcox and Stephen, 2013]. Authors are advancing the idea that even in the case of health-related behaviours, the level of self-control is dropping after the high involvement of an individual for a certain period with the social network usage.

The use of social networks is different taking account of the nature of the needs concerning health. In another study, it has been highlighted the fact that the experiential nature of information received over the network from family members or peers is very much valued in case of first-time mothers, as they feel the pressure to comply with the social status of "good mother" [Loudon, Buchanan, Ruthven, 2016]. Still,





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because of this special situation, the behaviour related with the use of information was characterized by tension, conflict and a kind of information overload.

In case of cancer patients, there has been pointed out the evidence related to the capacity of social networks usage to determine a better psychological well-being state through the development of the social support and social bond through the activities over the network (browsing content and actively posted content and communicated with other members) [Erfani, Blount, Abedin, 2016]. The possibility offered by the network to develop their social presence and capacity to connect to the others has been improving the mental state of the patients and self-confidence.

Another interesting aspect revealed by researchers is concerning the size of the social networks in which individuals are involved and perception over stress factors that can induce a subjective health condition. A survey applied on 246 Austrian healthcare services consumers revealed that individuals that are involving in larger social networks, having more trust and support from the network are considering potential stressful factors less threatening which implies a better level of subjective health condition perceived [Gerick, 2014].

The social ties that are present in the case of a larger network are mediating the appraisal of the stressor factor, individual being able to cope better with its pressure in comparison with other that are involved in much smaller networks.

When we are referring to the potential impact of social networks upon healthcare consumers' behaviour it is interesting to take into consideration the potential effects that can be observed also at the level of medical staff activity. From this perspective, the impact of social networks usage can be highlighted also at the level of doctors' activity more precisely. Sharing of knowledge between doctors is playing an important role, thus this type of knowledge is often considered the most valuable experiential know-how that allows them to make rapid judgements in different clinical situations. Studies have revealed that tacit knowledge transfer between doctors is possible with the help of social networks, themes such as socialising, practising, networking, storytelling and encountering being approached by the doctors within their communication over the networks [Panahi, Watson, Partridge, 2016].

As regarding the possibility to share information within other forms of social media as it is the case with forums, on a study made on a sample of 252 participants to a forum concerning breast cancer over a period of 11 months, it has been revealed that in the absence of normative assumptions, forum participants transfer knowledge about their own personal healthcare experience, being able to co-create value for each other [Keeling, Khan, Newholm, 2013].

The vast development of internet in the last 20 years have provided for the modern consumers a large range of possibilities to interact with specific information. The healthcare field doesn't make an exception, the greater access to different sources of medical information leading to a better-informed patient, and a real shift towards a kind of patient-doctor partnership.

3. Methodology of research





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In order to achieve the desired information, it was implemented a quantitative type marketing research, seen as an exploratory demarche. Among the research objectives we can highlight: measuring the degree of usage for social networks, determining the degree in which the social network can be perceived as an viable source for medical information, characterising the pattern of usage of the social network from the point of view of healthcare information, measuring the degree of trust given to the medics, determining the behaviour of the individuals within the social network in the context of a disease diagnostic, determining the degree of consumers availability referring to the importance of social network information for the actual treatment of a current disease etc.

As for the research hypothesis, the main ones can be highlighted as:

- H1: majority of respondents are using frequently a social network
- H2: a low number of respondents are considering the social network as being a viable source of information in the medical field
- H3: at least 35% of the respondents are sharing with their friends within the network, posts or other interesting information (regarding medical field)
- H4: majority of the respondents are having a high degree of trust in the medical staff that they are usually interacting with
- H5: a minor part of the respondents is using social networks in order to influence friends or acquaintances opinions regarding medical treatments
- H6: there is a correlation between the perception that the social network can be a viable source of information within the medical field and the degree of trust regarding the medical staff that is usually involved in relationships with the respondents
- H7: there is a correlation between the perception that the social network can be a viable source of information within the medical field and the willingness to consider opinions, information express within the social networks referring to the treatment of respondents' current diseases.
- H8: there is a correlation between the type of medical speciality corresponding to the last disease encountered by respondents, the severity of the disease and the willingness to consider opinions, information express within the social networks referring to the treatment of respondents' current diseases
- H9: there is a correlation between the degree in which respondents are using social networks to influence friends and acquaintances opinions regarding treatments for various medical conditions and the willingness to consider opinions, information express within the social networks referring to the treatment of respondents' current diseases

The selected sample comprised adult population above 18 years of age from the urban area, which is using at least one social network currently, the number of final valid questionnaire being 285. The method of administration of the questionnaires was the field investigation conducted online.

4. Results and Discussion

The main results concerning advanced hypothesis testing are showing the main tendencies recorded at the level of the considered sample. Thus, as regarding the H1, the average score obtained for the variable concerning the degree of social networks usage was 3,667 measured with the help of semantic differential





scaling method with 5 steps. This means that the usage of social networks among the considered sample is frequent, people being involved with at least one social network currently. This data is correlated with the available statistics that are showing for June 2016 a degree of 38.9% penetration rate for Facebook among Romanian users [<http://www.internetworldstats.com/europa.htm#ro>]. The hypothesis no 1 is validated.

Hypothesis no 2 is concerning the degree in which respondents are considering the social network as being a viable source of information in the medical field. The average score measured with the help of semantic differential scaling method with 5 steps is 2,423 corresponding to a low frequency of the variable considered. The hypothesis no 2 is also validated.

Hypothesis no 3 is validated as a percent of 67% of the respondents are retransmitting interesting posts and information from internet to their friends within the social network used. The entire behaviour related with the usage of the social networks depicted through the respondents' answers can be seen in the figure below:

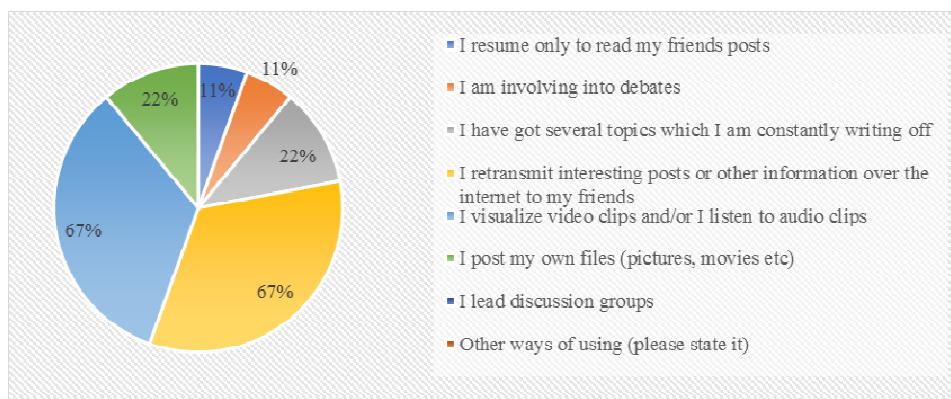


Fig 1: The respondents' behavior regarding the activities within social networks, Source: own research

The hypothesis no 4 is concerning the degree of trust in the medical staff that respondents are usually interacting with. The answers show an average score of 4,211 (measured with semantic differential scaling method with 5 steps), meaning a high degree of trust available for the medical staff. So hypothesis no 4 is validated.

Hypothesis no 5 is testing the degree of usage of social networks to influence friends or acquaintances opinions regarding medical treatments. The average score measured with semantic differential scaling method with 5 steps, is 1,438 meaning a very low degree of usage of the social networks for influencing friends. Hypothesis no 5 is validated.

Hypothesis no 6 is concerning the correlation between the perception that the social network can be a viable source of information within the medical field and the degree of trust regarding the medical staff that is usually involved in relationships with the respondents. The analysis of the answers shows the respondents that have a high degree of trust in the medical staff consider that the preferred social network does not represent a viable source of information regarding the medical field (approximately 38% of the respondents). In the same time, respondents who have choose the neither-nor option, regarding the social network as a viable source of information, have a high degree of trust in medical staff (27% of the





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respondents). There are considering the preferred social network as a viable source of information persons that have a little and a very little degree of trust in medical staff. These individuals are calling to the medical staff only in the case of severe medical conditions. In the light of responses received the hypothesis no 6 is validated.

Hypothesis no 7 is concerning the correlation between the perception that the social network can be a viable source of information within the medical field and the willingness to consider opinions, information express within the social networks referring to the treatment of respondents' current diseases. From the analysis it can be seen that exists a strong and direct correlation between variables implied (Pearson Correlation = 0,960, and Sig. 0,000).

Table no 1. Correlation table between variables regarding extent of a social network to be a viable source of information in medical field and willingness to consider opinions and information from social networks

Correlations			
		To what extent you consider your favorite social network is a viable source of medical information?	Are you willing to consider information / opinions / views expressed within social networks regarding the treatment necessary for your current medical conditions?
To what extent you consider your favorite social network is a viable source of medical information?	Pearson Correlation	1	.960**
	Sig. (2-tailed)		.000
	N	285	285
Are you willing to consider information / opinions / views expressed within social networks regarding the treatment necessary for your current medical conditions?	Pearson Correlation	.960**	1
	Sig. (2-tailed)	.000	
	N	285	285

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

Source: own research input analysis

So, also the hypothesis no7 is validated.

Hypothesis no 8 is concerning the correlation between the type of medical speciality corresponding to the last disease encountered by respondents, the severity of the disease and the willingness to consider opinions, information express within the social networks referring to the treatment of respondents' current diseases. The information obtained through analysis is showing the following different situations depending of the type of medical field implied by the disease:

- If the treatment corresponding to the last disease encountered by the respondents was in the dental healthcare field and the disease was chronic, the willingness to consider opinions and information's from social networks is very low, the great majority of these respondents being males;
- If the treatment corresponding to the last disease encountered by the respondents was in the dental healthcare field and the condition was moderate, the willingness to consider opinions and information's from social networks is very low also, the great majority of these respondents being females;





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- If the treatment corresponding to the last disease encountered by the respondents was in the dental healthcare field and the condition was light, the willingness to consider opinions and information's from social networks is high, the great majority of these respondents being females;
- If the treatment corresponding to the last disease encountered by the respondents was in the dermatology field and the condition was chronic, the willingness to consider opinions and information's from social networks is very low, the great majority of these respondents being males;
- If the treatment corresponding to the last disease encountered by the respondents was in the cardiology field and the condition was chronic, the willingness to consider opinions and information's from social networks is very low also, the great majority of these respondents being males;
- If the treatment corresponding to the last disease encountered by the respondents was in the ophthalmology field and the condition was light, the willingness to consider opinions and information's from social networks is high, the great majority of these respondents being females.

Information provided by the data analysis shows that the degree of illness or medical condition is correlated with the willingness to consider opinions and information's from social networks regarding the medical treatment of the respondents. As the degree of intensity for the medical condition is higher the willingness to take account opinions about possible medical treatments from the social networks interaction is becoming lower. Also, it was observed a correlation with the sex of the respondents in the respect that women, in majority of cases have a higher willingness to consider opinions and information from the social networks than males.

Hypothesis no 9 is concerning the correlation between the degree in which respondents are using social networks to influence friends and acquaintances opinions regarding treatments for various medical conditions and the willingness to consider opinions, information express within the social networks referring to the treatment of respondents' current diseases.

The data analyzed are showing a direct and strong correlation between the two variables taken into consideration (Pearson Correlation = 0,838, Sig. = 0,000), as can be seen in the table below:

Table no 2. Correlation table between variables regarding the degree in which respondents are using social networks to influence friends and acquaintances opinions and the willingness to consider opinions, information express within the social networks referring to the treatment of respondents' current diseases

Correlations			
		To what extent are you using social networks to influence friends and acquaintances opinions regarding treatments for various medical conditions?	Are you willing to consider information / opinions / views expressed within social networks regarding the treatment necessary for your current medical conditions?
To what extent are you using social networks to influence friends and acquaintances opinions regarding treatments for various medical conditions?	Pearson Correlation	1	.838**
	Sig. (2-tailed)		.000
	N	285	285
Are you willing to consider information / opinions / views expressed within social networks regarding	Pearson Correlation	.838**	1
	Sig. (2-tailed)	.000	





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the treatment necessary for your current medical conditions?	N	285	285
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: own research input analysis

Respondents that are willing to use social networks for influencing friends or acquaintances opinion over medical treatments are strongly taking account of information and opinions from the social networks regarding their own medical treatments.

5. Conclusions

The research conducted among urban respondents has the character of an exploratory demarche aimed to highlight some aspects regarding the influence exerted by social networks at the level of healthcare services consumption. Researched problem is very complex, being possible a diversified type of relationships between different variable involved as it can be seen also at the level of the scientific literature review in the beginning of the paper.

First, participating and involve themselves within a social network has become for a large number of modern individuals a constant need, the expression of not just merely a fashion or a social convenience but an entire behavior and a kind of lifestyle. Especially some of the younger individuals have developed in later years an attitude characterized by full embracement of all the instruments offered by social media browsing. Even if some specialists have rung alarm bells regarding the negative effects of the prolonged navigation within a social network (depression, anxiety etc), majority of young people are developing a behavior that is entailing the use of social networks or/and social media for extended periods of time. The development of telecommunications and internet technology to a level hard to imagine with 50 years ago, was also a firm background for this type of behavior.

Second, changes at the level of consumers' behavior itself has determine apparition of new jobs, an integration of new technologies in much of products and services being parallel with the need for more information and exchange of this information. Thus, social networks and social media in general has become the perfect vehicle for this, allowing individuals to connect to others consumption experiences and valuable information.

When we are coming to the healthcare field, things are becoming even more complex, because multiple facets of the holistic concept of modern health are implying also acquisition of a wellbeing state of mind, dependent on the capacity of every individual to connect, to socialize with the others. From this respect, social networks offer a perfect instrument to overcome the lack of socialization for some people that don't have intrinsic qualities in this respect. The usage of social networks at the level of urban Romanian population has evolved proportionally in the last years, as the penetration rate of internet access and especially smartphones at the level of middle to low income layers of population has grown significantly.

The first validated hypothesis of the article research is confirming this trend people being involved with at least one social network currently. Still, the national healthcare system doesn't have the possibility neither the logistics to offer and impose an ease to use/ find medical information database that can be accessed online by any interested person. This could be a part of the explanation behind the validation of





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second hypothesis that was assuming that the respondents are not considering social networks being reliable as a viable source of information. People are not used to find over the internet reliable medical information from official sources, so they don't have the habit to rely on such information. The general medical culture has also a low level, discussions and posts used over networks not being able to offer sufficient trust for people in general.

This is correlated also with the degree of trust granted to doctors that is still high for consumers. As long as we don't have a strong community of specialists in the medical field willing to share their professional knowledge within a kind of professionals' social network, the patients will look upon the direct communication with their doctors in order to understand the evolution of a disease or the correct way of administrating a treatment. Still, there is a growing influence of blogs and other forms of social media that allows patients to interact and provide information about their own evolution and experience with a particular disease.

The hypothesis that is confirming a very low degree of usage of the social networks for influencing friends is showing also the lack of trust in the capacity of social networks to offer viable medical information.

In the same line, we have the correlation between the high degree of trust in the medical staff and the perception that social network does not represent a viable source of information regarding the medical field.

Still, for the people that are willing to consider medical information from social networks reliable, is presented a strong correlation with the willingness to consider opinions, information express within the social networks referring to the treatment of respondents' current diseases. Also, respondents that are willing to use social networks for influencing friends or acquaintances opinion over medical treatments are strongly taking account of information and opinions from the social networks regarding their own medical treatments.

Another conclusion drawn after the analysis was that as the degree of intensity for the medical condition is higher the willingness to take account opinions about possible medical treatments from the social networks interaction is becoming lower.

Future directions of research could embrace the issues referring to the comparison between different elements of social media from the point of view of the effects upon the healthcare services consumption, such as blogs, wikis, social networks, podcasts, forums, content communities, and micro blogs.

6. References

- [1] G. Ryu, and L. Feick, A Penny for Your Thoughts: Referral Reward Programs and Referral Likelihood, *Journal of Marketing*, 2007, **71** (1): 84–94.
- [2] K. Wilcox, and A. T. Stephen, Are close friends the enemy? Online social networks, self-esteem, and self-control, *Journal of Consumer Research*, 2013, **40** (1): 90-103.
- [3] K. Loudon, S. Buchanan, and I. Ruthven, The everyday life information seeking behavior of first-time mothers, *Journal of Documentation*, 2016, **72** (1): 24-46.





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- [4] S.S. Erfani, Y. Blount, and B. Abedin, The influence of health-specific social network site use on the psychological well-being of cancer-affected people, *Journal of the American Medical Informatics Association*, 2016, **23** (3): 467-476.
- [5] J. Gerich, Effects of social networks on health from a stress theoretical perspective, *Social Indicators Research*, 2014, **118** (1): 349-364.
- [6] S. Panahi, J. Watson, and H. Partridge, Conceptualizing social media support for tacit knowledge sharing: physicians' perspectives and experiences, *Journal of Knowledge Management*, 2016, **20** (2): 344 – 363.
- [7] D. Keeling, A. Khan, and T. Newholm, Internet forums and negotiation of healthcare knowledge cultures, *Journal of Services Marketing*, 2013, **27** (1): 59 – 75.
- [8] <http://www.internetworldstats.com/europa.htm#ro>

