Can value co-creation in SMEs be obtained through mHealth service digitalization?

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Abstract

The holist nature that the service functions have and their impact on companies' profitability have determined a movement from selling products to selling solutions also in the pharmacy industry. Many studies have been conducted in relation to consumers' attitude towards the online medicines purchase and many have investigated how the e-services are perceived by consumers in the healthcare sector. The target of this exploratory study is, instead, is pharmacists, as SMEs owners, and their attitude towards new technologies. The purpose of the research is to explore the adoption of mobile apps by pharmacy owners. In this study, we were interested in pharmacist subjective experiences and how they made sense of them. The method adopted was the narrative inquiry technique combined with critical event analysis. Respondents' experiences were categorized based on how they viewed new technology tools (mobile apps). Interpretative inductive analysis identified precise aspects of sense making of illustrative of non-adoption or confused adoption of new technologies by pharmacists. This investigates at what extent new technological tools, such as mobile apps, impact on retailers and consumers. The multi-channel communication and supply approach required to professional is not ignored and need for education comes as imperative. In addition, retailers in the pharmacy industry realize that a multi-channel strategy of distribution communication with clients is necessary and is becoming crucial to keep high the level of the services supplied and to have a proactive relationship with consumers in a value co-creation perspective.

Keyword: mHealth, digitalization, mobile apps, pharmacy services, value co-creation, SMEs

1. Introduction

The use of mobile and wireless technologies to support the achievement of health objectives (mHealth) has the potential to transform the face of health service delivery across the globe also for SMEs (Kumar et al., 2013). A powerful combination of factors is driving this change in the direction of new forms of relationship between companies and clients (Ernsting, 2017; Linder and Levine, 2016). Specifically, mobile technologies and mobile apps represent a rise in new opportunities for the integration of mobile health into existing services, and the continued growth of co-creation quality in the direction of quality services management (Lee at al., 2012; Kuula and Haapasalo, 2017, pp. 249-268; Lember et al., 2019). This is particularly true for pharmacy, that has matured as a clinical profession and is presently transforming from a product and task oriented (dispensing) to a patient-oriented profession (provision of care, advice and counselling) (George at al., 2010). In the past, this has been reflected in special protective measures at the macro level, making the pharmacy sector one of the most highly regulated within the Italy retail industry. However, recent attempts of deregulation measures, in relation to all aspects of the services marketing mix, have made for a dynamic competitive climate with increasing pressures on the livelihood of small- to medium-sized pharmacies (Schmidt and Pioch, 2004).

Also, new technological tools simultaneously represent new opportunities, but can also eventually be perceived as threats in the pharmacy industry. According to the International Telecommunication Union (ITU), there are now over 5 billion wireless subscribers; over 70% of them reside in low- and middle-income countries. The GSM Association reports commercial wireless signals cover over 85% of the world's population, extending far beyond the reach of the electrical grid (WHO, 2103).

In general, the holist nature that the service functions (Kowalkowski, 2011) along with new technological tools have and their impact on companies' profitability have determined a movement from selling products to selling solutions (Baines et al., 2009; Bustinza et al., 2015; Ruiz-Alba et al., 2019) also in the pharmacy industry. The convergence of production and service delivery is called servitization (Johnstone et al., 2009; Baines and Lightfoot, 2013; Smith et al., 2014; Magone and Matzali, 2016, p. 123). The product is not seen on its own, but it is bundled with one or more services in the perspective of providing a solution (Cinquini et al., 2011, p. 55), rather than selling a product or a service only (Cinquini et al., 2011, p. 51; Magone and Matzali, 2016, pp. 123-124).

Such a shift of attention allows to obtain a higher level of differentiation and an unique selling proposition, that increases customer loyalty, along with higher entrance barriers for competitors (Magone and Matzali, 2016, p. 123), where value-cocreation becomes essential (Grönroos, 2011). Consumer, in fact, becomes central in this scenario (Cinquini et al., 2011, p. 52), where their role is played at three different levels: digitalization, automation, and the connection with the production, in order to provide as customized as possible solutions (Cinquini et al., 2011, p. 52; Pereira and Romero, 2007, p. 1212).

Products and services tend to a mass customization to better meet consumers' demand and create a competitive value proposition (Frank et al., forthcoming) also in the pharmacy industry (Horst et al., 2018). Solutions-based strategies and the focus on value co-creation have changed distribution models and the relation between resellers and consumer also in the healthcare industry, with the term mHealth becoming a topic to investigate, since the entire traditional communication between professionals and patients have been influenced and has to change (Webb et al., 2016).

In this paper we intend to present the results of a qualitative exploratory study aiming at understanding at what extent pharmacies, as SMEs, have decided and have eventually been forced to change their distribution model in relation to the new possibilities of interactions with their clients through mobile apps.

2. Background

The pharmaceutical industry has worldwide moved from selling products for sicknesses to selling health solutions (Moynihan et al., 2000; Moncrief and Marshall, 2005; Stantchev et al., 2015). This industry is a key asset to the European economy that represents 2 per cent of EU GDP (European Commission 2014; Ruiz-Alba et al. 2019).

The Italian pharmacies retailing system cannot be fully understood without reflecting on the numerous attempts by Governments to liberalize the sector, with limited success so far. Starting from August 29, 2017, restrictions regarding owners of retail pharmacies have fallen. The most relevant change happened in 2017. Previously, ownership of pharmacies was solely reserved to licensed pharmacists and entities owned by licensed pharmacists. A law decree of August 2, 2017 converted into law no. 124 of August 4, 2017, corporations may now own a retail pharmacy. While a licensed pharmacist must oversee the management of the pharmacy, the law repeals the requirement that a pharmacist must be a shareholder of the pharmacy. The market of retail pharma distribution may open to corporate investments and may lead to the creation of corporate-owned retail pharmacy chains, although no international retail chain is present so far in the Italian market. Therefore, the vast majority of community pharmacies are still small enterprises and small family businesses.

Nevertheless, ownership of a retail pharmacy will continue to remain subject to the following requirements: (a) Manufacturers of pharmaceutical products, scientific informers, and health professionals will not be able to own a pharmacy, since the relating incompatibility provisions remain in force; (b) Each pharmacy owner (including corporate entities) will be allowed to, directly or indirectly, control no more than 20% of the pharmacies located within the same region or autonomous province.

While this field remains highly regulated (the retail distribution of medicines on the territory and the attribution of the relevant authorizations have remained untouched), the

next years will show if investors intend to take advantage of this opportunity and/or if small owners of pharmacies will be able to create networks.

3. Literature Review

Many studies have been conducted in relation to consumers' attitude towards the online medicines purchase (Pál et al., 2015; Ashames, 2019) and many have investigated how the e-services are perceived by consumers (Breen and Crawford , 2005; Wiedmann et al., 2010; Athavale et al., 2015; Mai and Olsen, 2015). On the other hand, research has been conducted to determine the level of digitalization in a BtoB perspective in the perspective of new distribution model nowadays available to pharmacies (Siska and Tribble, 2011; Cordon et al., 2016, pp. 47-64; Pawłowski and Pastuszak, 2017).

Unlike previous studies, the present research aims at exploring whether, in the perspective of pharmacists, value co-creation affects loyalty in the context of new digital services provided by pharmacies. More precisely, we intended, in this exploratory study, to understand the pharmacist's attitudes towards new mobile apps, allowing them to interface with the consumers.

Advantages for pharmacies of digitalization are enormous. Digitalization allows the creation of a participation and continuative participation between pharmacist and consumer. In addition, it contributes to an immediate access to care, n the perspective of transformation towards a new sanitary system (Tambo et al., 2016).

Pharmacist's role is central in this changing scenario, since their expertise in medicines is one of the conditions (Van De Pol et al., 2019), although the medicines sale activity requires to be integrated with new skills related to consumer education (Toklu and Hussain, 2013), the identification of issues related to medications, and promotion of health services available in the pharmacy or in the territory (Toklu and Hussain, 2013).

Pharmacist in many countries is the first contact point with consumer (George et al., 2010). The use of new technologies and the strong relationship with consumers through mobile apps would allow (Niznik and Kane-Gill, 2018) these professionals to shift their role from dispensers to consultant and innovative point of reference for consumers. According to Van De Pol et al. (2019), pharmacists tend to dedicate their work to traditional tasks, such as the medicine dispensing, that could be delegate to members of the staff (Niznik and Kane-Gill, 2018). On the contrary, the relationship and follow up with the consumers is still very limited (Roberts et al., 2014; Mossialos et al., 2015; Niznik and Kane-Gill, 2018). According to Mossialos et al. (2015), the new role of pharmacists should include three main activities: monitoring of the quality and safety in the use of medicines; the supervision of the compliance consumers have with the therapy; and the implementations of prevention and management actions for chronic diseases (Mossialos et al., 2015).

In such a scenario, innovative technologies can help pharmacists managing these new tasks. The use of mHealth and new mobile apps could represent the perfect tool to embrace and facilitate the implementation of these new activities. Automation could release pharmacists from the simple dispensing and so help them develop new tasks (Spinks et al., 2007).

If it is true that over time pharmacies were able to change their role through the introduction of new devices, such as. laptops, PCs, prescription digitalization (Baines, 2015), it is also true that some studies have demonstrate that the innovation brought by mobile apps is seen by pharmacists as a threat rather than an opportunity (Baines, 2015). This happens because pharmacists are afraid to become simple retailers and lose their role and professionalism. Baines et al. (2009) suggests some steps to let a pharmacy become digital: consumers and pharmacies digital education, the connection of the pharmacy with a bigger network of actors (GPs, physicians etc.) operating in the national health system and allow consumer to keep in touch with their community pharmacy through mobile apps (Baines, 2015).

The use of these new technologies can let pharmacists become strategic actor in the national health system, with a wider role where they operate (Baines et al., forthcoming).

4. Methodology

The purpose of this research was to explore the adoption of mobile apps by pharmacy owners. In this study, we were interested in pharmacist subjective experiences and how they made sense of them. To capture the subjective experiences of pharmacists, we conducted in interviews and listened to how they, in relation to digital tools, experienced digitalization. The method adopted was the narrative inquiry technique combined with critical event analysis (Webster and Mertova, 2007; Heikkila et al., 2007; Gill et al. 2010).

The use of narrative provides a means of investigating the subjective experience of respondents, thereby providing insights into their "lifeworld" (Bury, 2001; Pottie et al., 2008). Yet, what individuals convey through their narratives cannot be interpreted as impartial accounts (Bury, 2001; Goulding, 2005), because their stories are interpretations of their experiences in a specific situation and context. The research questions focused on identifying the storytellers' subjective, holistic experiences with the phenomenon of digital mobile apps. Participants were asked to recall an event they had with being working with a mobile app or they thought to introduce mobile apps, and to relate their experience describing what was critical, that is either positive or negative about it. In order to generate an imaginary experience, participants were then asked to explain what that incident would look like if a magic wand (Heikkila et al., 2007) were used to make it a perfect event for them. Each author conducted individual unstructured interviews with pharmacists. Bissell et al (2006) argued that the use of narrative in pharmacy practice research can provide insights into the pharmacist's role, including how these key actors (in our case digital technology mobile apps) make sense of the service experience.

Within the categorization of mHealh mobile apps proposed by Rijcken (2019, pp. 95-105), precisely three mobile apps were selected. The selection criteria were:

- the availability of the mobile apps in the territories investigated, and
- the app that did not have to be a virtual competitor for pharmacists, but a tool conceived to support pharmacists in their work.

Based on this selection, the following three were the mobile apps researchers focused on:

- PharAround, a geo-localization mobile app allowing pharmacists to update their opening and closing times and clients to find the pharmacy,
- FarmApp, a mobile app allowing clients to order their mediations and other products through the app directly to the pharmacy, and
- FarmAdvisor, a mobile app allowing pharmacists to send push notification to clients.

Each researcher recruited their pharmacist participants from separate community pharmacies in the North-West territories of Italy, personally visiting each pharmacy and inviting a pharmacist to participate. The inclusion criteria were very strict: the availability of the same mobile app for all respondents; the minimal knowledge of the existence of the mobile app; respondents had to be the owners of the pharmacy. 82 pharmacists were interviewed by the researchers in the cities of Treviso (40 per cent), Venice (31.3 per cent), and Verona (28.7 per cent) from June 2008 to May 2009. Each interview was recorded and transcribed and the data were sequentially analyzed after each interview. Critical and imaginary events were used as a means of eliciting rich descriptions of each participant's experience; and no a priori categories were created for the analysis. Notes about each participant and the interview process were used to assist with this interpretation. Each transcript was highlighted, coded and then categorized into responses reflecting the key themes for participants. Validity was ensured by first, the findings being derived from the data, through each researcher independently undertaking their own data's analysis, and second, through the comparison of the sets of results by each researcher with the aim of achieving consensus. Agreement in the

emerging main themes (Charmaz, 2006), with the researchers identifying the significance of the themes, based on collectively determining their relative identified importance (Strauss and Corbin, 1994, pp. 273-85). Adequacy was used to ensure the reliability of the findings (Glaser and Holton, 2005).

5. Findings

The respondents' experiences were categorized based on how they viewed new technology tools (mobile apps). Interpretative inductive analysis (Smith, 2004; Alase A., 2017; Cope, 2011) identified four aspects of sense making of illustrative of non-adoption or confused adoption of new technologies by pharmacists: Confusion to Confidence; Suspicion to Trust; Frustration to Education, and Mistrust to Co-operation.

Confusion to Confidence. Most of respondents complained about the big number of mobile apps available and the poor ability of using them properly. On the other hand, this sense of confusion was reduced when the mobile app was validated and promoted by pharmacists' professional association. The relation we see in this change of attitude is related to the need for education pharmacists declared. Mobile apps, even though easy and smart, need a validation system and educational process pharmacist relies on.

Suspicion to Trust. Traditional attempts to summarize the role of the pharmacist have been 'product focused' i.e. through the medicine (usually its manufacture and supply) and the associated information provided. It could therefore be said that the primary role of the pharmacist was to be an expert in medicines. The venue of e-commerce and all the apps empowering consumers to buy through the web caused a cultural sense of suspicion. Pharmacists declared that these new tools mine the skills traditionally attributed to the entire category. Only when the mobile app functionality was explained some respondents changed their mind and started not to see the mobile app as a threat.

Frustration to Education. One of the reasons why mobile apps caused frustration in our sample was the frustration perceived in explaining consumers how to use the tool.

For most of them consumer education on these aspects is a waste of time. Also for this reasons, pharmacists, being part of our sample, could not be considered proper retailer. They did not not feel they really have to stay in touch with their clients, but prefer a "professional" role where the client is the one who has to ask for their help, rather than them to look for clients (Toklu and Hussain, 2013).

Mistrust to Co-operation. If on one hand respondents declared that clients were not ready for these new mobile app, on the other hand they also appreciated cooperative and aware consumers. In many occasions they declared that mobile apps helped clients find the opening times; however, when an action is required or is possible through mobile apps in the direction of sale (e.g. push notifications, special offer campaigns, discounts etc.) then respondents always appeared very reluctant and suspicious. Such a reluctance can be interpreted as the fear of these specific retailers to be confused and perceived as shop assistants. On the contrary, when the mobile apps were explained as a tool to keep in touch with the client and co-create with them the service provided, then the acceptance of the mobile app increased.

6. Discussion

This study has specifically explored the experience and attitudes of pharmacists, as owners of SMEs, in relation to the use of mobile apps. It is clear that the potential for mobile communication to transform healthcare and clinical intervention in the community is tremendous (Curtis, 2005). Several previous studies have evaluated the use of mobile phones to support healthcare and public health interventions, notably in the collection and collation of data for healthcare research (Katz and Aakhus, 2002; Jenkins, 2006; Boulos et al., 2011). This happens also because informed, connected, empowered, and active consumers are increasingly learning that they too can extract value at the traditional point of exchange. Consumers are now subjecting the industry's value creation process to scrutiny, analysis, and evaluation. In addition, consumer-to-consumer communication provides consumers an alternative source of information and

perspective. They are not totally dependent on communication from the firm (pharmacy). Instead, they can choose the firms they want to have a relationship with, based on their own views of how value should be created for them.

This is true for the entire healthcare system, and is particularly true for pharmacists, who are professionals running their own business. Technology is, in this context, an opportunity, to stay in touch with clients and communicate with them, and can also become their competitor, when wholesalers or manufacturers decide to sell their products directly to the final user. The ambivalence in the technology reflects the ambivalence of the responses researchers got in this work: on one hand pharmacists are aware of the importance to be up-to-date, on the other hand they feel a certain discomfort in managing these tools, that apparently waste their time or, at least, impose a new way to communicate with clients.

The most interesting fact is that no respondent was unaware of the 3 mobile apps described, but only PharmAround was the one used by most of them. It seems that as long as the mobile app is seen as a "window" to communicate a non-direct commercial message (e.g. the opening and closing times) it is accepted and used. On the contrary, when a direct commercial message has to be sent or the mobile app is perceived as a substitution of the traditional way to have a contact with the client, then the mobile app is perceived as a tread or is consciously avoided by the pharmacist.

However, all respondents shew flexibility and most of them were curious about new features available in mobile apps. Constantly, in transcripts appears the word "education" in both ways: education to pharmacists and education to consumers. This need for education should not be underestimate. As said, most of the respondents are small business players, with a poor retail and business management background. The awareness and desire to learn and to help consumers, to establish with them a stronger relationship, that goes beyond the product supply, in an interesting antecedent of loyalty, value creation and value co-creation.

7. Conclusions, limitations, and future research opportunities

The data analysis encourages research to go more in depth and to explore at what extent new technological tools, such as mobile apps, impact on retailer and consumers. The multi-channel communication and supply approach required to professional is not ignored and need for education comes as imperative. In addition, retailers in the pharmacy industry realize that a multi-channel strategy of communication is also necessary and ia about to become crucial.

Differently to other health professional, who tend to avoid whatever bring them far from their "comfort zone" made of the traditional doctor-patient top-down relationship (Gately et al., 2007), pharmacists perceive this pressure to stay close to their clients in a logic of customer satisfaction and loyalty. This is an interesting attitude, in an industry where deregulation has been announced serval times but has never really taken place in practice.

Main limitations of the present paper refer to the limited number of territories investigated. This is due to the exploratory nature of available research, mainly based on case studies, and the lack of clear operationalization in the research available at the time of data collection. This area of research is particularly recent as a construct, and a consensual measurement/evaluation of the concept remains ambiguous. Hence, suggestions for future research include developing a more comprehensive servitization and value-co-creation measurement instruments that incorporate some of the aforementioned elements. It is also suggested that consumer perspective is taken into consideration and analysed. Another limitation refers to the sample, that included only SMEs operating in the pharmacy industry in specific Italian territories. A national research could be conducted, and this can have future implications, in line with recent findings suggesting that, in certain conditions, pharmacists are adapting their role to the new technological challenges.

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