

Abilities of organization for client part taking in the health care creativity

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Abstract

The visitors and clients of Health care are requiring and necessitating a more active contribution in presenting and developing the health care services, a position that is furnished in the state health care policy in Australia. But, numerous health care corporations lack a comprehension of the abilities needed to response to this increased engagement from clients and customers. This investigation uses dynamic ability theory by co-creation lens to recognize institutional or corporation capacities and capabilities that help customer participation in health care service creativities. A qualitative approach was conducted using convergent interviews with health care chief executive officers and senior administrators. As a result of which, four categories of organizational capacities and capabilities were recognized: customer and organizational activations, mutual interaction capabilities, as well as learning agility. Based on the authentication the need for these capacities and capabilities, most health care organizations accepted that they had not developed the necessary knowledge, skills and resources. This investigation presents an insight into the organizational capacities and abilities managers seek to improve their customer part taking in health care service provision creativity.

Key words: Health care, Innovation, Organizational capabilities, Customer participation, Co-creation

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Introduction

The health care industry in the Western world faces rising costs, an ageing population, and customers demanding better care (Berry and Bendapudi, 2007; Rethmeier, 2010). For instance, in Australia, total expenditure on health services in 2011–12 was estimated at \$140.2 billion, around 1.7 times higher than in 2001–02 (Australian Institute of Health and Welfare, 2013). Health care policy makers face several challenges as a result of the extensive growth of costs and customers' lack of access to health care (Akenroye, 2012; Thakur et al., 2012). Thus, innovation in health care is needed to balance cost and access to health care (Omachonu and Einspruch, 2010). Traditionally, health care systems were designed with a focus on the role of the health care provider, with little consideration given to customer involvement (Berry and Bendapudi, 2007; McColl-Kennedy et al., 2012). However, within health care practice and academe there is now recognition that customers concrete health care service experiences, and are no longer passive recipients of their treatment (Gill et al., 2011; McColl-Kennedy et al., 2012). Thus, health care organizations are realizing the importance of a customer-oriented business approach (Thakur et al., 2012). This perspective reflects a shift in thought aligned with service dominant logic that customers are co-creators of value (Vargo and Lusch, 2004). Several scholars have documented that customer involvement is important for service innovation (Alam, 2011; Ordanini and Parasuraman, 2011). It has been shown that co-creation with users is a source of competitive advantage in innovation (Salunke et al., 2011). There is also evidence that customer participation reduces the cost of innovation, increases service quality (Ramaswamy and Gouillart, 2010; Tanev et al., 2011), and organization develop more innovative solutions and gain superior knowledge (Matthinget al., 2004). The management of customer participation in creating the innovation requires the organization to learn more about the customer and his or her individual and collective context (Voimaet al., 2011). Customers can derive health care innovation both by creating with clinicians for their own health care management and by contributing to the improvement of health care services at an organizational or system level. The customers' role in improving their own health care management is recognized in the literature (McColl-Kennedy et al., 2012); however, the processes and structures to actively embrace customer participation in the improvement of health care services at an organizational or system level have not been previously investigated. As health care organisations have not traditionally been customer-focused (McColl-Kennedy et al., 2012), they often lack an understanding of how to best coordinate their resources and harness their capabilities to address this challenge. The purpose of this paper is to provide an understanding of the organizational capabilities that support customer participation in health care service innovation. This reflects one of the key priorities of service science research – to further understand the course to involve customers in service innovation – and addresses the call to conduct service innovation studies in complex environments like health care (Ostrom et al., 2010). Drawing from dynamic capability theory, we identify various capabilities an organization requires to support customer participation in health service innovation. Specifically, we consider the capabilities required to bring the customer and organization together to facilitate innovation outcomes. Extant literature agrees that customer participation affects service innovation (Matthing et al., 2004; Ordanini and Parasuraman, 2011; Prahalad and Ramaswamy, 2004); however, there are several gaps in the field's knowledge. First, the current understanding of the role of customers in service innovations remains underdeveloped (Alam, 2011; Ostrom et al., 2010). Although several studies have focused on the role of customers (Alam and Perry, 2002; Carbonell et al., 2012), few studies have

examined the capabilities required by an organization to facilitate customer participation in innovation. Further, studies that investigate organizational capabilities to facilitate co-created innovation predominantly focus on product providers (Coviello and Joseph, 2012; Lin and Huang, 2013) or a business-to-business context (Coviello and Joseph, 2012). Despite the growing importance of customer participation in innovation, little is known about the capabilities required to enable customer participation in health care service innovation. This paper will advance the literature in this area by identifying, and providing a categorization of, organizational capabilities that support customer participation in health care service innovation. Dynamic capability theory will be applied in a co-creation context, to understand the capabilities required in the provider sphere, customer sphere and joint sphere (Gronroos and Voima, 2013) to bring together customers and organisations to innovate health care services. The capabilities reflect the activities undertaken by organisations to identify and mobilize customers, and their operant resources, to participate in the co-creation of innovation. In understanding these customer activation capabilities we build on the work of Coviello and Joseph (2012). Also reflected are the organizations' efforts to identify and coordinate their resources towards the co-created innovation experience. We have termed these capabilities organizational activation. We then consider the nature of the interaction between the customer and organization as they undertake a dialogue to facilitate the innovation, building on the interaction dimensions proposed by Karpen et al. (2012) in their conceptualization of a service-dominant orientation. Finally, while the above capabilities may drive value co-creation in any context, we are specifically concerned with the ability of the organization and the customer to facilitate innovation outcomes (Coviello and Joseph, 2012). Hence, our final category of organizational capabilities reflects an organization's learning agility to sense changes in the environment and respond to them (Den Hertog et al., 2010; Wilden, Gudergan, Nielsen and Lings, 2013). The remainder of this paper is structured as follows. First, we draw on existing literature to discuss the changing nature of the role of customers in health care service innovation. Then we put forth a categorization of organizational capabilities that provides a structure for examining the capabilities required for health care service innovation. We outline the qualitative research design employed as part of this research. The organizational capabilities to support customer participation in health care service innovation are identified and the extant literature that provides a theoretical underpinning for these capabilities is explored. The article concludes with a discussion of practical implications, limitations, and future research directions.

2. The role of customers in co-creating health care service innovation

The understanding of value co-creation has been transformative in the marketing field (Prahalad and Ramaswamy, 2000; Vargo and Lusch, 2008). Businesses are reinventing themselves to address the challenges inherent in customers being more active, having open access to information, and generally desiring more interactive experiences with organisations (Brodie et al., 2011). It is widely recognised that customers are co-creators of value and also resource integrators, with operant resources the fundamental source of competitive advantage (O'Cass and Ngo, 2012; Vargo and Lusch, 2008). While some researchers argue that customers create value for customers (Heinonen et al., 2010; Hibbert et al., 2012), customers' operant resources can be utilized to create value for the organization. Vargo and Lusch (2004, p. 12) stated that, in modern marketing, co-creation with customers for innovation will be essential, and they termed this "shared inventiveness." Customers have often participated in traditional firm activities, such as providing ideas to improve services (Bettencourt, 1997); however, a service-dominant perspective recognizes the extent to which the customers are involved in the co-creation of value through their resource integration (McColl-Kennedy et al., 2012). Customers' ideas are not just inputs into the innovation process (Elg et al., 2012), but rather they are involved in the co-creation of value in the form of the final output – the service innovation. From this perspective, we define customer participation in health care service innovation as the active role customers take in the redesign of health care services at an organization or system level. Customers are likely to be involved in activities such as strategy or policy development, providing ideas for improving services (Bettencourt, 1997), and co-designing the service (McColl-Kennedy et al., 2012). Organisations need to provide resources that customers can deploy to co-create this value, and often need to facilitate the development of skills and knowledge that lead to more effective resource integration and co-creation (Hibbert et al., 2012). However, there is little guidance in the extant literature to explicate the capabilities and resources health care organisations should develop to facilitate co-creation of innovation. Health care organisations face several challenges in enabling customer participation for health service innovation. First, health care customers, or patients, often have little knowledge of the nature of their illness and therefore feel stressed, emotional, and not in control of the situation as they may be in other co-creation situations (Berry and Bendapudi, 2007). Second, customers often choose the extent to which they wish to co-create their own health management experience (McColl-Kennedy et al., 2012) and therefore, it would follow, they can choose the extent to which they are involved in a co-creative innovation experience. Recently, McColl-Kennedy et al. (2012) elaborated on the conceptualization of co-creation and demonstrated that customers co-create their own health care experience by integrating resources not only from the health organization but also through self-generated activities or resources drawn from third parties (McColl-Kennedy et al., 2012). Co-creating their personal health care management is one avenue for customer participation in health service innovation; however, customers experience and interact with the health care system and often have a unique perspective of how it can be improved. Despite improvement in the delivery of health care services, they are complex systems with interactions between patients, providers, suppliers and financiers (Thakur et al., 2012). Managers make decisions in dynamic environments (Thakur et al.,

2012), and the challenges in the health care system demand a diverse mix of skills, knowledge and competencies. Although a customer can be conceived as a co-creator of value, due to the complexity of the industry it is most often the organization that chooses the means by which it will engage customers (Prahalad and Ramaswamy, 2004). Therefore, we investigate the role of organizational capabilities and introduce a categorization that allows for the exploration of capabilities to support customer participation in health care innovation.

3. Organizational capabilities for health care service innovation

Organizational capabilities have been defined as “complex bundles of skills and accumulated knowledge...that enable firms to coordinate activities and make use of their assets” (Day, 1994, p. 38). To stay competitive in a dynamic environment, organisations develop capabilities that enable them to gain a competitive advantage (Bakhru, 2004). Dynamic capabilities theory explains how organisations acquire and deploy resources according to the market environment to achieve superior organizational functioning and success (Teece et al., 1997). Dynamic capabilities reflect an organization’s capability to develop innovative services or products, responding to changing market conditions. Teece (2007) identified three elements of dynamic capabilities: sensing, seizing and transforming capabilities. As customer needs shift continuously, organisations must sense and respond quickly to changing customer preferences to create competitive advantage (Roberts and Grover, 2012). Organisations use their resources effectively or acquire new resources to survive in increasingly competitive markets. Organisations’ performance differences are argued to be due to the differences in their capability to deploy resources within the organization (Day, 1994, 2011). Teece and Pisano (1994, p. 541) defined dynamic capabilities as a “subset of the competences which allow the firm to create new products and processes and respond to changing market circumstances.” Innovation is also about new products, processes, and service development; therefore, dynamic capability theory is central to this research (Lawson and Samson, 2001). To identify relevant organizational capabilities for customer participation in health care service innovations, we consider the theoretical underpinning of value co-creation. The shift to a service-dominant paradigm has seen recent research focused on determining the co-creation capabilities of an organization (Coviello and Joseph, 2012; Hibbert et al., 2012), which was previously absent in the literature. Inherent in the co-creation of innovation is the integration of resources through interaction and activities among collaborators (Gronroos and Voima, 2013; McColl-Kennedy et al., 2012). The organisation and the customer are both resource integrators (Vargo and Lusch, 2008). Customers require knowledge and skill (operant resources) to act on the operand resources provided by the organisation during resource integration (Kleinaltenkamp et al., 2012). From an organisational perspective, it needs to develop the capability to support resource integration and customer learning (Arnould and Thompson, 2005; Hibbert et al., 2012). Some researchers have argued that customers control value co-creation (Heinonen et al., 2010; Hibbert et al., 2012). However, we adopt the paradigm that argues organisations are able to influence customer value co-creation through interactions (Gronroos, 2008; Prahalad and Ramaswamy, 2004). To achieve this, the organization should understand the capabilities required to facilitate these interactions and the resultant co-creation of innovation. To enable the categorization of organizational capabilities in this context, we utilize the concept of “value creation spheres” proposed by Gronroos and Voima (2013). They provide a conceptualization of value co-creation that has a distinct provider sphere, customer sphere and a joint sphere. In the provider sphere processes and activities are performed by the organization to create an engagement platform for the co-creation of value (Brodie et al., 2013). In the customer sphere, the customer creates value-in-use independent of the provider and may also integrate with resources from other sources (McColl-Kennedy et al., 2012). In the joint sphere, the organization can influence customer value creation efforts and act as a co-creator; therefore co-creation innovation takes place in the joint sphere. Organisations seek to develop capabilities to support the dyadic interaction that takes place in this joint sphere, as it is through these interactions that co-creation of innovation occurs (Gronroos and Voima, 2013). Firstly, organisations must look to develop the capability to encourage customers to interact as a co-creator of value. It is important for the organisations to utilize customers as a source of competence because customers possess the knowledge and skills, and are willing to learn, experiment and engage with the organisations for the purpose of co-creation (Hibbert et al., 2012; Prahalad and Ramaswamy, 2000). To harness customer skills, organisations require the capability to identify and respond to customer needs (Kindestom et al., 2013). This is achieved through sensing (Teece, 2007), mobilizing customers, and utilizing customer initiated efforts (Coviello and Joseph, 2012); we termed this customer activation. Secondly, organisations must identify and develop internally the capabilities, or appropriate organizational resources, that will facilitate the customer value co-creation process; we have termed this organizational activation. This reflects a dynamic capabilities logic, and proposes how organisations adapt and create a portfolio of resource capabilities to impact on their organizational functioning and success (Leiblein, 2011; Teece, 2007). Thirdly, customer participation in co-creation is influenced through direct interaction (Gronroos, 2011) and hence organisations need to develop interaction capabilities. Interaction capabilities are important to encourage dialogue with customers (Prahalad and Ramaswamy, 2000) and for sensing new opportunities for innovation (Kindstrom et al., 2013). The main focus of an organization’s two-way interaction with customers in the innovation process has traditionally been to gain customer’s feedback or to gather information, which only leads to minor variations in existing services (Ojasalo, 2009). However, co-creative innovation provides customers the opportunity to design their own experience by using their operant skills and resources (Ramaswamy, 2010). Finally, the joint sphere provides a platform for co-creation but the outcome can be co-creative or co-destructive (Echeverri and Skalen, 2011). Therefore, the organization needs to embrace capabilities to learn about customers, their individual and collective context to optimize the outcome (Voima et al., 2011). This learning agility of organisations is a fourth

capability reflective of a firm's ability to utilize the knowledge (seizing) it gained through sensing and, importantly, to reconfigure its resources to respond to this information (Coviello and Joseph, 2012; Kozlenkova, Samaha and Palmatier, 2014; Wilden et al., 2013).

4. Research methodology

The main objective of this study was to identify the capabilities an organization requires to support customer participation in health care service innovations. An exploratory, qualitative approach was adopted to obtain rich insights and understand the complexities and nuances of this domain. As such, convergent interviews were used to collect qualitative data from chief executive officers and senior managers in the Australian health care industry. These senior executives have rich experience in the field of customer participation in health care service innovation. Successive, in-depth convergent interviews were conducted in which data were collected, analyzed, and on the basis of findings the content was refined for subsequent interviews (e.g., Gebhardt et al., 2006). There were three reasons convergent interviews were used in this research study. Firstly, exploratory research was needed due to limited research on organizational capabilities that are critical for participation of customer in service innovation. Second, compared to other exploratory research techniques such as in depth interviews, the convergent interviews are more flexible so the researcher could change the direction of questions depending on the data gathered (Carson et al., 2000; Nair and Reige, 1995). As little is known about this subject matter, flexibility was essential to generate new ideas that could be explored in subsequent interviews. Furthermore, convergent interviews helped in understanding the research context and refining the questions to be asked in each subsequent interview. Along with the convergent interviews, follow up email, archival records and internal documents were collected for triangulation.

4.1. Sample

Senior executives in health care organisations were selected as participants in this study rather than medical practitioners, as they had greater visibility of the role of customers in service innovation at an organizational or system level. The focus of this study was on the organizational capabilities to facilitate a systematic approach to customer participation in health care innovation, rather than the personal management of a patient's medical condition. Senior executives facilitate customer participation in health care innovation by deploying resources and creating structures that encourage participation at the level of strategy development. Therefore, senior executives were expected to provide greater insights into the organizational capabilities to facilitate customer participation in innovation. The participants were carefully selected to include programmer managers, health policy makers, CEOs, members of executive boards, and advisors working in health care organisations, as well as academics who had conducted research in this area. These informants were chosen based on their expertise in the subject of health service innovation. The participants selected for this study had directly managed and executed a number of reform projects in the primary health care sector across a wide range of health care services. Purposeful sampling was used to ensure that the sample was of knowledgeable and informed participants (Dick, 1990). In particular, the first participant was carefully selected (Dick, 1990) who was not only knowledgeable but also directed to others who were familiar with the research topic (Carson et al., 2000; Nair and Reige, 1995) (Table 1). The sample size for this research was data driven (Dick, 1990); that is, more participants were added to the sample till the saturation was achieved and no new information was added (Nair and Reige, 1995). Twelve convergent interviews were conducted to understand the organizational capabilities critical for effective participation of customers in service innovation. Each interview lasted for 50–60 minutes.

4.2. Analysis

In this study, content analysis of convergent interview transcripts was conducted and themes were developed. First, each interview was individually analyzed and thereafter compared with the others so that patterns could be traced. These themes were labeled to reveal the relationships between customers and their organization. In order to make refinements to the findings, an iterative process was used (Eisenhardt, 1989). Follow-up interviews, email exchange with key informants were conducted to validate the data and the conclusion. There are four tests of validity and reliability of the study (Yin, 1989). To maintain construct validity multiple sources for data collection were used: that is, convergent interviews, internal documents and archival records and literature sources. Internal validity was maintained through purposeful sampling to ensure that the sample was of knowledgeable and informed participants. As the research was data driven, more participants were added to the sample until the saturation was achieved to maintain external validity. To maintain the reliability, a convergent interview protocol was developed for the collection of data and convergent interviews were conducted and interpreted in a structured manner.

5. Findings

We begin the discussion of the findings with an overview of how respondents perceived the changing nature of the role of customers in health care service innovation. In recent years, customer

Table 1-Respondent profiles.

Participant	Title	Type of organization
Participant A Division)	Lead Partner, Health and Human Services.	Consulting (Health care)
Participant B	Academician (Engagement and Interactivity)	Research Organization
Participant C	Academician (Co-creation in Health care)	Research Organization
Participant D	Director	Community-Based Health care
Participant E	Consultant	Consulting (Health care)
Participant F Body	Executive Director	Health Consumer Peak
Participant G	Community Engagement Manager	Primary Health care (National)
Participant H	Chief Executive Officer	Primary Health care (National)
Participant I	Chief Executive Officer	Community-Based Health care
Participant J	Chief Executive Officer	Primary Health care (National)
Participant K Health care	General Manager, Programs	Community-Based
Participant L (National)	Leader, Population Health and Community Engagement	Primary Health care

Participation has changed from passive recipient to co-creating value by integrating resources from service providers and other self-activities (McColl-Kennedy et al., 2012). The findings from this study provide additional confirmation of this phenomenon. When participants were asked about the attitude of customers to participate in health service innovation, they unanimously agreed that customers are more active, have more information, and want to be more involved in the health care process. However, the participants observed that although customers are more willing to participate in co-creating service innovation, the health care organisations are slow to respond and resistant to involve customers, as described by Participant L: "... the attitude towards the customer has changed in last 20 years in the commercial land and it is gradually changing in the health care sector. However, when you start talking to service providers in the health industry they individually are far more resistant in involving the customers." Participants also commonly agreed that health care organisations do not have the necessary skills and resources to effectively engage customers in innovating health services, as mentioned by Participant E: "There are gaps. I mean it's a particular skill engaging with the consumer, engaging with the community and I think a lot of organisations think that it's easy to do – just ask them some questions, get them to fill out a survey, hold a focus group set up an advisory group, tick, done – a lot of it is not being done very well." Organisations are moving toward involving customers to increase their success in innovating services. However, to enable customer participation organisations require continuous collaboration with customers (Matthing et al., 2004). They need the capability to recruit, engage and manage customer participation. Thus, this requires organisations to develop unique capabilities to enhance the active role of customers.

5.1. Customer activation

The nature of customers that participate in health care innovation is diverse and often context dependent with respect to the health care issue and the service innovation. Respondents spoke of individual participation in service innovation (patients, families, carers), as well as organized health care groups (e.g. Diabetes support groups). They recognised that individuals may be seeking to manage their own health care condition or seeking preventative health care. Participating customers would have differing levels of motivation, knowledge or acuity of an illness, knowledge of the health care system, and individual capabilities. It was a widely held belief that a singular health care customer was not the ideal participant for all health care service innovations. The following statement by Participant J further illustrates this: "I think that every situation and community is different but there will be some principles that will shape how an organization will go about [engaging customers]. It will depend on how an organization identifies customers who are encouraged to express their views. It will also depend on the health issues; say, for example diabetes, the impact of diabetes will be very different if you are a new arrival or if you are wealthy middle class Australian and that it would be entirely understandable and accepted that people with different cohort will have different expectations. "Customers can be activated or engaged with health care service innovation at both an individual and a group level. At the point of care with clinicians, customers participate in co-creating the experience of their own health care management (McColl-Kennedy et al., 2012). Customers can also participate at a strategic level for the development of a new health care service in the community. Participant G illustrates this: "Engaging a voice on an ongoing manner needs to be embedded in the way we do business and not bolted on once a quarter or twice year....We cannot exclude customer engagement from the process to improve health and wellbeing. You can involve customers in a group at a system development level or involve them at the co-creation of their own health." Utilization of customer experiences at a system level requires participation of the customers as a group. However, the organization first needs to identify and motivate individuals with appropriate skills and resources before engaging with them on a group level. This is evident from the statement by Participant H: "I think we need to be really very careful that we

don't go about it in tokenistic way... Ensuring that it is the right person, that the person is supported, and that the person has direct access to wider range of consumer groups. I think there is no doubt that engaging with the customer in a group is important through forums, focus groups but often consumers are put into these places with no support and they are obviously bringing often their own experience or of their family and friends to that space so whilst it's beneficial to hear that but it is important to make meaning out of the stories otherwise this is a pointless exercise." The next section will further discuss the capabilities of customer mobilization, customer identification, and customer agility that are required to engage the relevant customers in the service innovation process and respond to their input.

5.1.1. Customer mobilization

The immediate identification and involvement of customers is a necessary organizational capability to engage customers in health care innovation (Coviello and Joseph, 2012; Prahalad and Ramaswamy, 2000). Not all customers are willing or have the appropriate skills and resources to participate in the innovation experience. Therefore, it is essential that organisations build capability to identify motivated customers whose profiles are appropriate to participate in service innovation. Participant C provides further illustration of this: "We are finding groups of patients with very low level of concretion and groups of patient that have very high level of concretion. Unfortunately it will be at an individual level and the difficulty is that people don't walk around with a label on them 'I am willing to co-create.' How do you identify the people are willing to co-create and how do you then facilitate the people who do want to and don't bug the people who don't want to?" Customer mobilization is an important capability for health care organization because customer participation in co-creating health services has a great potential to improve health service delivery, customer experience and health outcomes (Crawford et al., 2003). Customer mobilization is more than just interacting with customers, it is encouraging customers to utilize their own resources and skills (Coviello and Joseph, 2012). In order to get this type of customer participation in service innovation, organisations require capabilities to attract, motivate and manage customers to use their operant resources (Hibbert et al., 2012). Although Coviello and Joseph (2012) identified the need for customer mobilization in the new product development process, our findings demonstrate its relevance to a health care setting and a service innovation context.

5.1.2. Customer identification

The nature of service innovation in the health care context varies considerably (for e.g. clinical services, non-clinical services, delivery services, etc.). Organisations need the capability to identify customers with appropriate skills and resources for the necessary service innovation. Many health care organisations, mandated to involve customers in the innovation process, will engage a customer panel or a small number of individuals and expect them to contribute to all health care service improvements. The description of Participant A describes the need to for organisations to be able to identify customers with appropriate operant resources to suit the service innovation context. "In the case of cardiovascular disease you are much better to engage customers who have these diseases as compared to general consumers. [However] When you want to develop a consumer participation strategy in this case you do not want people with specific disease but you want people who can articulate across a range of different consumers." Organisations require the capability to engage a relevant mix of customers and be open to their efforts (Coviello and Joseph, 2012). Coviello and Joseph (2012) described engaging customers with close connections and some customers with weak connections with the organization in a business-to-business context. However, in a health care context, the potential customer market is often much more diverse and the organisations do not have established ties to individual consumers to draw upon. This makes the organizational capability to identify relevant consumers a unique and difficult challenge.

5.1.3. Customer agility

Dynamic capabilities relate to managerial processes that sense, seize opportunities and reconfigure organizational resources to improve performance (Teece et al., 1997; Wilden et al., 2013). Customer agility is the capability to "capture the extent to which a firm is able to sense and respond quickly to customer-based opportunities for innovation" (Roberts and Grover, 2012, p. 231). Organisations need to be able to sense the changing needs of customers and undertake actions to respond with ease, speed and dexterity (Roberts and Grover, 2012). The need for cognitive, structural and relational flexibility, and lack of rigidity of process, is also recognised (Coviello and Joseph, 2012). Findings from our interviews suggested that organisations require the ability to obtain feedback on the customer experience (sensing) and respond swiftly to the needs identified. Thus, sensing and responding are identified as key aspects of customer agility that enable organisations to activate customers to co-create health care service innovations. The notion of sensing stems from the dynamic capability literature, and is an element required to identify and respond to customer needs (Teece, 2007). Sensing can emerge from explicit customer information provided to the organization in the form feedback, dialogue with front line staff or online, prototyping, and joint experimentation, or from implicit feedback such as that determined through observation. Customer agility should also reflect the organizational capability to identify latent and unmet needs of the customer and find options to meet those needs (Den Hertog et al., 2010). Moreover, customer agility is about aligning sensing and responding capabilities, which means the organization needs to respond to the identified needs in a timely and appropriate manner. This is evident in this example from Participant I: "In the [name] activity program we noticed by looking at our demographic stats and from customers' feedback that we had a lot of men and women at the range of 35-60 but we didn't have many young people, we were not connecting with the young people. Rather than saying that we have to find young people, we know what they want, we will invite them,

put on some pizzas then we will be up selling, instead of that what we did was that we found some young people as ambassadors help us build a program. They actually developed the program from the ground up so that is an example of innovation where we code signed the program with customers." Health care customers are often emotional and unknowledgeable about the service context and therefore appear reluctant to fully engage with providers (Berry and Bendapudi, 2007). In addition, customers co-create value uniquely and differently and integrate resources in different ways through interactions with the organization and other collaborators (McColl-Kennedy et al., 2012; Vargo and Lusch, 2008). Therefore, it is imperative that the organization has the capability to understand both the explicit and implicit customer needs and respond appropriately.

5.2. Organizational activation

5.2.1. Leadership

Health care organisations face critical challenges due to constant health care reform, global economic fluctuations, and employee resistance, which make it hard to drive innovation in the organization (Rethmeier, 2010). Due to these organizational challenges there is a need for strong leadership (McAlearney, 2006). This study confirms the importance of leadership for health care organisations and specifically for their ability to drive customer participation in service innovation, as stated by Participant D: "They have commitment to [enable customer participation] but it depends on the leadership in the organization about how well they do it so you always need a check and balance. There is a commitment to encourage customer participation in the organization but how far it is translated in good practices is variable. "Although many factors are important for enabling customer participation for successful innovation, the single most important factor is the competence of the leader (Speeches, 2005). Active and powerful leadership at the top promotes and drives innovation (Jung et al., 2008). Despite this, there have been few studies examining the role of leadership as a capability for effective co-created innovation (Kozlenkova et al., 2014). Our respondents recognised that leadership must be apparent at all levels within the organization. Because customers are interacting and co-creating with employees at multiple touch-points, innovation can be generated from any level within the organization .(Kaczynski and Gibson, 2008). Therefore leadership cannot reside centrally, nor be controlled by a few individuals at the top of the organizational chart. Employees at all levels must accept accountability and leadership responsibility in their areas of expertise (Currie and Lockett, 2011). This perspective of leadership can be seen in Participant J's statement. "Leadership throughout the organization is important. The CEO needs to model the behavior expected of staff, and leaders at every level need to model what customer participation is, and expect it of their staff. Leaders should be able to articulate why customer participation is important, and show their staff how to do it... Customer participation needs to be part of the way of being." This perspective on leadership significantly differs from the more traditional central leadership. In many health care organisations the budget is decentralized, services are delivered from multiple departments, and several people have the responsibility to make decisions (VanVactor, 2012). Therefore, leadership cannot reside centrally and be controlled by an individual; rather it has to be interdependent leadership operating at all levels.

5.2.2. Collaborative integration of resources

In health care organisations there are multiple discrete functional areas present in a single organization, making it more difficult to implement service innovation. In addition, various external stakeholders often need to be involved in the development of service innovation as they form part of the service provision. Therefore, collaborative integration is required to drive collaboration across cross functional teams, customers and other stakeholders. This enables the organization to access resources beyond its boundaries (Day, 2011). The importance of collaborative integration can be well illustrated by Participant L's statement: "It is very critical to use skilled personnel. An organization needs to recognize that if they have skills and resources internally or not ...if an organization does not have appropriate resources it should source that from outside. It is critical to discuss and get clarity within the organization on what are we trying to achieve and this is the hardest part." Globally, there is more specialization of skills and knowledge and this has increased the interdependency among various actors in the economy (VanVactor, 2012). This interdependence has also increased collaboration opportunities, which can result in more innovation (Lusch et al., 2007). Collaboration is often considered an important competitive strategy for innovation (Lusch et al., 2007). It has been recognised that for co-creating innovation in a public sector setting, such as health care, there is often the additional challenge of dealing with multiple stakeholders (Bessant and Maher, 2009).

5.3. Interaction capabilities

Karpen et al. (2012) developed a service-dominant orientation construct, which recognizes organisations need interaction capabilities to facilitate and enhance value co-creation. In this section, participants' statements are provided to illustrate the relevance of each of these interaction capabilities in the health care service innovation context. Individuated interaction capability is the organizational capability to understand individual customers (Karpen et al., 2012). The customer is the primary resource integrator in co-creating their own health care (McColl-Kennedy et al., 2012) and every customer correlates differently even when he or she is provided with a similar value proposition (McColl-Kennedy et al., 2012). Therefore, understanding individual customers' unique contexts, their expectations and preferences is essential in enabling customer participation in health care service innovation. Participant C explains individual customer unique preferences in enabling customer participation. "Some people will just be compliant, and they will take the information leaflet and read it. That is the extent of their concretion. Others would have enrolled themselves in actual short courses offered so that they are more active in co-creation. I think it is about organisations just providing avenues for customers to co-create." Relational interaction capability is the organizational capability to improve social and emotional connections with customers (Karpen et al., 2012). Customers in health care settings often feel extreme emotions and that they have

no control over their treatment (Berry and Bendapudi, 2007). A health care organization's capability to improve social and emotional connections with customers improves the customer experience beyond medical outcomes and encourages them to participate in health care service innovations. Participant C explains the importance of emotional and social connections when engaging customers for this purpose. "For those people who are interested, it is a matter of showing them what the value proposition is, for those engaging not let them have to work it out. Tell them what's going to happen as a result of them [customer] engaging and being involved in improving the system. You can go back to a whole heap of relationship marketing variables. They must feel like they have a relationship with the organization, trust the organization etc." Ethical interaction capability is the organizational capability to act in fair way towards its customers (Karpen et al., 2012). Ethics is the basic professional obligation of health care organisations. In engaging the customers for health service innovation it is essential to act in a fair way and engage customers from different domains of life, especially the marginalized groups. Consider the statement of Participant E as an illustration of this: "You will always have certain numbers of consumers you want to be involved but then at the same time you need to encourage new people. So, I would like to meet with some people that have just started or been in the program for 6 months, some who have been in the program for 12 months so that I can get a different perspective but because a lot of people I consult with are fairly vulnerable, older people, people with mental illness then you really have to make sure that you have good processes in place." Empowered interaction capability is the organizational capability to empower customers to utilize their skills to shape the nature of service (Karpen et al., 2012). Customers possess knowledge and skills that can contribute to the service process (Grönroos, 2008). Organisations require capabilities to engage customers so that they are willing to contribute their ideas, knowledge and skills. A health care organization's capability to empower the customers plays a critical role in improving their own health (Ansari and Almunawar, 2011) and enabling customer participation in health service innovation. Participant I provided an example of young people being empowered: "We found some young people as ambassadors help us build a program so they actually developed the flyers, they used their network to say hey let's have a meeting to talk about a program [organization]... . They picked the community center they brought the young people in and then they actually developed the program from the ground up so that is an example of innovation where we co-design all our programs." Developmental interaction capability is the organizational capability to develop customer knowledge and competence (Karpen et al., 2012). Customers must acquire the necessary skills and knowledge to be effective resource integrators and organisations should have the capabilities to facilitate the customer learning process (Edvardsson et al., 2011; Hibbert et al., 2012). Participant E provided an example of this: "I did A3 laminated pages of graphs and charts showing them [customers] the health of their community....This is your population, this is the ageing part of your population, this is your health and they were absolutely fascinated by it ...what services do you need, where are those gaps. So you actually give information to receive information." Concerted interaction capability is the ability to facilitate, coordinate and integrate service processes that include customers (Karpen et al., 2012). Coordinating the services is an important capability in health care organisations because even if the organization tries to innovate the way a particular service is delivered it has to coordinate and integrate the participation of various departments, customers and their careers. Consider the statement of Participant H to demonstrate this: "I think it's really important that we actually are very inclusive... if we are able to connect up the dots...and feed them up to the strategy...and if we are providing a complete and holistic service to a client...So you know that's a complex scenario but if each of the players are in the loop that can be managed very well and patient can only benefit from that."

5.4. Learning agility

5.4.1. Responding to customer needs

Learning agility is an organization's capability to improve on its processes for viable business existence (Den Hertog et al., 2010). Our interviews found that learning agility is important for organisations to innovate health services. Participant A explains that organisations learn from customer participation "Chronic disease there is a lot of innovation that you could [develop] with...these people [customers of chronic diseases] has lot of admission; lot of hand overs so there is real opportunity to improve pathways of care, great opportunity to improve home care, great opportunity to self-management." New organisations usually generate and share knowledge within the organization and across the partners and are willing to learn from others and import knowledge from their customers, as well into service innovation (Coviello and Joseph, 2012). In contrast, an existing organization has layers of standard procedures and processes that hamper innovation (Teece, 2007). Resources related to responding to changes in the environment (e.g. technical execution, organizational resources) have been frequently examined for their impact on marketing innovation (Kozlenkova et al., 2014). Wilden et al. (2013) argued that an organization's dynamic capabilities could be disaggregated into its capacity to sense and shape opportunities, seize opportunities (through knowledge utilization) and reconfigure its resource base to take advantage of these opportunities. This capability would positively influence firm performance in multiple ways (Teece et al., 1997).

5.4.2. Organizational flexibility

Organization flexibility enables new organisations to generate and share knowledge within the organization and across the partners, and it enables ongoing organisations to redevelop their processes and acquire new knowledge. This was well identified by our Participant J: "Organisations need to be adaptable and flexible to

ensure that services provided are those that people actually need. Organisations need to operate in a way that encourages responsive

approaches that are based on needs, not what suits the organization." Organizational flexibility can have a positive influence on acquiring new knowledge and redeveloping the existing mechanism (Wang et al., 2013). However, old processes and practices often hinder the absorption of new knowledge. Organisations must have the flexibility of unlearning previous processes if they hinder the adoption of innovation. Thus, flexibility within learning agility is

an important capability for health care organisations in the current political and social climate.

5.4.3. Evaluation tools

Participants were asked about evaluating the impact of activities undertaken by organisations to enable customer participation in health service innovation. Unanimously participants agreed that evaluation would assist the organisations to understand the improvement areas as stated by Participant E: "That [Evaluation] is the next step while people are agreeing to undertake stakeholder and consumer engagement what are they doing, how useful is it or are they just having a cup of morning tea and tick the box that they have done some engagement. It has to be real." Overall, the findings show that the active role of customers is causing challenges for health care organisations as they lack the skills and capabilities to manage increased customer participation. To facilitate customer participation in health care service innovation several organizational capabilities were identified in the study and categorized into four categories; these include customer activation, organization activation, interaction capabilities and learning agility. The next sections will discuss the findings in more detail followed by the limitation of the research.

6. Discussion and conclusion

This research addresses a key priority area in service science research, furthering our understanding of customer participation in service innovation (Berry and Bendapudi, 2007; Ostrom et al., 2010). Specifically, it advances dynamic capability theory by applying it in a co-creation context, and enhances our conceptual understanding of the role of the organizational capabilities to support customer participation in health care service innovation. Although some previous authors consider customers to be self-directed in their resource integration activities and subsequent learning (Hibbert et al., 2012), our findings articulate that managers endeavor to take an active role in managing customers within this interaction. Our findings provide support for previous research that has found that the role of the customer in health care management has significantly changed in recent years (e.g. McColl-Kennedy et al., 2012), with the customer being an active co-creator of his or her experience and demanding more meaningful interactions with the health care organisations. We reveal that, as a result of this changing role, health care organisations perceive they lack the capabilities required to effectively manage increased customer participation. The primary objective of this study was to provide insight into the organizational capabilities required to facilitate customer participation in service innovation. By applying dynamic capability theory through the lens of co-creation, we revealed several organizational capabilities and ordered them into four main categories around the customer and provider spheres of co-creation (Grönroos and Voima, 2013). The first two categories, customer activation and organizational activation, reflect the organization's capability to motivate and prepare both parties to come together, in the joint sphere, and integrate their resources to co-create innovation. This ensures both parties have the relevant operand and operant resources to contribute and draw from in this interaction. Organisations need to identify and mobilize customers, recognize their explicit and implicit needs, and develop skills within customers to ensure that they are able to integrate resources. Concurrently, an organization needs to provide a supportive leadership team and relevant and integrated resources. The third category, interactive capabilities, encourages an effective dialogue between the organization and the customers. Organisations require the capability to engage customers in this dialogue, continue the development of their skills, and provide them with the support and opportunity to create value and learning through the interaction. The final category, learning agility, reflects the organization's capability to continually respond to the opportunities identified and implement emerging innovative solutions. This will require the continual adaption and flexibility of process to meet the changing needs of consumers. Our findings show that although health care organisations recognize the importance of these capabilities to support customer participation in health care service innovations, most health care organisations seek further guidance on their implementation. Previous research studies have mostly focused on customer participation in innovation as an input in the process (e.g., Alam and Perry, 2002; Carbonell et al., 2012). Therefore, organizational capabilities to enable customer participation throughout the full spectrum of the innovation development have not been explored adequately. In addition, most of the literature on organizational capabilities had focused on product providers (e.g., Coviello and Joseph, 2012; Lin and Huang, 2013) and capabilities related to customer participation in service innovation remain underexplored. Thus, this study has addressed a gap in the literature by applying dynamic capability theory in a co-creation context and identifying and demonstrating capabilities required for customer participation in service innovation. This study has contributed to dynamic capability theory and the knowledge of organizational capabilities, and builds on the work of Coviello and Joseph (2012) and Karpen et al. (2012). Coviello and Joseph (2012) identified customer mobilization and learning agility as marketing capabilities for co-creative innovation. However, their study was set in a business-to-business context and therefore customer mobilization was depicted as involving a small group of customers with whom they already have a close relationship, or operate within close proximity in a network. We found that health care organisations are often at a psychological distance from their customers and therefore customer activation and mobilization is more challenging. We therefore extend the notion of customer mobilization as proposed by Coviello and Joseph (2012), to have a greater focus on customer

identification. Karpen et al. (2012) identified six strategic interaction capabilities that constitute a service-dominant orientation. Our findings extend their work by highlighting the importance of these capabilities for a health care organization. A health care organization needs the capability to interact with the individual customer while taking into consideration equity, access, knowledge sharing and ethics. This is imperative in the health care sector, as organisations often find it difficult to engage customers due to either lack of access, poor health literacy, or lack of skills and resources. Coviello and Joseph (2012) identified learning agility was an important factor to ensure that an organization had cognitive, structural and relational flexibility to provide services that customers need. However, they examined new and emerging technological firms. Our findings corroborate their findings and extend them to both new and existing firms in a health care setting. From a managerial perspective, our findings will assist managers of health care service organisations in several ways. First, our findings show that customers want to participate further in the improvement of health services for themselves as well as for the community. However, senior executives raised concerns about their ability to deal with this increased participation from customers. Therefore, the organizational capabilities identified can guide managers in successfully encouraging and supporting customer participation in health care service innovation. Second, our findings suggest that to harness the valuable skills and resources of customers to contribute to service innovation, organisations require the capability to identify and respond to customer needs that are constantly changing. Managers need to mobilize a mix of relevant customers, as not all the customers will be willing to participate or have the necessary skills and resources to contribute to the service innovation process. Therefore, managers need to build customer activation capability to identify customers with appropriate skills and resources to participate in a successful service innovation experience. Strategies such as workshops or discussion forums to identify willing and competent customers to leverage into innovation initiatives would be effective. Third, we recognize the importance of the internal capabilities of an organization being predisposed to support customers' participation in innovation. Given the complexity of many health care organisations, managers face a challenge to collaborate with cross functional teams, customers and other stakeholders. Therefore, there is a potential advantage for managers to stimulate collaborative integration and leadership to take place throughout the organisation. Fourth, our respondents articulated that their organisations had not had a history of being customer-focused. Therefore, it was recognised that managers would need to develop organizational capability to effectively interact with customers. These interaction capabilities would need to recognize customers as individuals, build relationships, empower and develop them, act ethically, and be a coordinated and integrated effort. Much of this effort would be directed through formal and informal communication channels. Finally, for innovative outcomes to be achieved, managers need to build organizational capability to learn from evaluation, and have the flexibility of unlearning the previous processes if they are hindering the adoption and diffusion of innovation. Customer surveys, discussion forums, and other feedback mechanisms would initiate this process, but more important is the organization's responsiveness to the evaluation.

6.1 Limitations and future research directions

Despite the contributions outlined above, there are several limitations arising from the study, which deserve attention. First, while the respondents in our sample were selected for their ability to provide rich and valuable insight, the study could be further expanded among a broader range of health care professionals, including from other countries with different health care systems, to enhance the generalizability and further refine the insights generated. Second, as there has been little research conducted to date to understand customer participation in health care service innovation, undertaking a qualitative research design was necessary to understand the complexity of the experience. Further research could look to empirically test the influence of the capabilities on resource integration behaviors of customers and the organization, and the ultimate effectiveness of the innovation design. Third, to respond to this increased participation of customers in service innovation, organisations require a supportive culture towards customer participation. Further research could explore what this type of organizational culture looks like, what are its components and how it manifests. Fourth, several of the capabilities identified warrant further investigation and understanding to enhance their managerial relevance. For example, although the capability of customer activation recognizes the need to identify customers with appropriate skills and resources to facilitate the innovation process, further investigation could be undertaken to understand the customer profiles that are best suited to participate in innovation. Finally, this study has focused on the health care context, as it is rich in complexity and unique challenges for customer participation. Further research is required in other complex service environments (e.g. banking and finance) to collaborate and investigate further the organizational capabilities required to support customer participation in innovation.

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