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Ageing communities as co-designers of social innovation

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ABSTRACT

This paper addresses the social phenomenon of ageing and emphasizes the importance of past experiences of ageing individuals when creating new solutions to deal with the issue of elderly care. Thus, this paper explores what role the ageing community can play in creating new service solutions for social innovation in senior care and also looks to ascertain how past experiences of the elderly can empower them to develop their own services. A comparative analysis is adopted as a method to respond to these aims. Two projects are used for this comparative analysis. Life 2.0 focused on generating information and communication technology services to provide a platform of support in social interaction for ageing people throughout the EU. BoAi focused on exploring the possibility of transferring the 'good old days' into current elderly care services in China.

KEYWORDS

Ageing communities; social innovation; participation; empowerment; co-designer

老龄化是一种日趋严峻的社会现象，本研究提出老年人群的过往经历可以成为应对老年人照护问题的一种新的解决方式。本文致力于探讨老年社群如何通过创造新的服务方式而带来老年照顾的社会创新。同时，本文也讨论老年人自身的过往经历如何对老年人赋能而影响对他们的服务。为了更好地讨论本论题，文章基于 Life 2.0 和 BoAi 两个不同的项目，采用分析比较法展开论证。Life 2.0 基于欧盟国家的老龄人口现象，通过信息通信技术服务为老年人及其社区的社会互动提供平台支持。BoAi 则是一个在中国的养老机构，其服务项目聚焦于将“过去好时光”的记忆（也就是老人过去的积极经验）转化到当前的老年人照顾服务中。

Introduction

Ageing individuals of communities often face prejudices of being regarded as useless by others and even themselves (Blakeborough 2008). Conventionally, ageing communities are perceived as being served. Thus, they are excluded from participating in processes of decision making. At the same time, some ageing individuals feel that they have lost their purpose and role within their societies (Fried 2014), because they no longer generate economic value. Those views not only influence the understanding of professional practitioners, such as social workers and design professionals but also impact on the well-being of ageing communities (Abrams and Swift 2012; Stuckelberger, Abrams, and Chastonay 2012).

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The number of ageing individuals over 60 years of age will be rising from 962 million in 2017 to 2.1 billion in 2050, according to key findings from the United Nation's World Population Prospects (2017). This forecast is underpinned by rising life-expectancy rates and a decrease in per capita birth rates, and thus presents one of the biggest social challenges in contemporary society. This challenge encompasses physical, psychological and economic dimensions for ageing communities and their social and cultural contexts (Dugarova 2017). Therefore, it is important to mould impartial understandings of the elderly to prevent prejudices towards these communities.

Research on ageing communities aims to find solutions to issues related to ageing, especially in areas such as ageing in place (Callahan 2019; Wiles et al. 2012; Horner and Boldy 2008) and design for care (Mazuch 2014; Jones 2013). Most studies derive from the area of social work, but in recent decades the area of design practice engaged in matters of ageing, for example, design for well-being (Steen 2016). In this paper, the authors also approach the challenges faced by ageing communities from the perspective of design and social work to explore the role of ageing communities in the social changes they are facing. Papanek (1971) pioneers in his book *Design for the Real World* that designers should stop damaging the earth with poorly designed objects. He calls upon designers to focus on making design an innovative and highly creative tool that responds to the true needs of human beings. Nowadays, designers realise that design expertise is not only to create products and services that benefit companies and customers but also to promote positive social innovation and well-being (Steen 2016).

Thus, in the context of the challenges that ageing communities encounter, this article takes a critical look at how the elderly themselves can play the role of co-designers in the creation of new solutions for senior care. In order to respond to this question, the authors will reflect on the two projects that had in common the goals to create new services or improve existing services. Both projects approached their questions from the point of view of how elderly users can contribute to design processes. The first project, titled Life 2.0, was based in the European Union (EU) with the aim to create an information and communication technology (ICT) platform that could provide socialising opportunities for those elderly who wished to be better connected at a social level. The second project, titled BoAi, was based in China. The aim of BoAi was to explore possibilities for drawing on the memories and stories of the elderly to transfer their remembered and lived experiences into senior care services.

This paper reflects, through a comparative analysis, on the potential of ageing communities to co-design new services for their needs. Thus, the paper asks: How can co-design processes that draw on technological platforms and past experiences, empower ageing communities? How can such co-design processes be implemented by social workers and designers in applied practice? The paper does not set up a binary between “past” and “future”, “old” or “new”, but rather seeks to understand how new technological platforms and past experiences, or “good old days” (Havlena and Holak 1991), can contribute to the co-design of more holistic experiences with the elderly. This knowledge can contribute to the development of social work and social design with ageing communities.

The paper is organised by presenting a review of the relevant theoretical concepts, such as social work, design, participation and empowerment to enable the comparative analysis of the two projects, followed by a discussion about their similarities and

differences. Then, the significance of past experiences and current understandings of social innovation will be highlighted. Finally, the paper presents an argument that alongside the solutions that are found through technological approaches, experiences and memories about the “good old days” of the user (in this case, elderly individuals) should be the subject of an increased focus to ensure a holistic understanding of the needs of elderly users. The purpose of the comparative analysis is to help designers, researchers and service practitioners to appreciate the value of anticipated future and past experiences of the elderly in terms of the care they may want to receive.

Literature review

Participatory and co-design

In social science, participation refers to different forms of involvement, where individuals play a more active role in the process of problem-solving, have greater choice, exercise more power and contribute significantly to decision-making and management (Adams 2008). The practice of participatory design has been in place for almost 50 years. Participatory design has been described by Sanders and Stappers (2008) as a human-centred collaborative approach. Participatory design can be defined as “the process in which actors from different disciplines share their knowledge, experience and practices [...] in order to create shared understanding [...] to achieve the common objective: the new product to be designed” (Steen 2013, 16). This approach posits that those who are being served by design are not mere representatives of the role they play (e.g. users or consumers) from a business perspective – they are also experts and valuable participants who understand their own methods of living and working (Sangiorgi 2013). Participatory design has its roots in Scandinavia, where it originated in the 1970s. In the 1990s, and it experienced more widespread use in the United States where it was termed co-design (Sanders and Stappers 2008).

Design as a form of practice aims to optimise the best solutions and improve the world (Beucker 2015). It shifted, as a discipline, from design styling to focus on problem-solving in both social and material practices (Crouch and Pearce 2012). The design embraces new ideas that can shape the understanding of, and explore solutions for social challenges (Mulgan et al. 2007). Thus, the design has to be capable of evolving into numerous forms to serve the complex problems of society; thus, designers carry the professional responsibility to address social and environmental needs. The actions of designers should address not only the needs of users but also the needs of society. They have to take on the roles of facilitator, service provider, translator and experimenter (Raijmakers, Thompson, and van de Garde-Perik 2012; Stickdorn and Schneider 2011).

Co-design is a design process of collective creation. As Sanders and Stappers (2008) claimed, it indicates collective creativity as it is applied across the whole span of a design process in which designers and people not trained in design work together in design development processes. Participatory design emphasises the user as a partner in the practice of collective creativity and design (Sanders and Stappers 2008). The term originated in the Nordic countries in the 1970s with the aim to involve the users of services in design processes (Jäppinen and Mattelmäki 2015). These terms both address

common notes such as collaboration, knowledge sharing, joint inquiry and imagination within the practice of innovation (Steen 2013).

Stakeholders, including users, designers and researchers, participate in the process of creating and/or improving a design or service (Szebeko and Tan 2010). The individuals who will be served as a result of design (for example the users) engage in the roles of experts by bringing their distinct user experiences, resources and knowledge to the design processes. Thus, they play significant roles in knowledge and concept development and ideas generation (Sanders and Stappers 2008). Pan, Sarantou, and Miettinen (2019) claim that the care for ageing communities should consider the value of past experiences and “good old days” in service design processes with the elderly. In their paper, the authors draw on the “good old days” experiences of elderly people as a resource to inform and transform elderly care practices for improving the quality of their care services.

Social work

The common goal of social work and social design is to mediate challenges that hinder human well-being and social harmony (Ku and Dominelli 2017). Both these fields acknowledge the value of involving participants, or the users, in solving social problems (Ku and Dominelli 2017; Kälviäinen and Morelli 2013; Yanay and Benjamin 2005) as they can be empowered to co-design with social workers and design practitioners. Social work has a history in dealing with different social and environmental problems and acute crisis situations, such as pollution, tsunamis and earthquakes (Ku and Dominelli 2017). The aim of social work interventions is to meet the special needs of vulnerable individuals and groups (Cherry and Cherry 1997; Shahar 1993). Social workers are “the professionals best prepared to deal with complex situations resulting from an emergency” (Yanay and Benjamin 2005, 271). They engage their altruistic and humanitarian principles in doing their best to serve people in need as facilitators, coordinators, service providers and educators in social interventions (Dominelli 2009).

Social work also has a history of intervening in meeting the needs of ageing populations (Ingaro 2015) and maximising the well-being of individuals and cohesive societies (Australian Association of Social Workers 2015). The concepts of ageing in place and ageing in community are theoretical concepts proposed by social work, addressing the importance and meanings of homes, the social environment and the neighbourhood atmosphere for ageing communities in order to avoid loneliness and social isolation (Wiles et al. 2012; Cassel and Demel 2001). Another relatively new concept is ageing in culture, which proposes that ageing is a meaning-making process (Fung 2013). This concept acknowledges that ageing individuals from different cultures should be exposed to their unique cultural context and be encouraged to pursue their own goals for ageing and well-being (Fung 2013).

Social workers and social designers work with the elderly to help them cope with physical disabilities, mental health and mobility challenges with the aim to enable active and independent lives (Ingaro 2015). Social interaction is also a priority, linking family and friends, enabling interactions with and participation in community and cultural or religious organisations (Lee 2009). The issue of care for ageing communities can be perceived as a wicked problem as it entails complex issues that span from physical to psychological, individuals to community, family to society levels.

Social workers and design practitioners are key players in social change Manzini (2014), which highlights the value of individuals as designers and experts in solving their problems. Human-centred and user-centred design emphasise the capabilities of the individual to add value to design, from the perspective of who is being served and who is serving. Manzini (2014) addresses three issues related to design and social innovation, including the need for design to go beyond a designer-oriented process to involve experts and non-experts to create or produce a tangible object and intangible services that will meet the needs of users and the wider society. He also posits that the challenges of daily life can possibly be solved through cooperation, the recovery of knowledge, experiences and practices of a shared culture.

Empowerment

The actors of social work and design practice not only play similar roles in terms of social change, but they share some theories and understandings to explore better the challenges and solutions that are based on participation, design and empowerment. Empowerment is a term originates from the field of community psychology and was introduced by the social scientist Rappaport (1987). The concept of empowerment encompasses “both individual determination over one’s own life and democratic participation in the life of one’s community” (Rappaport 1987, 121). Another interpretation of the term comes from Zimmerman (2000), who states that it is as an intentional and ongoing process that is centred in the local community and involves mutual respect, critical reflection, caring and group participation. In this way, those who lack an equal share of resources can gain greater access to and control over said resources. In the process of empowerment, users are helped by other actors, such as designers and social workers, to become aware of and critically understand their power. They are also supported in the development of necessary skills and actions, through which they can expand their influence and power in society (Kletečki Radović 2008). The concept of empowerment is currently used in various research fields, including social work, social design and feminist research (Granath, Lindahl, and Rehal 1996).

In social work, empowerment is a practical approach of resource-oriented intervention (Ertner, Kragelund, and Malmborg 2010). The present study is motivated by a desire to explore participation and ascertain how empowerment is expressed in the practice of participatory design (Ertner, Kragelund, and Malmborg 2010). In the context of design, empowerment “looks to combine the useful outcomes of participatory design with the altruistic agenda of critical ethnography in order to allow user input into the design [...] that will best benefit them” (Marquis 2008, 14). In order to deal with the wicked problem of ageing communities and the resulting social issues, knowledge about aspects of participation and empowerment borrowed from the social sciences should be combined with design and other multi-disciplinary professions.

Methodology

In order to explain how and why ageing communities can act as co-designers in social innovation, this paper focuses on a comparative analysis. The purpose of choosing a comparative analysis is to explore what the possible drivers are behind the

empowerment of ageing communities through appropriate services, and how this knowledge can stimulate the elderly to act as co-designers in social innovation within senior care creation in the contexts of the EU and China. As Bukhari (2011) states, a comparative analysis is comprised of answering questions about how and why a system will respond to the perturbations of its parameters. A comparative analysis compares and contrasts various aspects of the subjects in question. The comparison aims to identify the similarities between subjects, while the contrast describes their differences (Glaser 1965). The ultimate goal of analysis such as this is to illuminate, critique or challenge the stability of the matter of inquiry (Walk 1998) in order to produce a comprehensive understanding of a particular context.

The comparative analysis of this paper centres on two projects based in Europe and China. Both projects focus on determining the needs and the design of services for ageing communities. One project aimed to create a new digital service platform while the other looked to improve an existing service system in order to improve services for seniors. The Life 2.0 project was funded by the European Commission between 2010 to 2013. The project studied and tested geographic positioning services as a platform for those over the age of 65 in several EU countries in order to improve their social relationships and promote exchanges and meeting opportunities (Cantù, Costa, and Rizzo 2011). The project focused on supporting independent living and social interactions in elderly communities. In comparison, the BoAi project was conducted and led by the first author of this paper in September 2017 in Zhuhai, China. BoAi is a senior care home that hosts approximately 120 senior residents, whose average age is 71. The first goal of the BoAi project was to reintroduce values and experiences of “the good old days” (Havlena and Holak 1991) into BoAi’s care services, as the senior residents appealed to the managers of the home to consider their past experiences when tailoring their care services. The second goal of the BoAi project was to explore a new model of senior care in China.

The Life 2.0 project

The first goal of the Life 2.0 project was to unmask the hidden needs of ageing individuals, thereby generating design-oriented scenarios that considered relevant contexts as well as the users’ needs and challenges. The second goal was to create a social networking service platform that ageing individuals and communities could use to build networks and relations with others in order to increase opportunities for social engagement and activity (Kälviäinen and Morelli 2013).

Participatory design was adopted as the research approach for Life 2.0 in the creation of the digital platform. The Life 2.0 project consisted of four main phases (Figure 1). The first phase was an ethnographic research and analysis phase. This phase involved the potential users of the services that were undergoing development. The aim was to educate the service creators about the needs and desires of the project’s target users. The second phase comprised narrowing the definitions of the project scenarios and collating the contributions from the involved EU countries. In the third phase, the digital service prototype was designed using the requirements that emerged from the second phase. In the fourth phase, the customisation of the platform, based on the feedback received from

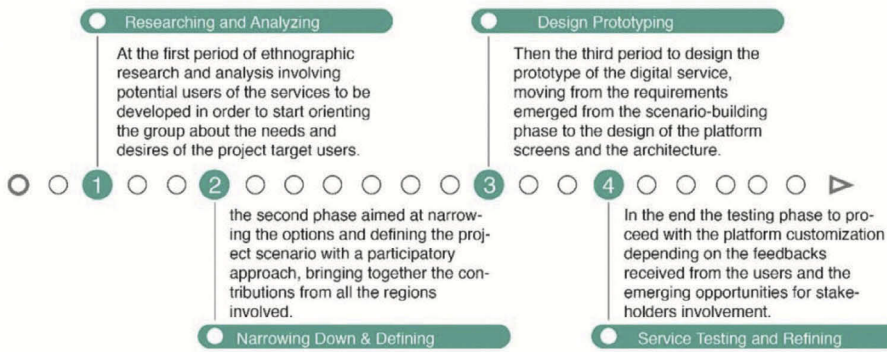


Figure 1. The research process of Life 2.0. The synthesised process is visualised by Pan, Sarantou, and Miettinen (2019).

users and the identified emerging opportunities of stakeholders, took place (Cantù, Costa, and Rizzo 2011).

Consequently, three needs of ageing users were identified by participants and designers and carefully analysed to inform the future actions of designers. The first identified need was the desire of elderly users to take care of others. Ageing communities very often take on care responsibilities for their partners, grandchildren, friends, etc. For ageing individuals, taking care of others gives them meaning and purpose (Kälviäinen and Morelli 2013). The second identified need was the desire for social networking and platonic relationships: Ageing communities want to build, maintain and develop their social relationships. Social events support the elderly in having fun and allow them to cultivate their relationships with others. Social exchanges such as this allow them to overcome loneliness and negativity (Kälviäinen and Morelli 2013). The third identified need was to help seniors in achieving self-fulfilment. In this context, information exchange, activity and event planning, and organising mutual help were identified, as providing access to these opportunities for self-fulfilment improves quality of life (Kälviäinen and Morelli 2013).

Based on the exploration of the needs of the elderly, a participatory workshop was organised by the team of the Life 2.0 project to identify the requirements for a future digital platform. The workshop involved multiple participants, including designers, municipalities, business consultants, technicians and ICT experts from partner countries in the EU, including Denmark, Finland, Spain and Italy (Cantù, Costa, and Rizzo 2011). From this workshop, the following conclusions were drawn (Kälviäinen and Morelli 2013): First, the digital platform should provide access to e-health information sources, remote care services, peer-to-peer assistance and communication with relevant stakeholders (e.g. the public health care system and public associations). Second, the device should be user-friendly and address different ways of creating social interaction between ageing communities.

The BoAi project

The first goal of the BoAi project was to reintroduce values and experiences of “the good old days” (Havlena and Holak 1991) into BoAi’s care service, as the senior residents appealed to the management of BoAi home to consider their past experience in the practice of their care services. The second goal of the BoAi project, as management suggested, was to explore new opportunities for senior care services, which is becoming a competitive area of business in China.

Based on the goals of the BoAi project, design ethnography (Van Dijk 2010) was used as a research approach. The project of BoAi consisted of five phases (Figure 2). In the first phase, the research commenced with participant observations in order to gain an understanding of the current service system and the problems and expectations of the ageing community at BoAi home. In the second phase, focus group discussions were conducted in order to germinate new ideas and views that would suit the expectations of the seniors at BoAi, while in the third phase designers and the elderly worked cooperatively to solve problems identified in the first phase. During the fourth phase, a co-design workshop was organised in which the identified problems were solved through prototyping and testing. Subsequently, in the last phase of evaluation, the values of “the good old days” were successfully reintroduced, illustrating the proactive role of the ageing community in designing their own services and futures (Pan, Sarantou, and Miettinen 2019).

From the participant observations and interviews, three problems were identified. The first problem was an inappropriate dining environment that the ageing community at BoAi had to endure. Dining arrangements and equipment used to serve food within the care home did not encourage interaction, but instead, senior residents were seated separately in different locations and used different tables. This negatively affected the residents’ ability to interact and communicate. The second problem was a lack of community spirit, mainly due to time limitations and restrictive schedules for delivering and serving food, meaning that the service providers and elderly residents rarely engaged in conversation during mealtimes. Consequently, the senior residents watched television during their meals rather than having conversations with other people. The third problem was the lack of “good old days” experiences, which refers to experiences from their pasts that conjure memories of familiar places and practices. The dining services and activities did not represent many values, aesthetics or experiences of the “good old

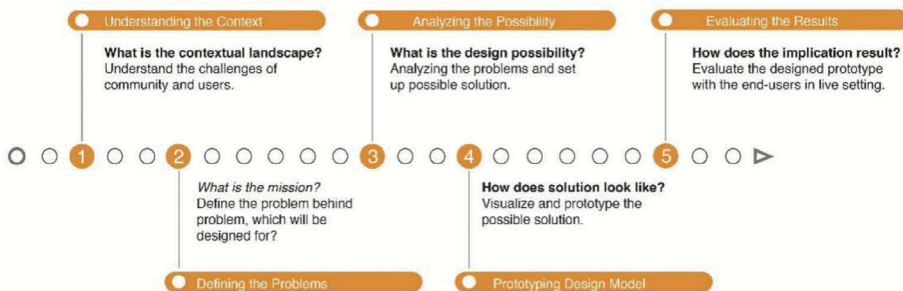


Figure 2. The research process of the BoAi project. Source: Pan, Sarantou, and Miettinen (2019).

days". For example, the senior residents, in the "good old days", used to eat with porcelain bowls and wooden chopsticks, and this added meaning to their dining experience. At the care home, they were served food in metal bowls and ate with metal cutlery.

Based on the identified problems, the ageing community was invited to participate in a co-design process of serving food. A workshop was organised that enabled the elderly to co/design and reintroduce more "good old days" experiences into their meal service. The aim of the new expected service was to eliminate the marginalisation that the senior residents experienced at the care home. The service designers (i.e. the researcher, designer and the elderly) cooperatively redesigned the dining space. The residents were encouraged to participate, comment and offer suggestions and changes, thus bringing their understanding and prior experiences to the activity while gaining ownership of the changes made. The dining table was changed to a longer and more rectangular table that was placed in the centre of the living room to avoid exclusion and forge connections between the residents. Metal tableware was replaced with porcelain plates, bowls, teapots and cups and wooden chopsticks were introduced to suit the more traditional Chinese culture. The atmosphere in the dining space immediately changed following the testing of these changes, and it was noted that the level and quality of interaction between the seniors increased. Asian filial culture was applied to the co-design process. The service providers became more attentive to the seniors. The eldest member was warmly placed in a position of honour, while the service provider was seated in a special position to indicate that they were the host. The eldest resident was seated first, with the remaining seniors seated according to their age, and the host was seated last. All physical interactions were conducted in a caring and respectful way.

Similarities and differences between Life 2.0 and BoAi

The comparative analysis highlighted the different approaches and methodologies used in the research and participatory service design processes of the two projects. The analysis further explored the value of digital approaches used in one project in contrast to the past life experiences of the elderly and how both these phenomena can impact on learning, and be translated into new opportunities for the co-design of new services with and by aged care communities.

Both studies drew from the user experiences of ageing communities as resources and empowered co-designers through which to understand their ways of living and working. They were positioned in the centre of the design process as valuable participants, and their insights and experiences empowered the process of design development. The Life 2.0 project held the view that the elderly are a rich and valuable resource rather than a cause of a growing social problem. In accordance with this viewpoint, the project maintained that the elderly could accurately choose and define the correct functionalities of their new digital service. Similarly, the BoAi project explored the value of the "good old days" and viewed the elderly as co-designers being sufficiently empowered to choose their own care services.

Both projects worked to improve social interaction between the elderly. As well as this, both projects adopted the participatory design approach to discover the values and competencies of ageing communities by involving multiple participants (e.g. the elderly, designers and other stakeholders), thus leading to the creation of improved services.

These two projects convincingly proved that participatory design is a potential enabler of “society-driven innovation” (European Commission 2009) and a strategic concept in the design of services (Sangiorgi 2013). During the process of co-design, the elderly were the most knowledgeable regarding their needs and how they could contribute to successful social design outcomes.

The differences between these two projects comprised their cultural background and geographical settings. Filial piety, as a “good old days” experience, is an important cultural norm in China. In Europe, however, different requirements, such as taking care of each other, are used to show respect to the elderly. The wish to live independently was also an important factor that can contribute to the empowerment of the elderly in Europe. Furthermore, Life 2.0 focused on future technologies and explored the comfort and meaning that said technologies could give to the lives of the elderly, whereas the BoAi project explored the meaning and comfort of the elderly by connecting these elements to the cultural values of the past.

Discussion

The paper highlights that ageing communities, with their valuable understanding of their experiences, can play significant co-designer roles in the development and innovation of care services. They can be enabled to participate in development and learning, and hence empower themselves. By conducting a comparative analysis of both BoAi and Life 2.0 new insights into ageing and care within the context of social innovation, participation and empowerment were gained. These insights are discussed below.

The elderlies are often perceived as “destroyers” of any accumulated value in public services (Vargo, Maglio, and Akaka 2008). Yet, the value of empowerment lies in participating as co-designers to improve services through interactions between stakeholders. Ageing communities are often viewed as lacking purpose due to the onset of physical and mental ageing and weakness, but they could, as demonstrated through both projects that were used in the comparative analysis, engage in social innovation as co-designers, active participants and facilitators. Following this insight, ageing communities should be perceived as resourceful experts and co-designers in matters of ageing, as they are able to share their rich lived experiences of ageing through participation in data collection, analysis and decision-making in relation to the actions and initiatives that concern them.

Dealing with issues specific to ageing need to embrace multiple solutions and different problem-solving approaches for achieving different levels of well-being. Pacenti (1998) interprets Normann and Ramirez’s (1993) concept of value constellations by suggesting the development of different platforms to facilitate interactions between users and service providers with the aim of realising and improving value propositions for services (Sangiorgi 2013). In the Life 2.0 project, the elderly proposed different digital solutions that addressed their needs. The ageing community of BoAi borrowed from their past experiences to assist in designing new services that were informed by the memories and values of past experiences. Both of these approaches can be adopted as empowerment strategies.

Social innovation addresses multiple challenges faced by society and therefore needs to be embraced as a method of achieving improved solutions, especially for ageing

communities. The literature review emphasised the common goal of social work and social design to meet the needs of society. The design takes on an optimistic view to change existing situations into preferred options that meet the needs of users (Simon 1988). For instance, the digital solutions in the Life 2.0 project provided more opportunities for the elderly to participate in social interaction, e-health treatment, and resource sharing for coping with their daily lives. The solutions of the BoAi project have efficiently changed the dining services. These experiences are enriched with contextual and cultural meanings that can empower the ageing communities to participate in the co-design process. Both projects illustrated that ageing community have the capability to contribute to social innovation once they are empowered to participate.

Conclusion

This paper conducted a comparative analysis of two projects from the perspective of design (digital solutions and “good old days” experiences) to explore the important role that ageing communities play in processes of social innovation. The paper drew conclusions as to how ageing communities and the elderly can be empowered as co-designer through participatory design processes. From the discussion of these two projects, three things need to be kept in mind in terms of the senior care issue. First, ageing communities capable of creating solutions in the development of their care services. Secondly, the comparative analysis illustrated that through do-design approaches social innovation can become more meaningful once the dimensions of past, current and future are combined. Finally, past experiences and knowledge of the user, in tandem to their ability to embrace new technologies such as digital platforms, need to be given more attention in social work and design to ensure that social issues in the context of elderly care are effectively addressed.

Disclosure statement

No potential conflict of interest was reported by the authors.

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