Influencing factors and functioning mechanism of the service experience of elderly care when integrated with health care in China: a qualitative study

Zhihan Liu (✉ liuzhihan@csu.edu.cn)

Central South University

Wenya Zhang

Central South University

Linyi Su

Central South University

Research Article

Keywords: Integration of health care and elderly care, Service experience, Qualitative, Constructing Grounded Theory, Influencing factor, Functioning mechanism

Posted Date: December 16th, 2020

DOI: <https://doi.org/10.21203/rs.3.rs-117773/v1>

License: This work is licensed under a Creative Commons Attribution 4.0 International License. [Read Full License](#)

Abstract

Background: As a service delivery mode of integrating health care with elderly care has begun to be vigorously promoted in China, it is urgent to carry out studies on the service experience from the perspective of the elderly, to help evaluate and understand the service performance. Different from the existing quantitative research, this study employed qualitative methodology to dig deeper into the influencing factors and functioning mechanism in shaping the service experience of elderly care when integrated with health care, in the Chinese context.

Methods: Based on Constructing Grounded Theory, we coded and analyzed the in-depth interview data of 20 elders and 6 management staff recruited from 6 elderly care institutions under the emerging service delivery mode being piloted in Changsha, China.

Results: It was found that the service experience of elderly care when integrated with health care is mainly affected by scenario construction, individual cognition and interactive communication. Specifically, the influencing factors can be divided into 9 sub-categories: social foundation, institutional characteristics, service characteristics, psychological characteristics, cognitive ability, understanding and perception, interactive trust, communication and participation feedback. Based on these influencing factors and the functioning mechanism (a total of 9 influencing paths), we proposed a theoretical model of the service experience of elderly care when integrated with health care.

Conclusions: Service characteristics, institutional characteristics and interactive trust have direct effects on the service experience of elderly care when integrated with health care, while social foundation, psychological characteristics, cognitive ability, understanding and perception, communication and participation feedback have indirect effects. From the perspective of polycentric governance, to improve the elderly care service experience, the government needs to make overall plans to reduce the cooperation resistance caused by the uneven distribution of interests among different departments. Moreover, the policy network needs to give more attention to the elderly while improving the supply of institutional services.

Background

Currently, China is ushering in an aging boom, and the elderly population continues to increase at a high level. In 2000, the proportion of the population aged 65 years and above was 7%, compared with 11.9% in 2018 [1]. Thus, there is growing demand for medical services coming from these elderly individuals along with the “silver wave”. In the face of the physical conditions of elderly individuals coexisting with aging and disease, the traditional elderly care mode based on economic support and social care has been unable to meet the real life needs of elderly individuals.

The “elderly care integrated with health care” (“*Yiyang Jiehe*”) is an emerging academic concept and policy-choice in China, resembling the social care integrated with health care or the community-based adult services (CBAS) integrated with medical care for the elderly in many ways. It aims at breaking the traditional separation of health care resources and elderly care resources, and integrates the wide-ranging concept of “health” into all stages of the life time of elderly individuals. On the basis of providing social care and mental support to the elderly, the elderly care integrated with health care can also provide the disease diagnosis and treatment, long-term care, rehabilitation, health education and other services [2]. Some developed countries put it into practice with “long-term care”, e.g., the Program of All-inclusive Care for the Elderly (PACE) and the long-term care insurance (LTCI) system, which have provided enlightenment and reference for the related research and practice in China [3,4]. China has already established 90 national pilot cities for the integration of health care and elderly care, and 22 provinces have set up provincial pilot units. There are nearly 4,000 integrated health and elderly care institutions across the country, and more than 20 thousand health care and elderly care institutions have established collaboration [5]. Some bibliometric studies employing CiteSpace showed

that, the amount of research on the integrated health and elderly care in China experienced a steep growth from 2014 [4,6], along with the promotion of China's national policies since 2013.

Most of the existing research focus on demonstrating the theoretical basis and operational logic of the service models [7], analyzing and evaluating the supply and demand issues [8], or constructing the optimization mechanisms [9]. In general, the academic research on the integration of health care and elderly care services has already passed the stage of discussing the necessity and feasibility of the service delivering mode, and entered into the stage of examining the dilemmas in development and exploring the solutions. However, few sound theoretical explanations and constructions could be observed in previous research findings and conclusions. Furthermore, less attention has been paid to the feedback of the elderly group; there is a striking lack of analysis and evaluation of the service performance from the perspective of the elderly as service-recipient.

Why do we need to value the perspective of service-recipient in elderly care? Against the background of active aging, the demand for elderly care has witnessed a change from meeting the needs of survival to meeting the needs of happiness, development and participation [10]. Elderly individuals are no longer passively receiving services and being cared for. Rather, they start to actively participate in the supply of elderly care services, becoming the beneficiaries and cooperative producers of such services. Coproduction is an effective service supply model guided by the concept of new public governance [11], which calls for placing the service experience in the core position of public service delivery.

Traditional management theories hold that service experience mainly comes from service contact [12,13], including rational, emotional, perceptual, substantive and spiritual experiences [14], and is the result of the interactions among the service object, organism and environment [15]. However, the latest literatures tend to focus on the contact point of individual service and understand the service experience from a more micro level, considering it as an individual's response to external stimuli [16,17]. Attention on service experience has spread from business management to various disciplines, but the research on elderly care services experience is insufficient, specifically when it comes to the elderly care integrated with health care in the Chinese context [18]. Moreover, for now, quantitative research is still the majority in this field. These studies mainly use the satisfaction index to evaluate the service experience of elderly individuals, lacking dynamic consideration of service processes and recipient psychological changes. Therefore, this study initiatively adopts the qualitative methodology to explore the influencing factors of the service experience of elderly care when integrated with health care under the realistic situation of China.

Methods

This research was designed to dig the influencing factors and mechanism of the service experience of elderly care when integrated with health care, based on Constructing Grounded Theory. This method seeks the core concepts reflecting social phenomena in the systematic collection of data and then construct theories from bottom to top through the connections among these concepts [19]. Compared with other qualitative methods emphasizing "description", Constructing Grounded Theory pays more attention to the construction of theories, with exploratory research being the majority, which makes up for the deficiency of normal qualitative research in theoretical construction [20].

Sample selection

Hunan Province has carried out pilot work on the integration of health care and elderly care, which is regarded as a "major livelihood project" in the transformation and development of China, and has made phased progress since 2015. Changsha, as one of the first batches of national pilot cities for the integration of health care and elderly care, has conducted some beneficial exploration and innovation in promoting the implementation of relevant policies and

preliminarily formed several models of integrating health care with elderly care, e.g., “joint operation” and “holistic care”.

According to the principle of purposeful sampling advocated by qualitative research and considering the availability of data, from June to August 2019, we conducted a two-month pre-investigation and formal survey in Changsha, Hunan Province. We visited relevant government departments, defined the sampling frame, and then used snowball sampling method to recruited elderly care institutions and elderly individuals. The recruitment requirements were as follows: (1) ≥ 60 years old; (2) no significant hearing or vision impairment; and (3) able to clearly communicate. Finally, a total of 20 elders from 6 institutions participated in the study (description of the participants characteristics can be found in Table 1). Besides, as we believe the viewpoint of managers would be benefit to form a more comprehensive and in-depth description of the elderly service experience, we randomly sampled and interviewed 1 management staff from each elderly care institution selected respectively. It is worth noting that these staff have close contact with elderly individuals and often directly participate in the delivery of elderly care services.

Data collection

In this study, face-to-face, semi-structured, in-depth interviews were used to collect data. The process included two stages. The first one was a small-scale preliminary interview, from which the feedback was used to adjust the interview outlines (as shown in Supplementary material), and then, a formal interview was conducted. To ensure interviewees’ right to know, the interviewers, on the premise of obtaining their consent, recorded the content of the interview and clearly informed each interviewee of the purpose and significance of the interview and of the use and protection methods for the data after obtaining them. To avoid any unnecessary presuppositions of interviewees, the interviewers only played the role of explaining the theme and deepening the topic during the process. When asking questions, according to the interview outlines, interviewees were allowed to express their opinions as much as possible until they had no new content to present. The interview time of each respondent was approximately 30-60 minutes, depending on the actual situation. In addition to taking note, each interview was recorded at the same time to ensure that no information was omitted. After that, the recording content would be converted into text within two days. All the information was synthesized into a verbatim manuscript of more than 70,000 words.

Table 1 Sample Characteristics of the elderly (n=20)

Gender	
Female	14(70%)
Male	6(30%)
Age	
60-69	2(10%)
70-79	7(35%)
80-89	9(45%)
90-99	2(10%)
Education	
illiteracy	3(15%)
primary school	5(25%)
junior high school	5(25%)
senior high school/secondary specialized school	5(25%)
undergraduate	2(10%)
Income	
below ¥2000	5(25%)
¥2000 - ¥3000	8(40%)
¥3000 - ¥4000	5(25%)
over ¥ 4000	2(10%)
Institution type	
Nursing home	15(75%)
YF	6(30%)
YJ	3(15%)
HR	3(15%)
LL	3(15%)
Daily care center	5(25%)
FL	3(15%)
KN	2(10%)

Data analysis and processing

Coding is the core of qualitative data processing. We adopted NVivo11.0, developed by QSR Company, to perform auxiliary coding and analysis. Affected by the interviewee's linguistic expression habits and data arrangement format, sometimes, multiple lines of data can express a complete concept or category [21]. Therefore, this study does not rigidly adhere to the principle of "line-by-line coding" required by Grounded Theory [22], but according to the three-level

coding method of Grounded Theory proposed by Strauss and Corbin [23], “word-by-word coding”, “sentence-by-sentence coding”, “line-by-line coding” and “paragraph-by-paragraph coding” are used comprehensively for interview data. Through the process of developing the concept and refining the categories by open coding, we finally obtained 36 categories. Spindle coding was performed based on 36 initial categories. By integrating the scattered data again and discovering and establishing the logical connection between the categories, a total of 9 subcategories and 3 main categories were identified (Table 2). The specific number of nodes contained in each category is shown in Table 3. Selective coding sorts out and discovers the core category by describing the “story line” of the phenomenon [24]. In this study, “the influencing factors of the service experience of elderly care when integrated with health care” is defined as the core category, which is composed of three main categories: scenario construction, individual cognition and interactive communication. The related “story line” can be summarized as follows: “the service experience of elderly care when integrated with health care is mainly affected by the scenario construction, individual cognition and interactive communication”. According to the story line, the typical relationship of the factors affecting the elderly service experience in China is initially constructed (Table 4).

Table 2 Spindle Code Table

Main category	Subcategory	Open category			
Scenario construction	●social foundation	●policy support	●economic foundation	●atmosphere of public opinion	●system dilemma
	●institutional characteristics		●living environment	●service facilities	●brand image
	●service characteristics	●institution size	●service attitude		● service effect
		●service timeliness		● service supply and demand	
Individual cognition	●psychological characteristics	●service demand	●psychological expectation	●stereotype	●psychological appeal
	●cognitive ability	●physical condition	●cultural literacy	●personal experience	●economic status
	●understanding and perception	●mindset	●cognitive policy	●information disclosure and understanding	●value perception
Interactive communication	●interactive trust	●psychological adjustment	●role trust	●emotional comfort	●personality traits
	●communication	●verbal expression	●communication medium	●relationship network	●charisma of leaders
	●participate feedback	●willingness for feedback	●handling opinions	●relative deprivation	●weighing of interests

Table 3 Number of Nodes in Specific Categories

Analysis dimension	Influencing factor	Number of nodes	Example of reference points
Scenario construction	Social foundation	52 ¹	We are currently in a state of loss, and there is no profit, but the headquarters will provide some subsidies. The Ministry of Civil Affairs provide subsidies based on beds, tens of yuan per month, which is relatively small. (LLb01 ²)
	Institutional characteristics	84	We cooperated with the community health service centre. It was originally a family doctor's activity in the community, but our community health service centre is a little far away from the community, and doctors do not have so much time to go door to door for physical examinations, so it is very difficult to provide door-to-door services. We changed it to a different form. The doctors had free consultations in the community at a fixed time each week. (FLb03)
	Service characteristics	119	The nurse who just came in has the worst attitude (pointing out the door). (Whispering) She has only been here for a few days with a particularly bad attitude, and she steals things. After I took Chinese traditional medicine in the daytime, it was easy to relieve myself, so she was impatient. She also deliberately said that my son would not give me food and would starve me to death. I am not angry, she has a low level of education; I do not care about her. I still will be kind to people and tell the truth. The attitude of the night shift nurse is quite good. She has been doing this job for several years, and she boils traditional Chinese medicine for me. It is good to eat traditional Chinese medicine, which can cure the root cause. (YFa11)
Individual cognition	Psychological characteristics	109	I am 91 years old (prolonged tone). What kind of service can I still need? I only blame myself for living too old. Why live so long? Sigh... (YJa13)
	Cognitive ability	123	We have different levels of nursing. The first level of care basically includes washing your face, eating, getting dressed, and brushing your teeth. Secondary care includes fewer services than primary care. (HRa17)
	Understanding and perception	129	Some old people want to go home, and their children take them back once a month. Well, I am alone. I cannot move or go home now, and everything is taken care of by the nursing staff. I want someone to chat with me. (HRa16)
Interactive communication	Interactive trust	61	(after thinking for a long time) Sometimes I feel sad...Looking back on my life, I have done a lot for my country in the past. Due to the cultural revolution, many things could not be continued and I suffered a lot. At that time, many behaviors were disorderly (said with piercing eyes). Now I'm old, but I can only live in a nursing home. I can't get through this obstacle in my heart. No matter how good the service is, I still think about it, I feel sad. YJa14

Communication	82	Look, it is this, called “YF old baby” (51 people), and their medical staff are also in this group. My eyes are not good now. I used to watch WeChat groups a lot, but now I dare not be so presumptuous (laughter). I can only look at it for a while and take a break, and sometimes, I do not look at it for a few days. My mobile phone is an old-age phone, and I use the tablet for WeChat chat. Look at our “YF old baby”. Wait a moment for me to wear glasses. (YFa04)
		<p>The service here is very good, but the canteen is a bit poor. There are few kinds of food and the price is high.</p> <p>(Interviewer: Have you reported this situation to the staff?)</p> <p>No, it's useless to say it. There are so many people. (KNa20)</p>
Participate feedback	70	

¹Notes: The number of nodes refers to the number of occurrences in the reference node during the encoding process.

²Coding rules of interview records: for the sake of respecting the wishes of interviewees, the names of all interviewees are hidden and replaced by a combination of English letters and numbers. Capital letters indicate place names, and lowercase letters denote the categories of respondents, where a represents elderly individuals, b represents management personnel, and the number represents the number of respondents.

Table 4 Typical Relationships among Influencing Factors

Relationship connotation	Relational structure
service characteristics → elderly care service experience	direct influence
institutional characteristics → elderly care service experience	direct influence
interactive trust → elderly care service experience	direct influence
social foundation → institutional characteristics→ elderly care service experience	indirect influence
social foundation→cognitive ability/understanding and perception→elderly care service experience	indirect influence
psychological characteristics → service characteristics → elderly care service experience	indirect influence
cognitive ability/understanding and perception→interactive trust→elderly care service experience	indirect influence
communication → interactive trust→ elderly care service experience	indirect influence
participate feedback→understanding and perception→elderly care service experience	indirect influence

Reliability and validity test

The encoding reliability test method advocated by Miles and Huberman was adopted in this study, and the scientific reliability of the encoding results was reflected through analysis of the coding consistency percentage of the two independent coders [25]. The specific process involves randomly selecting 2 copies from 22 verbatim manuscripts, re-coding them according to the coding scheme by another coder, comparing the 2 coding results, and calculating the number of mutual agreements and disagreements between the two coders. Through this calculation, the reliability was found to be 90.53% and the internal consistency was 94.62%, indicating that all the coding has good reliability. In addition, we invited some colleagues and some managers of the elderly care service institutions to evaluate the degree of consistency between the results and the actual situation. Their positive feedback verified the high validity of the research results.

Results

Based on the relationship among categories, we constructed a theoretical model of the influencing factors of the service experience of elderly care when integrated with health care in the Chinese context, as shown in Figure 1.

Theme 1: Policy Support and Institutional Characteristics: Scenario Construction in the Service Experience of Elderly Care

Influencing path 1: service characteristics → elderly care service experience

A key point that service is different from goods is to pay attention to the existence of customers and their interactive nature [26], and it needs to be felt in the process of experience. In the service experience, the nursing staff provide services for elderly individuals and produce service behaviors, which is one of the most important determinants of the elderly care service experience [27]. Their service concept guides the behavior under the shaping of institutional characteristics and becomes the specific code of conduct or convention system established by the institution. The service personnel based on “customer orientation” will quickly process the service feedback information of elderly individuals and finally present it through relatively observable results, such as response attitudes and processing opinions. Their service attitude and behavioral response will positively or negatively affect the elderly's perception and judgment of service quality [28]. One elderly participant described this:

"We can accept the bad living conditions, but the service personnel must be good to us, which is the most important thing. Service is software, living conditions belong to hardware, only hardware, no software, life is not interesting" (LLa01).

Influencing path 2: institutional characteristics → elderly care service experience

The nature and scale of elderly care service institutions to a certain extent determines the service objects and the scope and level of the services provided. For elderly individuals with demand for health and elderly care services, service expenditure and service quality determine whether they purchase the elderly care service. According to the survey, although the Chinese government has published a number of policies and opinions to promote the development of the integration of health and elderly care, there are few elderly care service institutions that really implement integration of health and elderly care into their services. The public welfare elderly care service institutions led by the government are generally an object of competition for the elderly due to their low fees and good reputation, but the amount is relatively limited, and some elderly people are given priority to stay in these institutions, as stipulated by the government, making such institutions often appear crowded. Some elderly people have to turn to public or private elderly care service institutions, and some of which are limited by funds and venues, so it is difficult to carry out diversified service projects.

For example, medical and health services are still at the stage of purchasing daily drugs for the elderly, but such institutions will find other ways to build their own brand characteristics in service quality or leisure activities to compensate for the defects caused by insufficient service supply.

It is worth noting that in the service field, the physical environment has become an important factor influencing the service experience of elderly individuals from the traditional perspective [28,29]. Through field research, the authors found that those elderly care service institutions which allow the elderly to decorate their rooms according to their own wishes and create a warm environment like home rather than full of the smell of disinfectant water are more likely to bring better service experience to the elderly. For example, an elderly person pointed out that:

“They didn't let me put pictures on the wall or table, saying it was unsafe...My husband has passed away. This is a group photo of us, and I have to watch it many times every day” (KNa19).

Influencing path 3: social foundation→institutional characteristics→ elderly care service experience

The national supportive political and economic environment and social and cultural atmosphere directly promote the development of integrating health care and elderly care, but their impact on the service experience of elderly care is more indirect, mainly affecting the elderly service experience and service demand through improving the quality of the supply of health care service [30]. The government's improvement of the supply of elderly care services is a rational system choice based on the integration of departmental rights and responsibilities and the effective interaction of the social and economic environment [31]. The following factors hinder the promotion of the policy in this choice:

Separation of health and elderly care. The construction of the policy environment and financial investment are affected by bureaucratic organization in China, which is mainly manifested in the fact that the government functional departments related to the integration of health and elderly care services are independent. The State Council carried out institutional reforms in 2018, but due to the fact that health and elderly care are subordinate to different administrative departments and the division of responsibilities of each department is different, it is difficult to form a joint force among departments, and the health and elderly care resources are thus in a fragmented state.

Policy preference. The fundamental reason for the division of health and elderly care resources is that the relevant subjects have different interest demands and behavior, showing their department preferences. At present, the local governance model in China mainly adopts the “Promotion Tournament” around GDP growth [32], and local officials take the assessment standard as the incentive means and governance basis. However, health and elderly care services are located in the upper right of the Zhou Li-an matrix analysis framework, which means that these services are part of a government affair with a high degree of vertical administrative contracting and a low degree of horizontal promotion competition. This kind of affair has a large investment, slow effect, and difficult governance, and it is difficult for officials to achieve significant results in the short term. This type of affair is the area with which society is most concerned area, but it is not fully reflected in the core indicators of official performance assessment [33]. Therefore, government functional departments based on rational orientation tend to hold a negative attitude towards or not actively cooperate with such matters, and then, the main responsibility is transferred to the Ministry of Civil Affairs.

System dilemma and policy implementation. The Ministry of Civil Affairs, as the business- competent department of elderly care service, faces difficulty in effectively coordinating the unified cooperation of various functional departments, which has caused some policies to be implemented inadequately. As far as the Ministry of Civil Affairs is concerned, elderly care service is only one part of the department's responsibilities. It also needs to be responsible for a series of services, such as social work, voluntary services, children assistance and welfare, and protection of the rights and interests of the disabled. With limited resources, the focus of the Ministry of Civil Affairs will be tilted. There are

differences in the degree of policy support for elderly care service institutions of different natures and scales; that is, the supply of health and elderly care services in institutions is also subject to the preference and interest choice of government departments. For example, one elderly person in the interview stated as follows:

"Some local departments do not strictly enforce policies. I give you an example. The elderly over 80 years old can get tens of yuan of pension every month, but the money from the previous quarter will only be available in the next quarter. Why? You see, it is funny (said helplessly and sarcastically). The money for December has not yet arrived. It will arrive in February. What can I do? This is what the government does. No one talks to the leader, and he does not know the actual situation"(YFa10).

Theme 2: Cognition and Interaction: Response Mechanism in the Service Experience of Elderly Care

Influencing path 4: social foundation → cognitive ability/understanding and perception → elderly care service experience

The social environment is part of the cognitive system, and it cannot exist independently of cognitive activities. Compared with the macro-environment of system construction and financial investment, elderly individuals pay more attention to media reports on health and elderly care services and the evaluation of public opinion, which are part of what they can touch. In a relatively closed environment, diversified news communication methods are widely favored and welcomed by elderly individuals, as they largely satisfy their convenience for leisure, entertainment and daily communication. Whether it is the choice of institutions before check-in or the evaluation of services after check-in, the interpretation of health and elderly care policies by the news media and reports on related events will shape and affect their cognitive level; in particular, some biased news reports and comments will mislead elderly individuals. These individuals bring this fragmented cognition to the service experience for comparison and add their subjective understanding to become the builders of information, which changes the group cognition of their relationship network and then affects their service experience or service satisfaction. For example, one elderly individual stated as follows:

"You see, the cell phone says that nannies steal things and abuse the elderly all the time, and many children do not know it. You have to install a monitor to find out. In cases of chronic sickness for a long time, there are no dutiful children at the bedside, and my children are unwilling to wait on the elderly. How could the people in the nursing home treat you sincerely"(HRa16)?

Influencing path 5: interactive trust → elderly care service experience

The service experience takes service or service behavior as the carrier and is jointly manifested through the interaction between the service provider and the service recipient. This interaction is linked to social roles and manifests as role interactions. Both parties interact in compliance with role norms. At the same time, the interaction between service personnel and elderly individuals is often regarded as an important factor affecting service experience and relationship evaluation [34,35]. To provide elderly individuals with good service is the goal of the interaction between service personnel and these individuals, but there are slight differences in this interaction at different stages. Generally, elderly individuals will experience a period of adaptation after they have just moved into the elderly care service institution. During this period, service personnel need to focus on psychological consolation and debugging for elderly individuals to help them adapt to their current life as soon as possible. The interaction at this time is more of a one-way output of the service personnel. Once elderly individuals have passed through the adaptation period, the attention they receive from service personnel may be reduced due to the limited number of such personnel. Elderly individuals will actively seek to interact with other elderly individual and service personnel. The interaction at this time is two-way service information feedback and exchange. Of course, there are a small number of elderly people who are reluctant to connect

with the people in these institutions, and some of them even suffer from mania. Restricted by the interview conditions, the authors are unable to explore such inner activities.

Influencing path 6: cognitive ability /understanding and perception →interactive trust → elderly care service experience

From the perspective of elderly individuals, the interaction between them and service personnel is affected by their own concept of providing for the aged, including their understanding of specific elderly care services and policies and the weighing of their own interests. The increased importance of the family population structure and the weakening of elderly care functions have impacted traditional elderly care values. The concept of “independent elderly care” has gradually formed, and elderly individuals are increasingly paying attention to spiritual elderly care. This also makes some elderly individuals choose to actively integrate into elderly care service institutions, to seek spiritual comfort, and to gain respect and recognition [36]. Once elderly individuals adapt to the living environment of the institution, their dependence on services will increase. At this time, the interaction based on the feedback of service information is essentially the construction of an emotional interpersonal relationship, and elderly individuals will be more likely to identify with the services provided by the institution.

“I said to Sun, ‘can you take my brother to walk around more and come down for some exercise?’ His brain is not very good, but he is still fit. I just said it casually, but Sun took it to heart. She... (Grandpa said while crying) She specially added calligraphy activities for my brother, as well as singing. I am really satisfied and moved” (LLa01).

Influencing path 7: psychological characteristics→service characteristics→elderly care service experience

The service experience is abstract, mainly related to the inner activity track of elderly individuals before and after receiving the service. Before receiving services, elderly individuals have a psychological expectation of service based on service demand. If there is a large difference between the expectation and the actual service after receiving the service, then the recognition degree of the service will be lower. Of course, this does not rule out the possibility that the psychological expectations of elderly individuals will decrease after they move into the pension service institution. At present, integrated health and elderly care services are still in the process of exploration, and the implementation of this model in various elderly service institutions is uneven. In many cases, the interaction between elderly individuals and the service personnel is based on emotional communication rather than just based on service appeals. Elderly individuals regard this interactive communication as part of the service experience, even if the problems reflected have not been solved in the end; as long as the service personnel respond well in the process and handle the problems properly, not only can the service satisfaction of elderly individuals be restored but their loyalty can also be enhanced [37]. One interviewee described as follows:

“Last time, I said that the food was too light and tasteless, and the service personnel told me that she would not dare to make it too salty. It is better for health to be relatively light, and she should take care of the taste of most elderly people. I understand her approach. She said that she could cook me some slightly more flavorful meals alone, but I would definitely not accept it. It will undoubtedly increase the workload of others. What is more, I am not living in my own home, and so many elderly people live here” (YJa13).

Influencing path 8: communication →interaction trust →elderly care service experience

In addition, the personal characteristics of the manager, such as his/her leadership style and service concept and cognition and understanding of policies, will exert a subtle influence on the behavior of elderly individuals and the work performance of service personnel. Communication is the most basic interactive behavior, and the generation of trust must be based on certain communication. According to the interviews, most managers of elderly care service institutions are service-oriented leaders who realize leadership in the form of service and attach importance to

customer feedback [38]. They know how to be humble and set an example in their communication with elderly individuals, who are often accessible via service personnel. Similarly, elderly individuals are willing to interact with managers with a more active attitude to enhance their sense of service identity. Secondly, service-oriented managers will affect the attitude and service behavior of service staff [39], making them pay more attention to the service demands of elderly individuals and actively establish good interpersonal relationships with these individuals.

Influencing path 9: participationfeedback→understanding and perception→elderly care service experience

More and more institutions encourage the elderly to directly participate in elderly care services, which is also seen as an opportunity to provide differentiation. Although some healthy elderly people live in institutions, they are willing to take the initiative to follow the service personnel to carry out some elderly care affairs. The transformation of service and service status makes elderly individuals understand the trivial and difficult aspects of elderly care services. In addition, the elderly individuals obtain certain psychological or emotional needs through their own participation behaviors, such as self-identification, sense of belonging, interpersonal contact, service pleasure, etc, which can provide them with a successful service experience and an inherent attraction [40,41]. For example, an old man introduced that:

"Monitor Peng is a real warm-hearted man. He is the labor chief and a veteran Party member. Those communities rely on him the most. The community is engaged in garbage sorting these days and he is on duty at 7 o'clock every morning. Young people can't do it " (FLa07).

Discussion

This study explored what factors affect the service experience of elderly care when integrated with health care and how they function in the Chinese context. The results show that the 9 influencing factors (social foundation, institutional characteristics, service characteristics, psychological characteristics, cognitive ability, understanding and perception, interactive trust, communication and participation feedback) could be sorted into 3 categories: scenario construction, individual cognition and interactive communication. 9 influencing paths have been built among them. The causal relationship between the 9 paths does not exist in specific objects but in the social relations and organizational structure formed by them and respectively affects the service experience. This conclusion is consistent with the research of Jiun-Sheng Chris Lin et al. and basically covers the 7 service experience research topics they summarized [27]. The difference is that the investigation of influencing factors in this study not only covers subjective factors but also takes into account the situational factors of socialism with Chinese characteristics.

Generally, we find that the vast majority of the elderly are satisfied with the services they received. Even some small-scale institutions with underdeveloped health service facilities can also get high praise from the elderly, because such institutions tend to use high-quality services to indirectly compensate the shortage in service supply. In addition, the research shows that China's policy network indirectly affects the service experience of elderly care through influencing the scale of elderly care institutions, the service environment design and layout, and the service supply conditions. Furthermore, separation of health and elderly care, policy preferences, system dilemma and policy implementation will affect the practice effect of the policy.

First, in the process of service provision, the contact between nursing staff and the elderly is a key factor influencing service experience. The elderly makes subjective judgments on the elderly care service experience based on the attitudes and behaviors of the nursing staff. They would take the interaction with the nursing staff as part of the evaluation of service experience. With limited human resource, most elderly people are eager to get attention as more as possible. The attention may be presented as a simple greeting like "put on more clothes when it's cold", or a feedback of problem-solving in a timely manner. Menon and Kahn [42] also emphasized the importance of contact and

interaction in the service experience, they attributed the influencing factors of the service experience effect to four aspects: the interaction between customers and the service environment, the contact between customers and service providers, the own factors of customers and the situation when customers receive services [43].

Second, according to Sara Sandström and other scholars [44], the service experience is anything the customer perceives by its presence or absence and summarize it as the sum of the functional and emotional outcome dimensions of any kind of service, which is consistent with our findings. The cognition and perception of the elderly, based on the cognition of elderly care services and are affected by the physical health status, education level, socio-economic status and emotion of elderly individuals [45-48], is an important dimension affecting the service experience. However, different from the existing studies, we find that some elderly people have a double cognitive standard towards nursing staff involving the emotional needs of elderly individuals based on the balance of interests. On the one hand, elderly individuals want nursing staff to focus on taking care of them. On the other hand, once they notice that the service staff takes special care of certain elderly individuals, they will think that they have been deprived of their rights and interests, and the sense of unfairness at the cognitive level will stimulate them to protest the service staff or the nursing staff. This sense of relative deprivation is likely to trigger a collective action [49].

Third, the institutional characteristics, including institutional size, living environment, service facilities and brand image, have a direct impact on the service experience of the elderly. Pullman, Gross [50] and Pine, Gilmore [51] have introduced the concept of context and believe that service experience is easily affected by consumer density and the degree of congestion of service facilities. In addition to the above traditional situational factors, we also find that the spatial design and layout of elderly care service institutions will bring different feelings to the elderly. When the elderly could arrange their rooms according to their subjective wishes, they will be more willing to share their own lives. The comfort and familiarity of the living environment can bring good service experience to the elderly.

Generally speaking, the combination of health and elderly care services involve four types of behavior subjects: government functional departments, elderly care service institutions, elderly individuals, and service personnel. Each behavior subject could exercise power and perform obligations based on the behavioral pattern expected by society, to further expand the effective supply of elderly care services and improve the service experience and service satisfaction of the elderly care. Specifically, the government should moderately relax the entry threshold of the pension service market, establish contractual relationships with other social subjects through the PPP model of purchasing services, improve the policy system of social capital participating in the development of the elderly care services, and improve the awareness and ability of independent operation of elderly care institutions through policy guidance. Considering the differences of the actual situation of the elderly, first, elderly care service institutions need to accurately identify the service needs of the elderly and provide professional and personalized care. Second, they should actively create a warm environment and overall atmosphere, build a relationship network system that meets the emotional support, cognitive support and behavioral support of the elderly, and create conditions as far as possible to maintain the relationship between the elderly and their families, friends and communities. It is suggested that the facilities of entertainment, fitness and reading in the institution could be opened to the public, so that the elderly have the opportunity to integrate into society and delay their marginalization.

Limitations And Future Research Directions

In view of the limitations of research resources and capabilities, this paper has deficiencies in the following two aspects. First, the service needs of elderly individuals with different health conditions present multi-level and personalized characteristics, which will affect service experience, but this paper only investigates elderly individuals with clear thinking logic and strong language expression, failing to verify the difference in service experience between

physically and mentally disabled elderly individuals and other elderly individuals. Second, this paper only uses the Grounded Theory research method to initially construct a theoretical model and provide relevant explanations, failing to effectively verify the rationality and effectiveness of the model. The next step is to propose research hypotheses among the variables based on the summarized theoretical model and use the structural equation modeling to test the overall fitting degree and significance, measure the model path coefficients and verify the path connections among the variables in the integration framework.

Conclusion

Different from the quantitative research prevalent in the extant service experience literature, this work used the Constructing Grounded Theory research method to deeply explore the influencing factors of the service experience of elderly care when integrated with health care in China. The research started from the external situation construction and internal elderly reaction mechanism, and constructed a novel theoretical model of service experience of elderly care that is suitable for Chinese context. It also intends to expand the breadth and depth of the global research on the elderly service experience and satisfaction to a certain extent.

Declarations

Author contributions

Z.L. and W.Z. conceptualized and designed the study. W.Z. drafted the manuscript and contributed to the materials and analyzes. L.S. performed the documents collection. Z.L. revised the manuscript. All authors have read and agreed to the published version of the manuscript.

Acknowledgments

The authors would like to thank all the participants in the study for sharing their experiences.

Funding

This work is funded by the National Natural Science Foundation of China (71603289), Hunan Philosophy and Social Science Foundation Think Tank Special Project (19zwb25), and the Fundamental Research Funds for the Central Universities of Central South University (2019zzts200).

Availability of data and material

The datasets generated and analyzed during the current study are not publicly available to protect the participants' confidentiality. However, they are available from the corresponding author on reasonable request.

Ethics declarations

Ethics approval and consent to participate

This study complies with national/international/institutional guidelines and Declaration of Helsinki. All experimental protocols have been approved by the Clinical Medical Ethics Committee of Xiangya Hospital, Central South University (No. 202011184). The investigation was carried out after all participating integrated care institutions for the elderly in Hunan Province obtained the informed consent of the recruited elderly individuals and management staff. All data were collected on the basis of informed consent and privacy protection, and did not involve coercion or inducement. All respondents agreed to the follow-up use and publication of the interview materials.

Consent for publication

Not applicable.

Competing interests

The authors declare no conflict of interest to this article.

References

1. National Bureau of Statistics. The 20th of Series Reports on the Economic and Social Development on the 70th Anniversary of the Founding of New China. 2019.
http://www.stats.gov.cn/tjsj/zxfb/201908/t20190822_1692898.html. Accessed 6 March 2020.
2. Du P, Wang X. Combination of medical care and elderly care and the construction of health care service system. *Lanzhou Academic Journal*. 2016; 11: 170-176.
3. Ministry of Health, Labour and Welfare. Outline of the revision of the Long-Term Care Insurance System, etc. 2017; <https://www.mhlw.go.jp/content/0000213177/>. Accessed 25 March 2020.
4. Ada C. Mui. The program of all-inclusive care for the elderly (PACE). *Journal of Aging & Social Policy*. 2002; (02): 53-67.
5. Chen H. The combination of medical and pension care benefits the elderly disabled. *Guangming Online*. 2019.
https://news.gmw.cn/2019-10/13/content_33228388.htm. Accessed 20 March 2020.
6. Qi D. Research hotspots and progress of the combination of medical and elderly care in China—visual analysis based on Citespace. *Labor Security World*. 2019; 15: 25-27+29.
7. Li N, Huang W, Guo M, Zhou Y, He J, Wang M. A Comparative study of medical and health combination at domestic and abroad: Based on knowledge mapping of documents from 2010 to 2019. *Modern China Medicine*. 2020; 22(05): 795-799.
8. Yang C, Lu Y. Behavioral logic and practical experience of “medical embeddedness” as elderly care with medical service: A study of six districts in Shanghai. *Journal of Yunnan Minzu University (Social Sciences)*. 2018; 35(06): 106-112.
9. Zhang L, Zeng Y, Wang L. Study on the influencing factors of the needs for “Medical-Nursing Combined” long-term care institution based on the Andersen Model. *Chinese Journal of Health Statistics*. 2019; 36(03): 339-343.
10. Wu Y. Establish a positive view of ageing to promote the healthy and sustainable development of the elderly care service industry in the new era. *China Journal of Social Work*. 2018; 14: 24-25.
11. Osborne SP. The new public government. *Public Management Review*. 2006; 8(30): 377-388.
12. Bitner MJ, Booms BH, Tetreault MS. The service encounter: Diagnosing favorable and unfavorable incidents. *Journal of Marketing*. 1990; 54(01): 71-84.
13. Pullman M, Gross M. Ability of experience design elements to elicit emotions and loyalty behaviors. *Decision Behaviors*. 2004; 35(3): 551-578.
14. Gentile C, Spiller N, Noci G. How to sustain the customer experience: An overview of experience components that co-create value with the customer. *European Management Journal*. 2007; 25(05): 395-410.
15. Holbrook MB, Hirschman EC. The experiential aspects of consumption: Consumer fantasies, Feeling and fun. *Journal of Consumer Research*. 1982; 19: 132-140.
16. Edvardsson B, Olsson J. Key concept for new service development. *The Service Industries Journal*. 2005; 16(02): 140-164.

17. Schmitt B. *Experiential marketing: How to get customers to sense, feel, think, act, and relate to your company and brands*. New York, Free Press; 1999.
18. Zhang X, Tao Z, Zhou W, Yi Y, Chen S, Zhang D, Zhou J. Analysis of service experience and influencing factors in operating room of gynecological inpatients. *Chinese Nursing Management*. 2018; 18(08): 1076-1080.
19. Chen X. *Qualitative research method and social science research*. Beijing: Education Science Press; 2000.
20. Jia Z. An overview on Grounded Theory and its applications in public administration: methods and practical issues. *Chinese Public Administration*. 2015; 03: 90-95.
21. Sun F. Value conflict management of Chinese local government performance evaluation: An qualitative research based on Zizhong county of Sichuan province. *Journal of Public Management*. 2015; 12(03): 139-150+160.
22. Silverman D. *Doing Qualitative Research*. Sage Publications Ltd; 2004.
23. Strauss A, Corbin J. *Basic of qualitative research: Grounded Theory procedures and techniques (2nd Ed)*. Thousand Oaks, CA: Sage; 1998. p. 1-312.
24. Zhou W. Knowledge service, value-creation and innovation performance: A multi case study on the Grounded Theory. *Studies in Science of Science*. 2015; 33(04): 567-573+626.
25. Miles MB, Huberman AM. *Qualitative data analysis: An expanded source book (2nd Ed)*. Thousand Oaks, CA: Sage; 1994.
26. Christian G. *Strategic Management and Marketing in the Service Sector*. Cambridge. Mass: Marketing Science Institute. 1983; 85-88.
27. Chris Jiun-Sheng Lin; Cheng-Yu Lin; En-Yi Chou. Service experience management in Asia: A review and directions for future research. *Management Review of NTU*. 2016; 26(2): 303-352.
28. Bitner MJ. Evaluating service encounters: The effects of physical surroundings and employee responses. *Journal of Marketing*. 1990; 54 (02): 69-82.
29. Baker J, Levy M, Grewal D. An experimental approach to making retail store environmental decisions. *Journal of Retailing*. 1992; 68 (04): 445-460.
30. Liu Y. The policy network and coupling synergy of medical care and pension service in China. *Chinese Public Administration*. 2018; (08): 53-58.
31. Deng D, Li Y. Integrating old age care with medical service: Rational institution, imbalance between supply and demand and innovative solutions. *Journal of Xinjiang Normal University (Edition of Philosophy and Social Sciences)*. 2018; 39(01): 107-114+2.
32. Zhou L. Governing China's local officials: An analysis of promotion tournament model. *Economic Research Journal*. 2007; 07: 36-50.
33. Zhou L. Administrative subcontract. *Chinese Journal of Sociology*. 2014; 34(06): 1-38.
34. Gwinner KP, Gremler DD, Bitner MJ. Relational benefits in services industries: The customer's perspective. *Journal of the Academy of Marketing Science*. 1998; 26 (02): 101- 114.
35. Parasuraman A, Zeithaml VA, Berry LL. A conceptual model of service quality and its implications for future research. *Journal of Marketing*. 1985; 49 (04): 41-50.
36. Liu J, Zhou Y, Li H, Kuang Y. A qualitative study on the experience of humanistic care for the disabled elderly in the integrated medical and elderly care institutions. *Journal of Nurses Training*. 2020; 35(05): 455-458.
37. McCollough MA, Berry LL, Yadav MS. An empirical investigation of customer satisfaction after service failure and recovery. *Journal of Service Research*. 2000; 3(02): 121-137.
38. Schneider B, Ehrhart MG, Mayer DM, Saltz JL, Niles-Jolly K. Understanding organization- customer links in service settings. *Academy of Management Journal*. 2005; 48(6): 1017-1032.

39. Hong Y, Liao H, Hu J, Jiang K. Missing link in the service profit chain: A meta-analytic review of the antecedents, consequences, and moderators of service climate. *Journal of Applied Psychology*. 2013; 98 (02): 237-267.
40. Bateson JEG. Self-Serving consumer: An Exploratory Study. *Journal of Retailing*. 1985; 61(3): 49-76.
41. Dabholkar PA. Customer Evaluation of New Technology-Based Self-Service Opinions: An Investigation of Alternative Models of Service Quality. *International Journal of Research in Marketing*. 1990; 13(01): 29-51.
42. Menon S, Kahn BE. Cross-Category effects of induced arousal and pleasure on the internet shopping experience. *Journal of Retailing*. 2002; 78: 31-40.
43. Gael B. Physical environment and service experience: an appropriation-based model. *Journal of Services Research*. 2006; 6(01): 45-65.
44. Sara Sandström, Bo Edvardsson, Per Kristensson, Peter Magnusson. Value in use through service experience. *Managing Service Quality*. 2008; 18(02): 112-126.
45. Shapiro L. The embodied cognition research programme. *Philosophy Compass*. 2007; 2(02): 338–
46. Gao Y, Peng H, Wen J, Wang D. The role of education in cognitive ageing. *Psychological Development and Education*. 2011; 27(06): 591-598.
47. Ren X, Wen S, Xue L. Relationship between socioeconomic status and cognitive function in the elderly. *Chinese Mental Health Journal*. 2019; 33(10): 762-768.
48. Ni X, Wang J, Tan Q. Correlation and regression analysis of common factors of depression and personality. *J Fourth Mil Med Univ*. 2005; (01): 67-70.
49. Robert KM. Social theory and social structure. Fress Press; 1968.
50. Pullman M, Gross M. Ability of experience design elements to elicit emotions and loyalty behaviors. *Decision Behaviors*. 2004; 35(03): 551-578.
51. Pine B, Gilmore J. Welcome to the experience economy. *Harvard Business Review*. 1998; 7: 97-105.

Figures

Figure 1

A theoretical model of influencing factors of the service experience of elderly care when integrated with health care

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [Interviewoutlines.docx](#)