Photography as a Research Method in Collecting Information from Elderly Respondents in Senior Housing Design

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Abstract. This study is concerned with acquiring knowledge of elderly peoples' perceptions toward senior housing design by using "photographic technique" based on participant design theory. The researchers asked 78 participants to choose 5 important areas of their own home and to take pictures of these. This was followed by a semi-structured interview. From those meaningful dialogues during the interview process the best insight into the elderly persons' experience is revealed and, therefore, offers an understanding of the elderly persons' perceptions and their spatial design preferences.

The results reveal four very important issues for the elderly participants in their everyday life. First, is concerning the items connected to or from the past. The second relates to family or social life. Third, concerns their hobbies or interests. Fourth, is in regards to where they spend most of their time. Moreover, the results show that by using a "photo taking" method this could possibly make the elderly participant feel themselves as contributing more to the project. Potentially this could improve the effectiveness of data gathered from the elderly respondents.

Keywords: Senior housing Design, Ethnographic method, User experience, Photographic method.

1 Introduction

The aging population has become an important issue during the twentieth century. There has been increased public concern about welfare policy and the quality of physical environment provided for elderly people through both government and local authority. Furthermore, research relating to spatial design for the elderly has been subject to significant growth in recent times.

However, elderly people seem to like having and expressing their own opinions and perceptions about living spaces (Lee 2011). Most design and research is mainly focused on facilities, safety issues and fire prevention equipment etc. In particular, those studies have emphasized the application of interior ergonomics to meet the special needs of the elderly, but without adequately addressing their psychological needs. (Green 1975, Valines 1988). Moreover, in most research, the elderly person has been viewed as a

customer but not a participant and, therefore, their feelings and opinions have been generally ignored. Besides, recent research shows that involving elderly people as participants at all levels of the design and development of their own living environment, is extremely beneficial (Sanoff 2000, Black 2006, Carter and Beresford 2000).

Because of those reasons, then, this study is concerned with acquiring knowledge of elderly peoples' perceptions toward senior housing design by using a "photographic technique" method followed by an in-depth interview, based on participant design theory to understanding of elderly persons' perceptions of recent senior housing design and their spatial design preferences. From those meaningful dialogues during the interview process best insight is revealed into the elderly persons' experience and therefore to a greater understanding of the elderly persons' perceptions of recent housing design and their spatial design preferences. Importantly, this forms a design protocol for the design or modification of environments for the elderly.

2   Research Methodology and Process

2.1   Participants

There are 78 participants in total who are 65 years old and over. These comprise 37% (29 people) males and 63% (49 people) females, with 45% aged between 65-74 years old, 27% aged between 55-64 years old, 26% aged between 75-84 years old and 2% 85 years and over. Furthermore, the top 3 ranked occupations that the participants were engaged in before retirement are as follows: 38% housewives, 14% engineers and 13% working in an industrial service related job.

2.2   Research Procedure

There are 2 phases within the data gathering stages, namely, "photo taking" and semi-structured interview. In the first stage, we asked participants to take 5 pictures of the areas or things they think are important to them in their house and document these by using a digital camera. In addition, a standard operation procedure (S.O.P) was made before the research commenced, to ensure each interviewer received the same type of information.

Following the photo taking procedure, the researcher asked each participant to introduce their own house, including a description of the space arrangement and functions. More specifically, the participants were asked the reasons why they chose those spaces. Further, they were asked about which space they spend most of their time in their daily life. From those dialogues during the interview process, it reveals insight into the elderly persons' experience with their everyday living space and, therefore, helps the researcher to have an understanding of their perceptions and their spatial design preferences.

3   Analysis

Two different types of data were gathered from this research both in quantitative and qualitative format. These include the photographs of spaces the participants took and the Narrative information from the individual interviews.

The results obtained from the quantitative assessment will provide the information on which spaces or items in the house are important to the elderly people. And the results gained from the qualitative assessment will provide more detail on the elderly participants' perceptions of the spatial design.

To analyze the narrative information from the 78 subjects, each interview discussion was reviewed, simplified and summarized in relation to the subjects' perceptions and preferences, regarding spatial design issues of their homes.

4   Findings

The results show that from a total of 390 pictures taken by the 78 elderly participants (Fig.7), the top 10 aspects/areas people selected were as follows: personal collections, travel souvenir/display or family pictures (80 pictures); living room (60 pictures), garden or balcony (34 pictures) kitchen (33 pictures), bedroom (27 pictures), sofa (25 pictures), dining room (23 pictures), Buddhist prayer room (22 pictures), computer (20 pictures) and study room (17 pictures). These were followed, respectively by, bathroom (15 pictures), massage or sports equipment (8 pictures) and second bedroom (4 pictures). Other areas or items with less than 4 pictures included: outlook of the house, stairs, mirror, reception area etc.

After the picture taking process, in depth interviews were undertaken individually with the participants to try and better understand the reasons why they think those areas or items are important to them. The results of this are as follows:
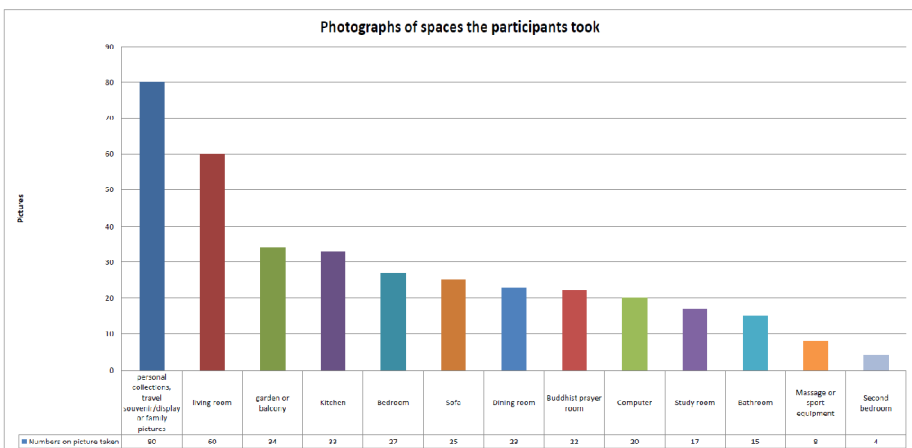

Fig. 1. Photographs of spaces the participants took

Collection/Souvenir or Photo (80 Pictures)

There are 80 pictures in this category, including: medals awarded for their achievements; personal collections such as painting, marbling etc; decorative items given by family or friends; family photos or photos from their vacations and drawings from their grandchildren etc. From the interview, most people explained that the reason they chose those items is because each individual item had its own individual meaning for them, and its own story. Due to this, the participants were able to speak at length about these items.

Living Room (60 Pictures)

The main reason the elderly participants chose the living room is because of the location of the T.V. Indeed, most said that they spend a lot of time watching the news or dramas when they are at home. The second reason is because the living room is usually the place where family and friends meet together and chat etc. Moreover, some participants said that they use part of the living room for reading or to go online. Others explained that they like to use the living room as a display area to show and share with friends their collections.

Balcony or Garden (34 Pictures)

There are 34 pictures taken of balconies or gardens. The main reason given by the participants is because they like plants and flowers and think these can make the environment look more pretty and feel more comfortable, particularly if they live in the city. Therefore, most participants arranged flowers around the house (if living on the first floor) or at the front balcony. Additionally, some of the elderly participants grow vegetables such as sweet potato leaves, by using plastic boxes. In particular, they believe that growing their own vegetables and planting flowers everyday can greatly benefit their health, as it involves a degree of physical exercise and the consumption of natural healthy food.

Also, other than planting, balconies are a convenient place for them to keep pets, such as dogs or birds etc.

Kitchen (33 Pictures)

There are 33 participants who chose to take pictures of their own kitchen, for 2 main reasons. First, they prefer to cook everyday meals on their own, because they think home cooking is more healthy than eating in a restaurant. Second, is because they enjoy cooking and love to make a variety of dishes to share with their friends or neighbors, especially at Chinese New Year or on other special occasions. From the interviews, participants made statements such as, "when people enjoy my food, it makes me feel so proud and joyful" and, so, the kitchen is seen not only as a functional space, but also one that has personal meaning for the individual.

Bedroom (27 Pictures)

Most participants see the bedroom as a private space. Apart from sleep, some participants like to read or rest in the bedroom, as it is normally quieter than other spaces.

Besides, some people prefer to stay in their own room as they don't want to disturb other family members' activities. In this space they enjoy watching their favorite T.V. programmes or being engaged in other activities. Also, in some cases, the bedroom is the only room in the house that has air conditioning. Therefore, during the summertime, they would prefer to stay in the bedroom all day, as this makes them feel more comfortable.

Sofa (25 Pictures)
The sofa is only one of a few items, other than the space/areas, which have been highlighted from the picture taking process. From the interview, the participants explained that the sofa is the place for them to relax, whether watching T.V. chatting with friends or even taking a nap. Thus, the sofa is regarded as a very functional item for them.

Dining Room (23 Pictures)
The reasons the participants chose the dining room as an important place in their house are similar to those expressed about the living room. For them, the dining room is the place where family and friends eat and chat together. Most of them say that they look forward to mealtimes or special events such as birthdays or Chinese New Year etc. as they love the atmosphere when family and friends meet together.

Buddhist Prayer Room (Hall) (22 Pictures)
Religion and spiritual sustenance are the main reasons for the participants choosing the Buddhist prayer room as one of the important spaces for them. A Buddhist praying room is usually a specific area which is separated from other rooms. It is used to show respect to Buddha and to make him offerings, like fruit, incense and candles. Normally, they use these spaces in the early morning and late evening to pray. This room is also used for small group meetings to discuss the Buddhist teachings. Further, as most prayer rooms will pay attention to feng-shui, the participants believe that having a Buddhist prayer room in the house can purify the house space as a whole.

Computer or Laptop (20 Pictures)
Most surprising in the survey is that there are many senior citizens who have a habit of using the computer. Nearly all of them use computers to store and organize the photos they have taken on vacations, or they search for news or health information etc. More commonly, some of the participants use the internet to contact their family or friends aboard. And a few people use the computer to play games.

Study Room (17 Pictures)
Usually, only those in a larger house (over 130 m²) are able to have space for a separate study room. It is typically a multi-functional space used for reading, going online, chatting with friends, writing or even drawing.

Bathroom (15 Pictures)

For the interviewees, they view the bathroom as a functional place in a home, where they can 'wash away' their daily stresses. Some people even prefer to take a bath rather than having a shower, as they think it will help them to relax at the end of the day. In addition, some participants mentioned that they helped with some of the child-care in the home, particularly assisting their grandchildren to take a bath each day.

Massage or Sports Equipment (8 Pictures)

For some participants, physical degradation forces them to stay in the house most of the time, as they cannot participate in outdoor activities. Therefore, simple home equipment such as exercise bicycles, for example, is very important to help the elderly participants in maintaining some basic fitness.

Second Bedroom (4 Pictures)

The main reason participants chose the second bedroom is because they want to keep a vacant room in the house in the event of their son/daughter or grandchildren coming back to visit them. For the elderly participants this room is not only seen as a multi-functional space but also it has special meaning for them.

5   Conclusions and Recommendations

The results demonstrate, firstly, that items connected with or from the past (family pictures, travel souvenirs or displays) are very important for the participants in their everyday life.   Secondly, areas related to family or social life is expressed as another key issue for them. Specifically, the reasons for choosing living room, dining room, kitchen, computer and sofa were because these are the places or functions related to family or friends meeting/connecting. Thirdly, importance is attached to aspects related to the participants' hobbies/interests. For example: garden or balcony for planting the flowers or vegetables; computer for typing articles etc; Buddhist prayer room for chanting Buddhist scripts and the study room for reading or engagement in other activities. Fourthly, is the significance the participants give to those areas where they spend most of their time, such as bedrooms etc.

In addition, the methodologies implemented within this research offer insight into the perceptions of elderly people and provide us with relevant information concerning their requirements. It also shows that by using a "photo taking" method, instead of traditional methods such as direct interview or questionnaires during the design process, could possibly make the elderly participant feel more interested and engaged with what, otherwise, may be regarded as an unfamiliar topic. Indeed, this may make them feel that they are contributing more to the project and, so, potentially improve the effectiveness of data gathered from elderly respondents and achieve more accurate and reliable results. If these findings can be adapted to the field of interior design then they may assist building providers in more fully understanding the experience of elderly residents and, thus, enhance their satisfaction and quality of life.

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