Abstract

Subjective well-being (SWB) is an emerging research topic in the field of design sciences in general and in the field of (interior) architecture in particular. However, research that focuses on the question of how (interior) architecture can positively contribute to SWB still is in its infancy. Taking into account the increasingly greying of our population, design for SWB in the field of residential care design seems very valuable. Therefore, this paper gives a first SWB-exploration of the Belgian intramural residential care landscape. The two most common intramural care concepts in Belgium will be analyzed through the lens of Desmet and Pohlmeyer’s (2013) Positive Design Framework by looking at the first author’s ethnographic research data which resulted from volunteer work. The results give insight in which of the existing concepts has the most SWB-potential while taking into account elderly persons’ changing demands relating to positive experiences in living environments.

Keywords: subjective well-being, interior architecture, residential care typology, elderly people

Introduction

Subjective well-being (SWB) is gaining attention in academic research (e.g. Duyarappah, 2010; Desmet & Pohlmeyer 2013). In literature, SWB has several general definitions, but the ones by Diener (1999) and Lyubomirsky (2007) are the most relevant for our research. Specifically within the field of architecture and interior architecture, interest in and attention to design for SWB are emerging. Currently, the architectural type most closely linked to issues related to SWB in Belgium is that of residential care for the elderly. We use the term ‘residential care’ for the mix of different types of permanent stay for elderly persons, that also provide some form of (medical) care and assistance. In this sector, the architectural concept and the type of care provision are inextricably connected. Due to the ageing population, this sector is under pressure evidenced by the threat of shortage in vacancies (Vlaams Agentschap Zorg en Gezondheid, 2012, 2013). However, equally problematic is the negative connotation residential care has in today’s public discourse. This seems to be caused partially by the negative image with regards to the living experiences in the architectural environment of these settings, which are often perceived as ‘rather clinical’: several studies and public complaints of residents mark this problem area (Callewaert & De Maeseneer, 2000; Neos, 2013; Penninx et al, 2007; Stichting SBO-NH, 2011; Vlaamse Oudereningaard, 2012; Ministerie van Volkshuisvesting NL; 2010). The interactions between a person and his/her physical environment reveal an interaction between objective well-being (OWB), or the realization of ‘primary needs’, such as shelter, hygiene, nourishment and usability in the physical environment which are inherent in this setting, and subjective well-being (SWB), that is an intuitive / emotional ‘state of mind’, a
personal status, which is gaining importance but apparently does not seem to be provided by these settings. In other words, the new demand for positive (living) experiences in the physical environment exceeds what the presently built environment of the archetypical ‘old peoples’ home’ as a ‘resting place’ for the elderly, seems to offer. The accomplishment of OWB does not seem to suffice for the flourishing of elderly people in residential care (e.g., Miller et al, 2012). This problem has an architectural undertone. In our view, this implies that a possible key to obtaining SWB in these environments can be found in the quality of the architectural design and that (interior) architects are challenged to incorporate this intriguing relationship between a person and his/her physical environment in residential care.

This paper is a first step in a research program with the purpose of augmenting SWB in residential care for the elderly through manipulating the (interior) architectural design. When looking at the history of the design focus in residential care architecture (see Stevens et al, 2013) we notice that the introduction of OWB-research topics in the architectural design process in the 1970s (e.g. Universal Design, accessibility, ergonomics) had a great impact on architectural realizations (Mens & Wagenaar, 2009). The interiors of residential care became more adapted to what people needed: user friendliness for elderly who became more and more physically challenged, etc. In other words, this OWB-research contributed to shaping the environment to the needs and demands of people towards their physical environment. Currently, a similar activity is initiated concerning the research topic of SWB, or the newly posed wishes elderly persons have concerning their habitat (Stichting SBO-NH, 2011; Vlaamse Ouderenraad, 2012). However, today we are not ready to provide sufficient design information to (interior) architects in order for them to integrate SWB in their creative processes since there are still many unanswered questions regarding what SWB actually means for the elderly in their built environment. For OWB, on the other hand, a firm knowledge base has already been established and although there is still considerable work to be done, the transfer of this knowledge to designers has also been executed, as evidenced by the many faces and the variety in concepts of residential care present today. Indeed, when we randomly look at the architectural realization of residential care settings in Belgium, we immediately notice a number of care concepts that differ in the sort of care delivery, the specific target group of residents (level of dependence/independence, age, generational differences), etc. Although all care concepts today largely comply with OWB-demands of the target group, it is far less clear how these different concepts perform with regards to SWB. From a typological point-of-view, it is therefore an interesting starting-point to systematically list these variations of OWB-certified residential care concepts, and evaluate them from the perspective of SWB.

**Research purpose**

The main objective in this paper is to get insight in how Belgian residential care concepts currently stand in relation to SWB. First, we give a classified typological overview of the Belgian residential care landscape to frame our research (see Figure 1). We then focus on the specific residential care type of intramural care for a SWB analysis. The focus on the intramural care type evolved out of bringing the entire typological classification in contact with the current care need/situation in Belgium. Statistics show that 2,3% of the Belgian population is in need of long term assistance and care on a constant basis (Statistics Belgium, 2014). Out of the people aged 80 or older, already 42% resides in long term residential care and can be defined as the target group of the intramural care type. Even though the government has been investing in and building a great deal of these intramural care facilities over the last decade and already a great number of Belgian elderly reside in these facilities, a climax has currently been reached relating to a shortage in vacancies.
To continue, the intramural care type will be analyzed based on its objective characteristics. Afterwards, we try to get insight in how intramural care in Belgium currently stands in relation to SWB by analyzing this type through the lens of Desmet and Pohlmeyer’s ‘Positive Design Framework’ (2013).

The Belgian residential care typology and the architectural care concepts

In order to get an overview of the residential care landscape in Belgium to frame our research, we listed the nationally acknowledged and government granted types (Evrard, 2013; Koning Boudewijnstichting, 2014; Myncke et al, 2007; Neos, 2014; Vlaamse Ouderenraad, 2013; Plus Magazine Knack, 2014; San Egidio, 2014; Swinnen, 2012; Vlaams Agentschap zorg en gezondheid, 2014; Waals Gewest Portaal, 2014) and clustered them through a user-centered approach, which resulted in a classification into three major types: (i) ageing in place, (ii) assisted living, and (iii) intramural care. This typology is presented in Figure 1.

The Belgian intramural care type

In this section we define the type of intramural care and elaborate on the objective characteristics of the two most important architectural care concepts within this type.

Definition

The intramural care type unites elderly care concepts that imply a permanent stay for a specific target group of elderly people who are highly dependent on help with activities of daily living (ADL) and care provision (Vlaams agentenschap voor zorg en gezondheid, 2014), and have severe physical and/or lucidity problems. The architectural care concepts in this type offer the same amount of care and assistance. Also, these concepts must offer certain indoor services, such as physiotherapy and daytime animation. There are two intramural care concepts mentioned in figure 1, i.e. the residential care center (RCC) and the small-scale living concept, that differ with regards to the scale of the projects and the attention for the creation of a homelike atmosphere.

Objective characteristics
In this section, we zoom in on the intramural care type and analyze the objective characteristics of its architectural concepts. Intramural care has two government-granted architectural concepts in the Belgian landscape (see Figure 1): the residential care center (RCC) and the small-scale living concept. Although they both appeal to the same target group, they have a very different general approach. A first difference can be found in their occurrence and initiator. Small scale living facilities are less widely spread than the RCC, that can be found in almost every municipality in Belgium (Vlaams agentschap Zorg en Gezondheid, 2014; Waals Portaal, 2014). To give an idea, there are approximately 1620 RCCs, versus only a few dozen small scale living facilities. This demonstrates that the RCC is more available to Belgian elderly persons. A reason for this occurrence seems to be that the RCC was the top elderly residential care concept promoted by the Belgian government after the ‘International year of the Elderly’, that was organized in 1999 by the United Nations (Callewaert & De Maeseneer, 2000). The realization of these facilities has therefore been heavily subsidized. Small scale facilities on the other hand, are a relatively recent concept that originate in private initiatives or non-profit organizations (e.g. San Egidio Simeon en Hanna, 2014). The Belgian governments have only recently started to express interest in this type of intramural care, and have therefore not yet formed a legislation for this type to comply with, or a subsidization scheme. Without governmental financial support, these facilities are quite expensive to build but foremost also more expensive to live in for the residents.

The most important differentiation from our point-of-view however must be made concerning the living experience of the residents, implied in SWB. Small scale living facilities try to be experienced and perceived as very close to a natural home setting, atmosphere and living experience, which is evidenced by the architectural layout of a typical family house and in the concerned personnel management. These facilities provide care for a moderate number of elderly persons that reside together in one house (e.g. San Egidio Simeon en Hanna, 2014; Koning Boudewijnstichting, 2009). There are no nurses in clinical outfits that reveal their actual duty, but nurses who take the role of ‘housekeeper’, dressing like an ordinary person, taking care of lunch and dinner, entertaining the residents, but who also fulfill the necessary medical tasks (Wetzels, 2013). RCCs on the other hand are usually built up from several wards in which the elderly live together in larger numbers following strict daily schedules. They also have a strict day and nighttime regime: daytime is spent in the communal spaces (e.g. dining room, cafeteria, recreation room), and nighttime in the private (bed)room of the resident. In small scale living facilities however, the ‘communal spaces’ are very similar to rooms present in almost every single family house: the kitchen, the living room, etcetera, in which residents can stay when they want to.

Combining this information, we notice that from the viewpoint of a future resident, amongst the two options to choose from, one is a small scale facility, which has a high chance of not being located in one’s direct living area, and is a financial uncertainty, since subsidization is not guaranteed. The other option is the RCC, which one will probably find in one’s proper town/municipality, but which generally has a negative connotation concerning living experiences in a way that not many people make the choice to live there voluntarily or based on positive living expectations (Vanden Boer et al, 2006). In most cases this situation will lead to a selection process by default in favor of the RCC. The already very limited choice is usually nullified by more practical reasons like distance from the current home and finances. In other words, rather negative reasons are steering people towards choosing the RCC as their new dwelling. By looking at the two intramural types through an SWB-lens, linking the actual living experiences to the architectural environment and the background of these concepts, we hope to retrieve more insights in how SWB can occur.
In the next chapter, we will make a transition from the objective characteristics towards the main topic of our research: subjective well-being, and more specifically SWB linked to the architectural environment.

## The Belgian intramural concepts through a SWB lens

In this section, we study the two earlier mentioned Belgian intramural care concepts through a SWB lens in order to learn more on the question if and how the built environment impacts on living experiences and SWB.

### Methodology & procedure

For the SWB research, the authors have selected one case per architectural intramural care concept: one RCC (located in a small provincial town, with 62 residents) and one small scale living facility (a city center dwelling for 7 residents in a large city). The first author has immersed herself into these two care facilities by performing volunteer work and joining personnel and residents in spending one entire day at the concerned facility. During the volunteer work the first author has also informally spoken to residents about subjects concerning their living quality, level of entertainment, care provision, etcetera and to personnel, regarding the amount of time they could spend per resident, work pressure, activities done with residents, etcetera.

Based on the proper experiences and ethnographic research data of the first author, a SWB analysis was executed. We emphasize that this analysis is not a systematic, full-scale SWB comparison between the two facilities. It stands for the detection of important notable elements influencing SWB, intrinsic to the specific architectural care concept and detectable after spending a day at the elderly care facility, performing tasks of the personnel and talking to residents. Therefore, this research functions as a first exploration of the Belgian intramural residential care landscape regarding SWB.

Since our research scope is SWB linked to (interior) architecture, we only elaborate on the first author’s experiences that can be brought back or linked to the (experience of the) architectural environment or features linked to the architectural set-up of the intramural care concepts. Living experiences linked to other factors, for instance staff and care provision, will not be discussed since they do not have a direct link to the built environment.

### Chosen SWB lens as analysis instrument

We opted for Desmet and Pohlmeyer’s Positive Design Framework (2013) as our SWB lens. This framework emphasizes stimulating positive design that contributes to a person’s feeling of subjective well-being (Desmet & Pohlmeyer, 2013). It is developed from a product design background, and states that three ingredients, namely personal pleasure, meaning and virtue will stimulate human flourishing when accomplished altogether in one design. The framework can be interpreted as a working instrument for a designer, on how to design a product in ways that people can experience the three ingredients in order for them to flourish. The fact that it is specifically developed with the purpose of increasing people’s well-being, is an interesting approach that can also apply to architectural designers.

Therefore, this framework seems to be a relevant tool to study SWB in the field of architectural design. The user, in this case the residents of residential care concepts, and their living experiences in and reactions to the environment are placed first. This framework allows us to research if and where ‘pleasure’, ‘personal
significance’ and ‘sense of virtue’ of the resident can occur with regards to the physical environment. All three ingredients are necessary in order for a person to flourish and thrive, which is an element that former studies have acknowledged to be important for elderly persons residing in residential care (e.g., Bergland & Krikevold, 2006). We believe this user-centered analysis of residential care architecture can provide us with valuable information on how the architectural design of care concepts can enhance a positive feeling of well-being by generating pleasure, meaning and sense of virtue to the resident. This approach is an interesting addition to existing research that in most cases reflects on how existing design outlooks in SWB literature are present in residential care architecture (see e.g. Lee, 2007, Stevens et al, 2013).

Results

The RCC

We believe that the physical environment is an important parameter that relates to the element of ‘pleasure’ that is part of the Positive Design framework. Interviews with residents of the RCC for instance demonstrated that they specifically appreciate the fact that they are allowed to arrange and decorate their private (bed)room, i.e. that they have the freedom to furnish and decorate it. This spatial opportunity for the residents (i.e., the potential act of designing) seems to generate a certain effect, that is, residents have the possibility of taking control of the physical environment. When we apply the three ingredients-framework on these activities, it is not difficult to believe that the act of designing the interior of the private room can evoke positive feelings. Not only can pleasure be found in the action of designing and decorating, but also in admiring the ‘end product’. Another important result of this activity, is that the elderly person experiences a feeling of control over this particular space, which evokes feelings of pride and the awareness of an achievement, which is indicated to be important for elderly (Percival, 2002). Also, this act of designing provides an opportunity for social interaction with other residents, since the possibility arises that the elderly person has performed the furnishing and decorating activity in such a great way that other residents drop by to have a look, admire it and give compliments to the concerned resident. This so-called side-effect of the act of designing (social interaction) can generate feelings of pleasure. On the other hand, the act of designing a room and therefore taking control of it, also provides an opportunity for the resident to explore skills and even display them, what could be a key to experiencing a sense of virtue. Taking this even further, designing a room, training and displaying skills and socially interact in it with others, can spur the elderly person to altruistic behaviour in the form of helping fellow residents designing their room. This altruistic behaviour could also trigger experiencing a sense of virtue.

In brief, the simple act of allowing residents to equip, set up and decorate their proper (bed)room can be labeled as an act of positive design, since all three ingredients are met to let the resident flourish.

This privilege of personal decoration is not allowed in the communal spaces of the RCCs, spaces in which a lot of daytime is spent. The fact that the residents do not have an influence in the design of these spaces can – according to our view - be considered as a missed opportunity concerning SWB although we are aware that practical arguments play a role in this respect too. However, we are convinced that there are possibilities to introduce minor design options and give the control over these spaces (partially) to residents. Taking in account that residents in RCCs spend most of the daytime in these spaces, it could be an interesting intervention to open these up to certain forms of personal influences of residents.
Other links of SWB and the built environment of RCCs can be found in the strict day- and nighttime regime of RCCs. Interviews have shown that most residents experience unpleasant feelings when being obliged to rise earlier and consume their meals on other (and fixed) times than they were used to when living in their own private home. This generates the feeling of loss of control. Residents experience the feeling of being deprived of the freedom of living life on their own pace and directing their day in a way they want to, which could pose a possible threat to the residents' self-esteem. However, the possibility exists that small changes in this rigid structure of RCCs can avoid this threat and even trigger positive feelings by residents. The installation of a buffet restaurant for instance, instead of standard meal services, potentially can lead to more freedom for the residents in terms of rising-time in the morning, the time they consume a meal, the ability of making impulsive choices on what they want to eat, etc. These small changes all contribute to experiencing feelings of pleasure and personal meaning, that are two of the three ingredients of potentially flourishing according to the framework. When we search for virtuous behaviour as a result of this intervention, thoughts come to mind that residents can for instance incite themselves to choose more healthy dishes from the buffet options in order to contribute to a healthy living attitude. However, this virtuousness is less clear.

The small scale living facility

The second intramural concept is the small scale living facility. This architectural care concept offers a homelike environment to a small number of residents (<10), whereby the aim is to instill an actual single family home, in terms of spatial configuration, size, room typology etcetera. This perception of ‘homeliness’ has shown to be a very important factor for elderly persons in residential care (e.g. Brummett, 1997; Peace, 2005; Fay 2012). Also, this ‘homeliness’ and moreover the architectural layout of a single family home, provides the opportunity for actions and experiences that apply to the three ingredients of Desmet & Pohlmeyer’s Positive Design Framework. In this intramural concept, residents are able to actively participate in the household chores. The facility is ran by nurses that function as a kind of ‘housekeeper’ and are dressed in regular clothes, which invigorates the ‘homelike’ character of the environment. The architectural layout of the house is similar to that of a single family home, and the ‘communal spaces’ in this case consist of a living room with dining area and an attached open kitchen with kitchen table. In contrast to most intramural care concepts in which meals are cooked in an industrial kitchen out of eye sight, in this care concept meals are home cooked in the kitchen area by the nurse and usually with the help of residents. This homelike concept has the side effect of providing the living area with smells of fresh coffee and cooking flavors, which is a sensory experience that can evoke joyful feelings. The fact that the residents are in direct contact to the open kitchen when entering the living room, and can freely walk in whenever they want and have a snack, or even help in the cooking process, provides them with a sense of control over their daily activities, and gives them ability to test their (cooking) skills and even display them, which contributes to their self-esteem. Observations have shown that the majority of the residents chose to actively participate in the cooking processes. They perform tasks sitting together and chatting, and are even taking initiative in assisting each other when performing more difficult tasks like cutting small pieces of vegetables. This act of participation in preparing a meal, triggers social interaction that gives a sense of pleasure, but also evokes altruistic behaviour, that can provide a sense of meaning and worthiness to the resident. The fact that residents are cooking a meal for their fellow residents can evoke feelings of pride and virtue since they are behaving in a good, altruistic way and are contributing to the welfare of others. On the other hand, residents are never obliged to participate in activities, but rather are given the opportunity, which
also contributes to their sense of ‘freedom’ and ‘independence’ in taking their own decisions and act on them, which implies personal significance.

This small scale care concept puts the emphasis on enhancing residents’ pleasure and self-esteem, and the architectural layout of the facility is an important factor in the realization hereof. Another good example relates to the case’s outdoor patio which is partially arranged as a garden in function of one of the current residents. This resident has the freedom of entering the patio whenever he feels the need to. In this way, in the intramural facility he can continue his old time habit of gardening. This activity provides him firstly with short-term pleasure when actually working in the garden, secondly with meaning and personal achievement when overviewing the garden and its growing greens and being able to harvest vegetables, and thirdly with a sense of virtue, when he accomplishes a garden that is well-maintained, in order and that provides the residents with fresh vegetables. This interesting intervention of adapting the environment to personal wishes of residents, is a noble, SWB enhancing idea, but the remark must be made that it is relatively easier to make changes in a small scale facility with only a small number of residents, instead of in a larger scale RCC-facility with a larger number of residents that all carry their proper wishes.

Another interesting remark is that personal items are not banned from the kitchen area and living room in this small scale setting. Interviews with the main nurse of the facility also revealed that the furniture and decorational items were not chosen purely based on their OWB-performance (e.g., user friendliness and safety) but they had to be a compromise between user friendliness and homeliness.

We can see that this small scale living concept has potential for residents to be able to flourish in their physical environment since the built environment in combination with the organization of the concept responds well to the three ingredients of Desmet & Pohlmeyer’s Positive Design Framework.

Discussion and conclusion

In this paper, we discussed two intramural care concepts in Belgium on their objective characteristics and on how aspects related to their built environment affect residents’ SWB by applying Desmet & Pohlmeyer’s Positive Design Framework of (2013) as a lens of looking at the built environment and how it is experienced.

Analyzing instances of intramural care in Belgium on the potential link between the architectural environment and SWB enhancing experiences, suggests that it is more difficult to accomplish the three ingredients of the Positive Design Framework in the specific care concept of the RCC than in the small scale living concept. We must take into account that the organizational structure and the larger number of residents living together in a RCC complicate the process of trying to provoke SWB through initiatives relating to pleasure, meaning and virtue. According to our preliminary analyses, the architectural concept of small scale living seems to carry more potential of increasing residents’ SWB. Not only the architectural layout of the physical environment as a single family home, but also the way in which the small scale living concept is organized fits the framework. The user-centered approach in which the resident is the key figure around which the personnel operates and up to which the built environment is shaped to a certain degree together with the architectural homelike atmosphere have the ability to enhance SWB. This is an interesting starting point for further research.
Our research and the discussion of results concerned case studies and the insights originating in an analysis of the first author’s experiences in the concerned elderly housing concepts. The results could be furthered and strengthened by also discussing the set-up, organization and experience of the concepts with the concerned stakeholders (architects, interior architects, paying clients and ‘users’ / inhabitants). Also, this research could be furthered by analyzing other types of elderly care facilities. For now, we have put the emphasis on the RCC and the small scale living facility, respectively a fixed value and an interesting “newbie” in the Belgian residential care landscape. These two are the top two types in Belgian intramural care, since they are connected to our way of living and rooted in our cultural system. Looking at other types of elderly care facilities could also reveal cultural differences which can be very interesting in SWB research linked to the built environment.

Also, in this research we focused on a number of (interior) architectural elements. We acknowledge that a lot more can be said concerning other elements in those built environments. We chose to highlight a few elements that immediately caught the attention of the first author and were estimated to have a major influence on SWB. By addressing only a few elements, we enabled ourselves to go into detail and also formulate our proper ideas as spatial experts to find solutions to these SWB-threatening elements or circumstances. However, for future research it could be interesting to try to list more environmental elements influencing SWB in a specific built environment.

References


