

THE ALCALAR MODEL, A QUALITY OF LIFE PERCEPTION: A COMPARATIVE STUDY OF INSTITUTIONALIZED ELDERLY PEOPLE

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ABSTRACT

Summary: A comparative evaluation was carried out of *quality of life* (QoL) perception in different communitarian residential institutional environments for senior citizens.

Method: A cross-sectional comparative study was conducted using a deductive and descriptive statistical method on a sample of 50 senior inhabitants of the retirement village St. Joseph of Alcalar (Alcalar group), 56 senior residents of traditional retirement homes (RSS group) and 52 senior attendees of day care institutions (DCI group). This research comprised two self-applicable questionnaires for elderly citizens, WHOQOL-BREF and WHOQOL-Old PT. We evaluated 158 senior citizens selected from 22 institutions.

Results: The QoL levels perceived by the Alcalar retirement village inhabitants were predominantly higher than the QoL levels perceived by the group of RSS residents and the DCI attendees. The trend in QoL results obtained from the Alcalar retirement village inhabitants was not absolute because it was surpassed by the DCI attendees' results in some (few) areas assessed with both WHOQOL scales.

Conclusion: The Alcalar retirement village group globally showed higher levels of quality of life perception than the other two groups of residents and attendees, respectively, from RSSs and DCIs.

Keywords: Alcalar, Elderly, Quality of Life, Retirement Village.

JEL Classification: D61, H53, I31, I38

1. THE GENESIS OF THE CONCEPT OF *QUALITY OF LIFE* AND ITS APPLICATION

Over the last decades of the twentieth century and the dawn of this millennium, the expression *quality of life* has been increasingly used in common language and has become customary in the current vocabulary. Historically, the expression “quality of life” was originally coined publicly in 1964 by President Lyndon Johnson in a speech in which he stated that “(...) progress on social goals cannot be measured by the size of our bank balance. They can only be measured by the quality of lives our people lead (...)” (Ribeiro, 2005: 95).

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Similarly to the common language, the quality of life expression has often been used by the scientific community, which has made efforts to formulate a commonly accepted operational definition of the concept. However, reaching an accurate conceptualization of *quality of life* has not been an easy task because of its complexity: it is a concept that varies in one individual over time, from person to person, from culture to culture and even from epoch to epoch, since what was once pleasant for many may be currently unappealing to some and unacceptable to all in the future or vice versa.

Contemporary attention is increasingly being paid to qualitative concepts, such as the standard of living and quality of life (hereinafter referred to with the initials "QoL"), which are shared by social scientists, philosophers and politicians and cover care practices as well as general official policies. According to Spilker (1990), the renewed interest in QoL has been especially promoted in scientific areas such as psychology and sociology and has had great importance in the context of comprehensive health care and the political management of economic resources. According to the same author, the increase in studies on QoL was due largely to technological and civilizational progress, which led to an increase in people's life expectancy, mostly due to changes in disease treatment or in relation to the extension of the chronological age. In this context, as society became more aware that the extension of life expectancy did not always correspond to continued well-being, a growing social and scientific concern about the concept of QoL emerged, especially when this started to be considered as a basis for decision making in relation to the duration or term of medical treatments (Spilker, 1990).

From the last third of the last century, it has been possible to find a causal relation as the basis of the development of the notion of QoL: the remarkable recent civilizational development, particularly in the technological dimension of biomedical sciences over the last 50 years, arose at the same time as growing social unrest concerning the progressive dehumanization of senior care provided to people. This unrest increased the public focus on QoL in social and humanities sciences, both of them inspired by the social humanist movement, which, in turn, played (and still plays) a substantial role in policy determination and, as might be expected, influences the biomedical sciences.

The humanizing purpose, focused on the enhancement of wider qualitative parameters than simply controlling symptoms, reducing mortality or increasing life expectancy (Fleck *et al.*, 1999), in our opinion has been ethically crucial and morally just, as it was (and unfortunately still is) relatively common in biomedicine to intend to prolong life, relegating the need to add *life* to lifetime to a secondary plane.

Nevertheless, we are aware that, due to idiosyncratic subjectivity, the concept of QoL has limitations: people's perception tends to be unstable, because what today can be considered as a good QoL might not continue to be so in the future, as change in people and societies also modifies the way in which they evaluate their QoL. In general, despite some identified conceptual limitations, authors seem to be unanimous on two key aspects: besides being multidimensional, the characterization of the QoL notion seems to have a high correlation with the perception that people have about themselves as well as about others and is strongly influenced by the environmental context within the scope of the socio-cultural dimension in which individuals are situated. Despite its conceptual diversity, it is encouraging to note that the proliferation of definitions of QoL underlines the importance that the scientific community has assigned to this theme (Meneses, 2005). This complex conceptual situation seems to be related to the critical link between ageing and QoL, particularly given the importance that such a relationship has assumed in Western societies, in which the QoL concept is one of the main indicators to be taken into account when assessing the living conditions of the elderly (Castellón, 2003).

Therefore, one can verify that the concept of QoL has become progressively more complex over time. It covers an increasingly wide range of aspects of people's lives, among which it comprises the environmental, health (physical and mental) and societal dimensions (which include social organization, political and spiritual, including economic and cultural aspects).

We recall that in the present and future socio-demographic context wherein biotechnological developments allow increasing longevity (which is also reflected in the increased prevalence of chronic pathologies), the central objective of the QoL concept is to determine medical practices and to back up health policies that focus not only on treatment devoted to healing but also on maintaining or promoting a good life existence. However, we must bear in mind that the concept of health as it is proposed in the *Glossaire de la promotion de la santé* (WHO, 1999) implies a positive multidimensional perspective that exceeds pathology and functional deficits; therefore, such a definition should limit any QoL approaches that are exclusively of a biomedical nature, even if they are inspired by the biopsychosocial paradigm.

From a psychological point of view, the QoL results of the evaluation of various components, such as happiness or subjective well-being, self-esteem, coping and resilience, emotional and psychological stability and particularly in the case of ageing, are also dependent on an adaptable attitude towards selection optimization and compensation (Baltes & Baltes, 1990).

QoL also seems to correlate with people's *joie de vivre*, their emotional skills and the establishment and maintenance of their community participation, as well as their expectations about the future and other personal aspects. We also point out that the psychological domain is closely linked to all of the other dimensions, in particular a spiritual relationship with death and the possibility of dying, physical, functional and economic independence, social relationships and, in this particular case, the environment and the way in which individuals live in the environmental space, whether it is natural or human.

In other words, from a psychological perspective, the perceived QoL depends on the characteristics of each person in interaction with others, in view of their socio-environmental and cultural context. From this perspective, from the inclusion of the psychological domain as well as the specific features of the living space in the assessment of the QoL came the proposal to include the assessment of the environmental quality, which is a more measurable concept facilitating research; this is why the environmental domain serves as a specific indicator of QoL.

Studies of psycho-behavioral aspects connecting the surrounding environment have contributed to this understanding, which includes the correlative analysis of the perception of individuals' surroundings (whether they are natural or made by human intervention) and the quest to understand their levels of well-being in connection with the surrounding environment; these concepts have been developed since the mid-twentieth century, opening a new field of psychology – environmental psychology – that has as its main objective to study the interrelational dynamics of human behavior with the environment in which an individual operates: in other words the reciprocal relationship between the person and the environment.

Also known as spatial psychology, environmental psychology analyses human behavior in the environmental and social contexts while investigating the interrelationship between people and the environment, giving great importance to the behavior, perceptions and environmental representations.

Currently, environmental psychology investigates the effects of environmental and structural conditions on human behaviors as well as studying how people perceive the environmental conditions (natural and physical) and hence act individually in and with the environment in which the two coexist.

Claiming that environmental psychology should study the environment and analyze the behavior and perceptions (individual and community) of physical and social or communitarian contexts, Moser (2005) classifies the relationship between the person (or people) and the surroundings into four levels: i) the individual level: the private space or the micro-environment (the workplace, housing, private property, etc.); ii) the neighborhood community level: the environments shared by people or semi-public spaces (the neighborhood, apartment blocks, condominiums, nursing homes, leisure parks, etc.); iii) the individual community level: public environments, the landscape, the intermediate spaces (the settlement, the village, the town, the countryside, the beach, etc.); and iv) the social level: the global environment as a whole, encompassing both the built environment and the natural environment (the resources of a region or country, etc.).

Also according to Moser (2005), in conjunction with this detailed classification, there are four more dimensions in the person–environment interrelationship, giving it greater complexity and dynamism: the cultural, physical, social and temporal dimensions. The author argues that well-being depends on the involvement with the environmental surroundings and, concomitantly, the identity processes, arguing that the way in which people, in self-awareness, interact with the environment and with each other in the environmental context contributes to their well-being, a view with which we agree.

This means that, from the perspective of environmental psychology, natural and built components and individual and social factors interact with each other: they are interrelated. We are also inclined to agree with Ferreira (1997), who states that environmental awareness, environmental cognition, environmental stress and pro-environmental attitudes are also examples of the broad field of study that has been dedicated to contemporary environmental psychology, topics that greatly interest us in our study on residential institutions for the elderly.

All of the multiple components of everyday materials and the sensations and emotions that derive from them are not negligible, but there are other relevant factors, such as age, socio-economic patterns, ethnic and cultural origin, demographics, health and other aspects that make each person a unique being capable of perceiving reality in a unique and idiosyncratic way. All of the environmental influences on individual perceptions, particularly on QoL, are also not negligible. In association there is also the reciprocity of psychological and behavior feedback that influences, in particular, the environment itself.

Mainly from the middle of the last century, as happened with the worldwide population contingent, the average life expectancy also increased to previously unknown levels due to factors related to the tremendous scientific evolution occurring on technological and biomedical levels as well as factors attributable to socio-economic and cultural progress.

Science and clinical experience have shown us that it is not uncommon to face situations in which longevity can be problematic, since it has consequences for different dimensions of life (physical, psychological, socio-economic and cultural). This is also the prospective of Figueira *et al.* (2008), who conclude that the successive losses of autonomy, activity and social participation associated with increased age simultaneously reduce the QoL of the elderly.

It is becoming increasingly evident in contemporary society that living longer may have implications for the QoL of the long-lived, with increasing depression and anxiety and consequences of social exclusion, so often marked by family abandonment. In a way longevity also generates consequences that influence the QoL of other age groups of the population, in particular close family members and caregivers of dependent elderly people.

The arrays of elements associated with the QoL are also highlighted by Paúl (2005), who argues that the QoL of the elderly is modified to the extent that it changes the determining

factors of successful ageing: good health characteristics, personal behavior and the physical, social and economic environment.

From the foregoing, we also agree with Fernandez-Ballesteros (2000), who states that a higher or lower QoL of the elderly results strongly from the circumstances and the environmental context in which they live, also depending on their gender, social status and lifestyle, especially when the combination of all those factors is considered in the long term.

However, with respect to the representations of older people themselves about the meaning of QoL, Silva (2003) indicates that they focus on the relative dimensions of autonomy, physical health, functional independence, psychological balance, social and family relations, economic aspects, citizenship, religion, transcendence and the environment. Regarding the elderly subjects of research carried out by Fernandes (1996), the author states that, among various aspects, functional autonomy, learning about how to live well in old age, self-esteem, psychological and spiritual well-being, social relations, good neighborliness, mutual help and the ability to continue to live in their own homes for as many years as possible were particularly valued by them as leading to a good QoL.

In accordance with what has been previously exposed, we think that QoL perception in the elderly appears to result from a balanced combination of multiple biopsychological as well as socio-cultural factors, all associated with the environmental surroundings. To this end, there seem to be several causes that transmute the relational person–environment dynamic: emotional disorders, trauma and frustration in social life, among other factors, seem to justify the emergence of different (and new) diseases associated with contemporary environmental quality, mostly related to the artificialness of the natural environment, which has often been radically modified by human intervention. In this regard this issue is an important aspect of our research in that it is assumed that the environment influences the perception of QoL of the elderly in certain residential institutional contexts.

In the course of our field research, as a result of close communicative interaction with our elderly subjects, we obtained innumerable comments on their own perceptions about multiple aspects contained in our measured instruments, which are especially suited to the evaluation of their QoL. In the dialogues that we established with the elderly after running the tests, many of which enriched the relevant knowledge, there was a shared and clearly valued aspect for all of them: the importance of good health as well as a good level of functional independence. In this context it is known that, at the biological as well as the psychological level, the elderly are susceptible to potential changes in their state of health that may influence their QoL (Fernandes, 1996). Similar opinions are expressed by Garcia Banegas, Perez-Regadera, Cabrera and Rodriguez-Artalejo (2005), concluding that the health domain, when related to old age, is generally associated with lower levels of QoL. According to Bowling (2001), the elderly, compared with younger subjects, give more importance to issues related to good health throughout the senescent process, considering it precious to allow longevity with low morbidity and to facilitate many opportunities for experiences with moments of well-being, these being a vital dimension (but not exclusive) of a good QoL throughout the ageing process.

In our study we had to avoid the proliferation of QoL concepts that were strongly influenced by the Anglo-Saxon culture. Our final choice fell on the World Health Organization's (WHO) definition of QoL: "Individuals perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of their environment" (WHOQOL Group, 1994: 28).

Our preference for the WHO QoL definition is due to its wide international and cross-cultural consensus with a multidimensional gnosiological perspective, which implicitly contains the influence of personal characteristics on individuals' interdependent relationship with the environment depending on the idiosyncratic subjective evaluation. However, it should be noted that the concept of QoL proposed by the WHO is not exempt from criticism or even immune to changes that promote greater accuracy and completeness. As a matter of fact, we think that such a definition could contemplate an *adaptive dimension* specifically applied to human development, particularly in view of the inevitable human ageing process. In this sense, to the QoL definition proposed by WHO we would like to see added the expression "(...) depending on the capacity to adapt throughout life."

2. THE ARCHITECTURAL INFLUENCE ON THE QOL OF THE ELDERLY

The improvement of living conditions, not only in developed countries but all over the globalized world, has been greatly supported by the extraordinary development of science, not only in the technological area but especially in the biomedical sciences. Such an improvement has also been supported by multiple civilization factors, for example security conditions, access to basic necessities, sanitation, increased labor rights, access to education and adequate housing, among other improvements.

However, despite the enormous civilizational and scientific development, it has not been possible to eliminate all the biological dysfunctions resulting from human senescence, so we must continue to consider the consequent limitations arising from them. With increasing life expectancy, which extends the active life, the time during which individuals live in their residence increases and that can prolong the associated needs within the housing space.

The planning of architectural projects may neglect the relational dynamics of institutionalized people and disregard the identity of residents who inexorably age, resulting in a gradual difficulty in making full use of the residential space, whether on an interrelational plane or even by enjoying their private space, which is often dramatically reduced to a bed (bedridden) and a bedside table. In this context, the architectural barriers can be subtle, unusual and vary the functional capabilities or the idiosyncrasies of the elderly residents. It also happens that, in the institutional context, several obstacles are excessively eliminated that may worsen the mental framework and the functional dependence of the institutionalized elderly, either by excessive protectionism or by the loss of the individuality of residents, which may include actions that are close to elderly abuse – both cases that are common in a residential environment with a "hospital" environment inspiration.

According to architect Sandra Carli (2004), the elderly in general feel satisfied in respect of their living places and the functional limitations in the use of the spaces as they perceive them to derive naturally from their gradual ageing.

Similarly, Luisa Pimentel (1995) finds that the majority of elderly people living in their own homes share a desire to maintain their independence from their families and to continue to reside in their own homes for as long as possible. In addition, Christenson (1990), Marsden (2005) and Paul *et al.* (2005) point out that older people express a desire to continue to reside in their own homes, even if that experience is hindered by functional limitations. In this context the possibility of suffering a domestic accident and the fears associated with that risk have dominated most regulations ad nauseam, instilling in them markedly *hospital* characteristics, which constitute the normative of the institutional spaces for residential care for elderly citizens.

For us it is clear that, as ageing progresses and functional abilities decrease, structural and operative conditions should be created that solve the frequently inadequate residential

habitat (which, however, remains almost unchanged). Conditions should be adapted to older people so that, as advocated by Baltes and Smith (2003), they can modify their patterns of behavior adequately to solve the functional and domestic difficulties caused by their progressive senescence.

Therefore, it seems to us to be desirable for the problem of senescence and the experience of residential spaces to be debated in a multidisciplinary way to promote adaptive changes, not only concerning the behavior of individuals but also through structural reforms in the housing area – whether privately owned or institutional – since there are technical solutions and different types of support, even backed up by the law, that could enable them without excesses of preventive regulation.

There may be difficulties for the elderly in the resolution of functional problems and the relationship with their residential space derived from the natural senescent process – the housing project and the environment, whether private or in the public domain, should be proactively planned in advance to enable the habitat to integrate any physical and psychological needs of all its inhabitants, from children to much older people, to ensure the full use of whatever age and functional capacity each one has. In this context Peters (1999) started his studies in the 1960s on architectural barriers and the improvement of spaces that include improved accessibility through *universal design*. Just as *universal design* seeks to adapt different spaces for people with various anthropometric needs through specific solutions to mitigate unnecessary efforts, particularly of people with physical limitations, we also differentiate ageing from deficiency, because the two singularities are often mixed up (it is quite often implied, in the available literature, that the difficulties and needs of the elderly and the disabled are the same or similar, which is incorrect). Under the principle of *universal design*, an adapted space is considered to be appropriate if a built area and its environmental surroundings are adequate and indiscriminately accessible to all. Therefore, it is the creation of an architectural design with particular concern for all its direct and indirect components – the type of materials, esthetic, function, environment, human, etc. – as a complex and interrelated system (Sandhu, 2001).

The balance in the progressive changes of the human body throughout life should influence the avoidance of obstacles in the creation of any urban project or the elimination of those obstacles in restoration projects or even urban renewal. Such assumptions facilitate and promote the full enjoyment of everyday living environments, proactively optimized so that they can be perceived not only as a residence but essentially as an enjoyable living place. In this regard the conception of the word *home* can find part of its significance to be inseparable from a person's identity in relation to his or her closest members, because, if we perceive the house as a third skin, the personal concept of *home* could act as a collective skin integrating, protecting and uniting all of its members around a central focus or even a spiritual symbol of family unification. In this sense, in its figurative significance, the *home* heats and bonds all the members of a family at the same moment, resulting in a complex condition that integrates memories and dramas, contains the past and the present and projects expectations about the future, including a combination of personal rituals and collective routines as a direct reflection of its inhabitants.

Thus, the symbolic notion of *home* is constituted as a strongly emotional concept and a result of the continuous family life within the space; the emotional stress or insensitivity, calm or an emotional storm, balance or relational disharmony, noise or the absence of sound all echo at the same time in the residential space. Consequently, the intrinsic emotional attribution to the term *home* (now trivially understood in the common vocabulary as a mere synonym for house) is the proper place where the individual interacts in intimate relational dynamics, a personal space where one can enjoy privacy and that also runs the most significant part of life in the family sphere. Therefore, we consider that a house, more

than an architected and built structure, contains huge qualitative potential and intrinsic personal value that, through the hasty contemporary life, has hardly been tapped or is often misconceived. Nevertheless, we think that we should assume it to be an architected structure that was built essentially for individual, multi-family or institutional use, and we hope that the experience of each resident or the relationship between its inhabitants can make any house a pleasing home.

3. THE TYPIFICATION OF PORTUGUESE SOCIAL CARE DIRECTED TO THE ELDERLY: RSSS, DCIS AND THE ALCALAR RETIREMENT VILLAGE PROTOTYPE

Especially in the last four decades, developed countries have witnessed a growing ageing population as well as a higher prevalence of chronic and disabling diseases. These factors entail a huge collective effort, particularly with regard to the establishment and maintenance of the social state. The increase in longevity levels in an ageing population generally corresponds to an increased need for long-term supportive care, which could include skilled or specialized care.

Portuguese social care intervention policies are centralized in the Ministry of Solidarity and Social Affairs; this Ministry is responsible for releasing regulations and signing agreements in the area as well as providing inspections that are carried out in private institutions of social solidarity or other private-oriented institutions that might provide care to the elderly.

In Portugal social care policies or long-term care for elderly dependent people have increasingly been focused – almost exclusively and traditionally – on care provision through the State, which reveals a certain distance from other support models with family-oriented and socio-communitarian integration. However, more recently, the Portuguese state has tried to share part of this responsibility with families and the non-profit private sector (IPSS/NGOs) as well as other business initiatives that are profit-oriented.

The different aid models of Portuguese social care for the elderly could be divided into three predominant models, two of them with obvious social residential community features – residential structures for seniors (RSSs) and day care institutions (DCIs) – and a third aid model with a gregarious nature aiming to maintain pre-existing conditions – home care services (HCSs). Taking into account these three main models, between 2000 and 2012, HCSs recorded the highest national growth (over 62%), followed by RSSs (44%) and DCIs (over 31%) (IGFSS, 2013). According to the latest data available (2014) from the Social Security, among the population over 65 years of age, there were 78,104 people housed in RSSs, 62,928 attendees of DCIs (42,693 attendees of day centers and 20,235 attendees of social centers) and 76,188 seniors with HCSs. Therefore, in Portugal these three models provide direct support to more than 217,000 elderly people (IGFSS, 2014; ISS, 2014b).

3.1. Residential structures for seniors (RSSs)

In Portugal homes for the elderly, nursing homes, hospice care and so on have been designated as residential structures for seniors (RSSs). This care paradigm results from the recent organizational evolution⁴ of the services and standards that were determined by official standardization of their quality requirements⁵.

RSSs are collective institutions intended for permanent residential care of the elderly, which can take different formats in regard to the accommodation provided. Each format

⁴ Modern Portuguese nursing homes are the oldest religious and mutual structures intended for the refuge of the elderly, lunatics and mendicants and were previously referred to as asylums, the origin of which dates back to the fifteenth century in Portugal.

⁵ The Portuguese legislation and the National System of Quality Management in RSSs have used as a reference the NP EN ISO 9000 (international standards used as a model for the design and implementation of quality management systems in different countries), as well as the Model Quality Evaluation of the ISS – SAD 2005 (adapted from Social Response for Elderly, SCML, 2008).

obviously differs from the others. Theoretically they are grouped into two main types: *nursing homes* and *residences for the elderly*.

In the first group of RSSs, we find structures that shelter the elderly; currently it is the most common model in Portugal. Commonly of a collective nature, these housing structures function mainly to provide basic long-term care services for institutionalized seniors. In turn, *residences for the elderly* are inspired by the *homelike* concept. They are usually made up of private rooms, suites, houses or even assisted housing that tend to be planned and organized as residential structures with a welfare purpose identical to their counterparts, *nursing homes*. These have the purpose of providing permanent care to residents. The differences between the two focus on the wider variety and better quality of accommodation and the individualized services that residences can provide as well as the degree of operational independence and freedom of choice provided to elderly residents. Given those premises, those residences are usually (but not exclusively) operated by private for-profit entities and are generally targeted structures for social classes with above-average incomes, which constitute residual markets. The housing units of *residences for the elderly* are of a personalized nature, imitating a *homelike*⁶ environment. In a collective residential model, the rooms are individual or for couples and are usually of a private nature.

Among the RSSs functioning on the Portuguese mainland in 2012, the accommodation room is the predominant model (97%). Regarding the population living in RSSs, according to the latest data, users over 80 years of age (in 2012) constituted about 70% of the total, of which 46% were 85 or older, which highlights the significant weight of this long-lived age subgroup, in which women are the majority. The statistical distribution of users according to the length of time spent in an RSS shows a large share of long stays: 50% of users remain in RSSs for 3 or more years and 30% stay for a period exceeding 5 years. Longer stays have a greater prevalence in not-for-profit entities (33% stay for over 5 years), while in for-profit entities, stays of short and medium terms record a greater weight of 66% up to 3 years (IGFSS, 2013).

According to recent data from the Portuguese Social Security (2014), there were 78,104 people over 65 years housed in RSSs (IGFSS, 2014; ISS, 2014b).

3.2. Day care institutions for the elderly: day care centers and social centers

Day care institutions (DCIs) include day care centers (DCCs) and social centers. Both establishments are social responses aimed at providing adequate care services to meet the different daily needs of the elderly and/or activities that might contribute to their socialization or even possibly delay some harmful consequences of the ageing process. Individuals attending DCIs receive daily support without residential boarding, that is, they return daily to their homes. One of the main aims of the Portuguese DCIs is to prevent isolation or social exclusion and to promote interpersonal and intergenerational relationships. DCIs support the elderly during the day and favor their permanence in their habitual residence (ISS, 2014b).

As a principle, most DCIs share some common objectives; however, between them there are differences in the variety and scope of services. Comparing day care centers with social centers, we establish DCCs as a more complete valence in which the support capacity is more comprehensive. In this sense, the day care centers provide services such as an adequate diet according to age and problematic health, proper hygiene and comfort, and cleaning and organization of their clothes, and they even facilitate access to information on different services for the community that might satisfy other needs. In DCCs it is also possible to

⁶ These institutions may provide a wide range of services (permanent ward, medical and emergency services, physical therapy, library, workshops, home automation, etc.). It is noteworthy that the most recent Portuguese homes for the elderly already provide high-quality wellness and leisure services, such as a dining a la carte service, spa, gym, personal trainer, hairdresser, beauty salon, concierge and other hospitality services. However, it is a residential market that is increasingly geared towards the elderly socio-economic elite.

provide psychosocial support and the development of socio-cultural animation activities: recreational and occupational as well as religious assistance. In turn social centers are generally institutions of less complexity that organize recreational and cultural activities involving the elderly of a local community. According to the latest data from Social Security, during the year 2012, about 20,235 attendees used the Portuguese social centers (IGFSS, 2014; ISS, 2014b). With regard to DCI attendees, in 2012 about 50% were younger than 80 years old and they were mostly composed of females, a trend that is found in all the responses directed to the elderly population, which seems to confirm the preponderance of females in the frequency of RSSs and DCIs. This factor is probably related to the supremacy in numbers of the female population groups among the oldest age groups. It should be noted that, according to recent data from the Social Security (2014), in Portugal there were about 62,928 clients who benefited from the services provided by DCIs, being, respectively, 42,693 attendees supported by DCCs and 20,235 attendees of social centers (IGFSS, 2014; ISS, 2014b).

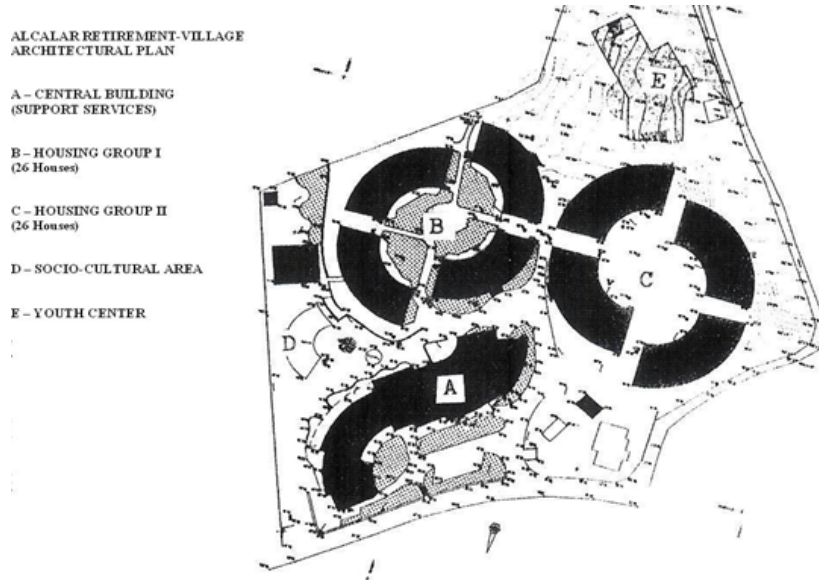
3.3. The retirement village St. Joseph of Alcalar: a community residential prototype for the elderly

In 1988 the basic conditions were met for boosting the creation of a new model of nursing home that could environmentally mimic a village. The Jesuit Father Domingos Costa began the architectural conceptualization in close collaboration with the architect Martim Afonso Pacheco Gracias. They agreed that all the buildings should have one central core, two housing nuclei consisting of the houses for the elderly families, one social center and a support center for visitors, since contact with foreign parishes favored the arrival of students and started to sow the seed of inter-generational socialization, which is today made possible by the nursery.

As shown in Figure 1, the big “S” (for solidarity), the circular development for two housing units, creating free and conveniently landscaped spaces, allows the coexistence of a great quality of life (Costa, 2000). According to architect Martin Gracias’s description (cited by Costa, 2000): “Once defined the architectural structure (...) it had been a choice of interpenetrating and engaging forms; hence the use of circular shapes (in conceptualizing the design of the proposed architecture).”

The design of the retirement village of St. Joseph of Alcalar had in mind fluid and easy access between the common areas and the promotion of a neighborhood between houses arranged around a square.

Figure 1: Alcalar village scheme, designed by architect Martin Gracias (Costa, 2000, adapt.)



The largest building in St. Joseph of Alcalar Village is the Central Services Block, which is the central core. This building is in front of the car park, and the two main entrances flank a small wall that separates the village from the municipal road. The enormous house, with two floors that follow the gentle slope of the entrance to the property, was the first building to be built during the three phases of construction of the village. In it are installed various support services (the kitchen, storerooms and community dining hall, the doctor, nursing and physiotherapy offices, a hairdressing salon, laundry and ironing, cleaning services and household support, the general store, administrative services, a meeting room, a multi-purpose workshop, a chapel, a library and a huge ballroom).

Surrounding the central core of the main building (A) is the Socio-Cultural Area. This recreation area welcomes us with a huge carob tree alongside a stone amphitheater in a clear and moving evocation of the Mediterranean. Adjacent is a small building that houses the bar run by village residents. The building once housed a small grocery store and bar intended for use by residents, which, however, ended as a result of excess regulatory requirements by the Ministry of Finance. In this area we can find outdoor exercise equipment and a communal barbecue area.

Each of the 2 housing units consists of 26 houses of T1 (29.00 m²), 18 of T2 (48.60 m²) and 8 of T3 (60.40 m²), amounting to 52 houses in the village. Divided by 2 circular cores, the buildings form 2 garden squares limited by long circular porches, under which is the private access to each residence. The Alcalar retirement village has a maximum capacity of 130 habitants. The sequential circular arrangement of houses is extended outwards by the protecting traditional porch, which facilitates the use of the living space. The communal porch promotes coexistence with neighbors, with connecting personalized spaces, and functions as a conduit passage between premises.

Each long porch could provide private or public use at the same time. As it is circular and covered around the square, it provides protection for pedestrians, sheltering them from the sun and the rain. It is also a recreational area as the circular layout of the buildings serves as a proximity link by allowing visual connection with all the neighbors of the 26 houses in each residential core. The extensive porches see their function multiplied by the customization of the inhabitants, who use them as an area for meals, relaxation or playing cards.

Both garden squares resulted from the circular layout of the buildings. The two housing units are delimited by four symmetrical and diametrically arranged passages, which serve as access streets between cores or to other built areas and the adjacent natural environment. Thus, with the arrangement of passages properly paved, the flow between the core and the housing is not a problem even considering people with disabilities. The community gardens were an initiative undertaken by the most active residents. They are grown at the rear of the housing core (B and C) but a little could appear everywhere, as the inhabitants plant in pots and make beds of vegetables and herbs. Sometimes they even attach areas for the garden each time that the grass is scarce. In addition to the gardens and flower beds cultivated by the elderly, there are some domestic animals, such as chickens, some adopted cats and a donkey called Buda.

The entrance to each residence connects to an open space that integrates a living room, a dining room and a kitchenette with basic equipment. All the residences are equipped with a full bathroom, hot and cold water, electricity, land line telephone, central heating, TV installation, stove, oven and fridge. The residents are free to bring or purchase appliances, furniture or other facilities that they deem necessary for their comfort. The house is decorated in accordance with the taste of each resident, allowing the space to be transformed into a homelike environment. If residents prefer, the Board of the retirement village of St. Joseph of Alcalar can provide equipment and miscellaneous furniture, which are usually donated by companies or individuals.

Note also that the nearly 2 hectares of property also incorporate a youth center attended throughout the week by about 140 children distributed between the nursery, kindergarten and after-school activity.

Located on the outskirts of Portimão city in the Algarve, Portugal, the retirement village of St. Joseph of Alcalar is not a traditional RSS, and it is not a resort for rich elderly people. The doors of the village houses are always open to neighbors, friends and family. Visits are always welcome, during the day or at night. Users move in and out at will and help each other in the spirit of a good neighborhood.

The Alcalar retirement village houses were designed for elderly people who cannot or do not want to live alone and do not want merely to survive. In this retirement village, people live in a community type of environment, embedded in nature, and can enjoy their privacy or live more socially as they please. In their living quarters, which are decorated according to the ability and the taste of each one, the elderly residents are formally institutionalized but feel completely autonomous, allowing them to live affectively in the space to the extent that they could consider it their *home*.

4. METHODOLOGY

The main objective of this study focuses on the comparative study of the perception of elderly people⁴ who attend a communitarian residential institution. In this context the main challenge of this study is the investigation of any relevant perceptual differences in their view of their quality of life in terms of the different residential institutional contexts considered. We analyzed the results through a comparative differential intergroup perspective.

Data were obtained from sample groups of institutionalized elderly people in three different community residential environmental contexts: residents of the retirement village of Alcalar, residents of RSSs and attendants of DCIs.

After choosing the target institutions, preliminary exploratory contact was made to reveal our intentions and the subsequent commitment to the study. We started with sample selection, which faced some restraints caused by representation of equiproportionality.

The sample selection variables chosen for each case tried to match the field reality to increase the quality of the data and their degree of reliability, avoiding biased conclusions by standardizing illegitimately. In this sense subjects diagnosed with severe psychiatric pathologies and neurodegenerative diseases were excluded from the records. Consequently, we successfully established a sample of 158 subjects, divided into 3 sub-samples representing each residential institution type. For comparative purposes the intergroup sample was divided into 3 similar groups. In each sub-sample randomly selected subjects were chosen from the available and mentally fit individuals according to the technical and clinical information collected beforehand in each institution, all according to the protocol procedures described below.

Thus, three sub-samples were created with the intention of studying the intergroup comparison. The samples were constituted respectively of: i) the Alcalar subsample formed by residents of the retirement village of St. Joseph of Alcalar (n=50); ii) the RSS subsample, consisting of elderly residents of an RSS (n=56); and iii) the DCI subsample, consisting of elderly attendees of a DCI (n=52). By gender, the sample consisted of 117 elderly women (77%) and 41 elderly men (23%).

We opted to follow a customized methodology with questionnaires that were self-applied or mediated by an investigator. When applicable, we handed out questionnaires to subjects who were able to respond autonomously so we could allow the elaboration to proceed without oversight. We provided prior instructions so they could understand the type of questionnaire applied, and at the end (when we collected the questionnaires) we reviewed each item fully. In the cases in which it was not possible to apply the method under these conditions (for the most varied reasons, from lack of vision to illiteracy), the questionnaires were administered by a field investigator through reading aloud, in a strictly impartial and directive way, with prior deontological information and safeguard privacy. The consecutive duration of the implementation of the set of tests did not exceed 45 minutes each, during which we managed the length of time. The intervals between passages varied according to the availability of subjects; we imposed a rule imposed that breaks were not shorter than 15 minutes between each period of continuous application. The application of the evaluation instruments began in September 2012 with completion in December of the same year.

We performed a descriptive and inferential study as it was intended to describe and summarize the data analyzed using descriptive statistics and generalize the results to the population studied; for this purpose appropriate inferential statistical tests were applied. The data were collected through questionnaires applied within a given time without any interference by the investigator in the behavior of the studied individuals and therefore the study may be classified as a transversal and observational study. In the inferential statistical testing, it was intended to compare the individuals of the three sample groups considered (Alcalar, RSS and DCI) for the studied instruments, that is, how the perception of QoL depends on the group. Therefore, the variable defining the group is the independent variable and the remaining variables included in the inferential tests are the dependent variables.

5. RESULTS

We can point out that the average age of the subjects of the DCI group (80.1 years) is lower than the average age of the subjects of the Alcalar group (84.02 years) and the RSS group (83.52 years). Regarding the schooling level of the three groups analyzed, more than half of the inhabitants in the Alcalar group (54%) are unable to read or write compared with 28.6% of the residents in RSSs and 23.1% of the attendees of DCIs.

Compared with Alcalar, the RSS and DCI groups have a wider distribution with regard to schooling education. In this context the Alcalar group consists of a large majority of illiterate or poorly schooled individuals. With regard to the professional area before retirement, most people in the retirement village of Alcalar (72%) were working in the primary sector, compared with 28.6% of the residents of RSSs and 17% of the attendees of DCIs. In these last two groups, there is a prevalence of labor activity in the tertiary sector.

Regarding marital status, about 36% of the elderly people in the Alcalar group are married or in a long-term committed relationship compared with 12.5% of the subjects in the RSS group and 15% of the subjects in the DCI group. In the three groups, there is a predominance of widowers; however, widowhood concerns only 52% of the population of Alcalar compared with 76.8% of the residents of RSSs and 69.2% of the DCI attendees. Furthermore, in these last two groups, the percentage of older people reporting their situation as separated/divorced is more than double that of the elderly in the Alcalar group.

As for cohabitation and direct social support or proximity support, the Alcalar and DCI groups scored very high values and showed comparable close nuclear family cohabitation (respectively 46% and 50%), while the RSS group scored a low value (3.6%) for this type of cohabitation. The attendees of DCIs revealed a partition between nuclear family cohabitation and living alone, respectively 50% and 42.3%, while the inhabitants of the Alcalar retirement village expressed an approximate equidivision between nuclear family cohabitation and living with mates or friends. Notice that, given the constraints related to the dynamics and establishment of affective relationships (including romantic relationships) among people, it was expected that there would be no complete match between the percentages relating the civil status and the assessment regarding the form of cohabitation.

In relation to the economic situation in terms of monthly income, 44% of the inhabitants of the retirement village of Alcalar, at the time of the data collection (end of 2012), enjoy an income with values ranging between 485 euros (€) and €970, which, in percentage terms, outperforms the other two groups in the study. About 24% of the inhabitants of the Alcalar retirement village mentioned incomes ranging between €254 and €485, while 30% of those people reported incomes between €152.4 and €254; in the range of extremes, only one individual in the Alcalar group (2% of the sub-sample) had an income exceeding €970 and another (also equivalent to 2% of the sub-sample) reported receiving an income below €152.4.

In turn, the income distribution of the elderly population in RSSs differs from the distribution of income of the inhabitants of the retirement village, specifically at the extreme levels: 7.1% of RSS residents have incomes above €970 and, at the other extreme, 10.7% have incomes below €152.5.

As for the attendees of DCIs, compared with the other groups, they show the highest percentage of individuals with incomes above €970 (23.1%), with some notable differences in the distribution of income; particularly at the higher end, the intermediate level of disability and old age pensions add up to two minimum wages (17.3%, compared with 24% and 26.8%, respectively, of the Alcalar and RSS groups).

Health being an essential domain in the perception of QoL, there are differences between sample groups regarding the perception of diseases, as there are differences between the groups regarding the consistency of their perception of diseases and the identification of the existence of chronic diseases. In this context, among the three sample groups, the subjects of the Alcalar group feel healthier, with 60% of older people denying that they have any illness. This group also reveals consistency with regard to the recognition of chronic diseases, with 40% confirming that they suffer from chronic diseases.

Regarding the statistical consistency of the aspects of diseases, half of the members of the RSS group feel sick but more than half (51.8%) claim to have chronic diseases. The same

applies to the attendees of DCIs, among which only 48% say that they feel sick when 51.8% claim to have a chronic disease.

A curious fact of this study is that it was expected that the groups with a higher mean age and longer-lived samples (as with the Alcalar group and, to some extent, the residents of RSSs) would be more affected by health conditions. However, if this comparative assumption is confirmed between the RSS and the DCI group, the results obtained in this dimension are relatively favorable to the Alcalar group: despite Alcalar being the group with the highest mean age and the most long-lived sample compared with the DCI group, the inhabitants of the retirement village presented results that are comparatively favorable in aspects related to disease. This comparative intergroup trend will be confirmed in the other domains evaluated, as will be proven below.

5.1. Perception of QoL through the WHOQOL-BREF

Following the application of the WHOQOL-BREF scale to the sample (N = 158), the analysis of the consistency revealed that the subscales Physical Domain ($\alpha = .836$) and Psychological Domain ($\alpha = .802$) showed good internal consistency. The subscale Environmental Domain presented weak internal consistency ($\alpha = .677$) and the subscale Relationships Domain showed an unacceptable Cronbach's alpha value ($\alpha = .402$), even taking into account the fact that it only contains three items.

Regarding the evaluation of the *quality of life perception*, the results in Table 1 showed the level of overall perception of QoL in the sample of the Alcalar group to be higher than the corresponding perception assessed by the samples in RSSs and DCIs. The differences between the Alcalar group and the other two were statistically significant ($p < .001$ in both comparisons). Specifically, between the RSS and DCI groups, it also reveals a significant difference in that domain ($p = .006$). Just as for the Alcalar group, as we compared the DCI with the RSS group, it showed a significantly lower level of perception of the quality of life than the latter one. Consequently, in this particular domain, the Alcalar group had a measurably and significantly higher level of perception of the quality of life, while the RSS group was found to have a significantly lower one.

As regards the perception of the health domain, no statistically significant differences were identified between the three sample groups ($X^2 [2] = 2.495$; $p = .287$).

In the physical domain, the RSS group had a lower average when compared with the Alcalar and DCI groups, with statistically significant differences between the RSS and the DCI group ($p = .014$) and differences at the limit of statistical significance between the RSS and the Alcalar group ($p = .054$). We did not identify statistically significant differences between the Alcalar and the DCI group ($p = .614$).

In the psychological domain, the RSS group showed a lower average than the Alcalar and DCI groups, with significant differences in the two groups ($p = .004$ and $p = .011$, respectively). In this area there were no statistically significant differences between the Alcalar and the DCI group ($p = .719$).

Table 1: WHOQOL-BREF – value comparison between groups

GROUPS→ DOMAINS ↓	Alcalar (n1 = 50)	RSS (n2 = 56)	DCI (n3 = 52)	KRUSKAL WALLIS (1)	MULTIPLE COMPARISONS (2)
Quality of Life Perception	M = 3.96 SD = 0.49	M = 3.05 SD = 0.72	M = 3.42 SD = 0.75	$X^2 (2) = 44.254$ $p < .001$	A vs. RSS -> $p < .001$ A vs. DCI -> $p < .001$ RSS vs. DCI -> $p = .006$
Health Perception	M = 3.26 SD = 1.01	M = 2.96 SD = 1.08	M = 3.19 SD = 0.91	$X^2 (2) = 2.495$ $p = .287$	No significant differences

Physical Domain	M = 60.14 SD = 20.99	M = 54.21 SD = 17.44	M = 62.77 SD = 19.01	$X^2(2) = 6.805$ p = .033	A vs. RSS -> p = .054 A vs. DCI -> p = .614 RSS vs. DCI -> p = .014
Psychological Domain	M = 63.92 SD = 15.94	M = 55.43 SD = 15.53	M = 62.90 SD = 15.31	$X^2(2) = 10.043$ p = .007	A vs. RSS -> p = .004 A vs. DCI -> p = .719 RSS vs. DCI -> p = .011
Relationships Domain ¹	M = 64.67 SD = 11.97	M = 60.42 SD = 11.81	M = 66.99 SD = 13.40	$X^2(2) = 9.595$ p = .008	A vs. RSS -> p = .058 A vs. DCI -> p = .269 RSS vs. DCI -> p = .002
Environmental Domain ²	M = 69.50 SD = 8.83	M = 59.38 SD = 7.95	M = 66.47 SD = 10.65	$X^2(2) = 34.059$ p < .001	A vs. RSS -> p < .001 A vs. DCI -> p = .110 RSS vs. DCI -> p < .001

1) Kruskal-Wallis test statistics and significance value; (2) significance value of multiple comparisons tested using the Dunn procedure

Regarding the relationships domain, the RSS group had a lower result than the Alcalar and DCI groups. In this area the difference was statistically significant only between residents of RSSs and attendees of DCIs (p = .002).

Still concerning the relationships domain, despite the statistical difference between the Alcalar and the RSS group, it was close to the limit of significance (p = .058) and cannot be considered statistically significant; however, we must stress that this is an indicator of a tendency to take into account. In addition, there were no statistically significant differences between the Alcalar and the DCI group (p = .269).

As for the environment domain, the RSS group showed lower values than the Alcalar and DCI groups, with statistically significant differences in the two groups (p < .001 in both cases); in this domain there were no statistically significant differences between the Alcalar and the DCI group (p = .110).

5.2. Perception of QoL through the WHOQOL-OLD Portugal

To evaluate the psychometric properties of the WHOQOL-OLD Portugal (PT) in this sample, we used a Portuguese version adapted by Canavarro and colleagues (2006). This version consists of 26 items of the original scale, with the same method of listing on a 5-point Likert scale. The WHOQOL-OLD instrument globally showed good internal consistency with a Cronbach's alpha value of 0.884. With respect to each of the 6 subscales, there was poor consistency in the past, present and future activities domain ($\alpha = .662$). In turn, the domains of independence and spiritual relationship with death and the possibility of dying showed reasonable consistency ($\alpha = .749$ and $\alpha = .758$, respectively). The sensorial functioning domain and the social participation domain showed good consistency with Cronbach alpha values above 0.85. In turn, the intimacy domain had very good internal consistency ($\alpha = .926$).

In this WHOQOL-OLD PT instrument, as can be seen in Table 2, from a global point of view, the RSS group revealed a mean value of QoL perception lower than the values of the Alcalar and DCI groups, with statistically significant differences in both groups (p < .001, respectively). Although globally there are no statistically significant differences between the

Alcalar and the DCI group ($p = .676$), the average Alcalar result is the highest among the three groups.

In the sensorial functioning domain, the RSS group had a mean value lower than the values obtained by the Alcalar and DCI groups; however, a statistically significant comparison was confirmed between the RSS and the DCI group ($p = .014$). The results shown in Table 2 indicated no statistically significant differences between the Alcalar and the DCI group ($p = .193$) and the same occurred between the Alcalar and the RSS group ($p = .271$).

Regarding the independence domain, as shown in Table, 2 the RSS group had a lower average result than the others, with statistically significant differences in both groups ($p = .002, p < .001$, respectively). In this specific domain there were no statistically significant differences between the Alcalar and the DCI group ($p = .561$).

In the past, present and future activities domain, the results revealed no statistically significant differences between the groups ($X^2 [2] = 4.688; p = .096$).

As for the social participation domain, the RSS group showed a lower result than the others, with statistically significant differences in both groups ($p < .001$ and $p < .001$, respectively). There were no statistically significant differences between the Alcalar and the DCI group ($p = .969$).

As regards the spiritual relationship with death and the possibility of dying domain, the results obtained showed no statistically significant differences between the three groups ($X^2 [2] = 0.350, p = .840$).

Table 2: WHOQOL-OLD PT – value comparison between groups

GROUPS → DOMAINS ↓	Alcalar (n1 = 50)	RSS (n2 = 56)	DCI (n3 = 52)	<i>K R U S K A L</i> <i>W A L L I S</i> (1)	M U L T I P L E C O M P A R I S O N S (2)
W H O Q O L - O L D G L O B A L	M = 85.96 SD = 11.93	M = 74.43 SD = 12.58	M = 85.13 SD = 10.68	$X^2 (2) = 25.656$ $p < .001$	A vs. RSS $p < .001$ A vs. DCI $p = .676$ RSS vs. DCI $p < .001$
Sensorial Functioning Domain	M = 14.96 SD = 4.01	M = 14.55 SD = 3.29	M = 15.13 SD = 2.89	$X^2 (2) = 6.011$ $p = .050$	A vs. RSS $p = .271$ A vs. DCI $p = .193$ RSS vs. DCI $p = .014$
Independence	M = 14.14 SD = 2.37	M = 12.52 SD = 2.83	M = 14.48 SD = 2.47	$X^2 (2) = 15.597$ $p < .001$	A vs. RSS $p = .002$ A vs. DCI $p = .561$ RSS vs. DCI $p < .001$
Past, Present and Future Activities	M = 13.82 SD = 2.08	M = 12.20 SD = 2.59	M = 13.17 SD = 3.04	$X^2 (2) = 4.688$ $p = .096$	No significant differences
Social Participation	M = 14.10 SD = 3.06	M = 11.05 SD = 3.11	M = 14.25 SD = 2.40	$X^2 (2) = 33.961$ $p < .001$	A vs. RSS $p < .001$ A vs. DCI $p = .969$ RSS vs. DCI $p < .001$
Spiritual relationship with Death and Dying possibility	M = 13.74 SD = 3.83	M = 13.50 SD = 3.63	M = 14.12 SD = 3.46	$X^2 (2) = 0.350$ $p = .840$	No significant differences

Intimacy	M = 15.20 SD = 1.91	M = 10.61 SD = 3.77	M = 13.98 SD = 4.39	X ² (2) = 36.202 p < .001	A vs. RSS p < .001 A vs. DCI p = .169 RSS vs. DCI p < .001
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1) Kruskal-Wallis test statistics and significance values; (2) significance value of multiple comparisons tested using the Dunn procedure

In the intimacy domain, the RSS group showed a lower value than the Alcalar and DCI groups, with significant differences in both groups ($p < .001$ and $p < .001$, respectively). In this domain we did not identify any statistically significant differences between the Alcalar and the DCI group ($p = .169$).

Therefore, the WHOQOL-OLD PT questionnaire showed significant comparative differences between the Alcalar, the RSS and the DCI group in all the domains except two (past, present and future activities and spiritual relationships). The RSS group obtained results (overall and by domain) that were lower comparatively than those of the other groups. In turn the Alcalar group obtained results (overall and by domain prevalently and comparatively) that were higher than the corresponding results of the attendees of DCIs and the residents of RSSs.

6. DISCUSSION

Bearing in mind the understanding of the influence of space and organization on the perceptual living experience of QoL of institutionalized elderly people, in terms of the results concerning the WHOQOL-BREF, the quality of life perception domain and in general, the level of QoL assessed by the Alcalar group was higher than the QoL perceived by the RSS group and the DCI group, with statistically significant differences when comparing the Alcalar group with the others (respectively $p < .001$ in both cases). The difference between DCI attendees and RSS residents ($p = .006$) was also significant. Moreover, in both WHOQOLs (BREF and OLD PT), the RSS group comparatively revealed the lowest results, on average, overall or in each specific domain.

Concerning the health perception domain, although we did not identify significant differences in the intergroup comparison, there seemed to be a comparative trend among the groups means. In this sense, when compared with the RSS and DCI groups, the Alcalar group showed the best average level of health perception, while the RSS group had the lowest average among the three. It seems appropriate to recall that Paúl, Fonseca, Martin and Amado (2004) state that seniors who are assessed as having better health generally show higher levels of overall QoL, which seems to be confirmed by the average results obtained for our three sample groups in those areas, particularly in the domains of quality of life perception and health perception.

With regard to the physical domain, as shown in Table 1, the RSS group showed an average level below the other groups, with statistically significant differences between residents of RSSs and attendees of DCIs and differences close to the limit of significance between the Alcalar and the RSS sample.

As regards the psychological domain, we are in agreement with Paúl *et al.* (2004), who argue that this domain varies with marital status (i.e., the level of psychological QoL in the elderly is better for those who are married or in a long-term relationship than for single people or widowers). This seems to be confirmed in our study, as the Alcalar retirement village

inhabitants are the group with the highest results for marital or long-term relationships, so this specificity may have positively influenced the perception of psychological QoL in relation to their counterparts. Also in the psychological domain, the importance for the psychic life of multiple environmental, psychosocial and biological factors is known, and it can be inclusive in and correlative with development and cognitive and emotional balance as well as good mental health. The influence of such conditions seems to have been confirmed by the questionnaires, in which the predominance of good comparative results of the Alcalar group and low scores of the RSS group are apparent.

Still, in the analysis of the WHOQOL-BREF and regarding the influence of the schooling level as a predictor of physical and psychological QoL, as defended by Paúl *et al.* (2004), we concluded that such a statement cannot be fully confirmed in our study, because the subjects of the Alcalar group, despite being the least literate of the three groups, are still the individuals who had comparatively the best results globally in the psychological domain, besides revealing a medium result through intergroup comparison in the physical domain. In the correlation concerned, the Alcalar group outperformed the RSS group in both domains and surpassed both groups in the relevant fields. However, in the context of the relationship between the level of schooling and their perception of physical QoL and psychological QoL, an analytical perspective restricted to the RSS and DCI groups seems to confirm the opinions of the authors mentioned above (the only exception being applicable to the Alcalar group).

As regards the relationship between age and QoL, Paúl *et al.* (2004) argue that the overall QoL decreases as age increases. Generally we agree with those authors when such a statement refers solely and exclusively to the progression of the longitudinal correlation between age and QoL, both individually and in any group of individuals whose age distribution is approximately homogeneous. However, according to the results obtained, the Alcalar group diverged from the above opinions: the inversely progressive causal relationship between age and QoL when considering the comparative cross-sectional investigation does not seem to apply to the Alcalar inhabitants. Despite the Alcalar group consisting of older subjects (on average and in individual age groups), compared with the other two groups, the Alcalar group did not fail to obtain predominantly the best results in the perception of overall QoL comparatively.

Paúl *et al.* (2004) defend the idea that elderly people with a better perception of their health condition generally have higher levels of overall QoL. Therefore, and given our results, it seems reasonable to claim that the cumulative combination of degenerative factors throughout life, due to the senescent process, can lead to physical and/or psychical degradation as people age, which in turn may influence their perception of QoL.

The outcome of our study assumes that there are biological, psychosocial and environmental factors (we are referring only to the residential environments of Alcalar, RSSs or DCIs) that may influence that inversely progressive correlation between age and perception of QoL. It seems to be a wise assumption if we recall the influence irrespective of the age factor, the effects of environmental variables and the self-control in relation to various parameters correlated with individuals' QoL, as evidenced by the study by Langer (2009) on rejuvenation and the reversal of functional dependence.

Given our results, we think that the perception of the health, psychological and physical domains in association with environmental conditions that are strongly marked by the residential context and lifestyle, in association with the influence of the variables of self-control and self-effectiveness, may have a protective interference in the perception of QoL, globally and/or by domain. In this regard we remember that the Alcalar group, which had environmentally differentiated conditions, generally obtained more favorable results in those aspects than the other groups, despite some unfavorable predictors, such as age, income and schooling level. Such environmental benefits may have influenced the intergroup comparative

results, especially when considering the statistical behavior of the Alcalar and RSS groups. In this regard it should be stressed that the analysis of the WHOQOL-BREF results obtained by the Alcalar group often produced a positive surprise: in our opinion, based on the literature review, this is due to the interdependence of factors, particularly those that are inherent to the environmental and psychosocial conditions described throughout our study, which are embodied in the residential paradigm in which individuals live, that is, the Alcalar model.

It should also be noted that, in this WHOQOL-BREF instrument, the residents of RSSs showed comparatively the worst results in the evaluated areas, while the residents of the Alcalar model received mostly good scores. Indeed, the trend in the results of the Alcalar inhabitants is not an absolute feature, because attendees of DCIs surpassed them in some areas, particularly in the scores of the physical and relationship domains, albeit without statistical significance in the comparative intergroup relation for both cases.

We should also mention that, during our study and the analysis of the QoL, there was one aspect that raised some reservations: the gender of the subjects in the sample distribution. Regarding this possible limitation, some have argued that low levels of QoL may be related to concurrent factors, among which one could be belonging to the female gender (Sprangers *et al.*, 2000; Kirchengast & Haslinger, 2008). However, we are in agreement with Fernández-Ballesteros (2000), who argued that a higher or lower QoL perceived by the elderly results strongly from the circumstances and the context in which they live, as well as multiple other variables, such as social status and lifestyle, especially in the long term, and does not only depend on gender.

For these reasons, we also agree with Fleck, Chachamovich and Trentini (2003); these authors concluded that among the elderly there is the perception of multiple elements associated with QoL, including stress, good health, physical dynamism, interrelational contact, mutual social support and the feeling of belonging to a community and its integration; hence, it can be concluded that the multidimensional significance of QoL is correlated with biopsychic domains in conjunction with the socio-environmental space.

As regards the results obtained from the WHOQOL-OLD PT, from a global point of view in the perception of QoL, the residents of RSSs obtained an average value below the average values of the other groups, and we could confirm the statistically significant differences in both comparisons ($p < .001$, respectively). There were no statistically significant differences between the Alcalar and the DCI group.

In the sensorial functioning domain, the RSS group had an average value below the average results of the rest; however, the differences were not statistically significant between the RSS and the DCI group ($p = .014$), which is not surprising since it is commonly accepted that it is an evaluative component that is essentially geriatric in nature and therefore is highly correlated with physiological degeneration, the intensity of which is usually more common at older ages (in this context, the RSS and Alcalar groups consisted of subjects who were on average older than those in the DCI group). Although composed of globally older individuals, the Alcalar group obtained a higher average in the sensorial functioning domain than the RSS group. Among the DCI group (slightly younger) and the Alcalar group (older on average and in age distribution), the difference between their means was not statistically significant.

With regard to the domains independence, social participation and intimacy, the group of residents in RSSs had lower average values in relation to the average results of the Alcalar and DCI groups, with statistically significant differences.

In those three domains of WHOQOL-OLD PT, the comparison of results between the Alcalar and the DCI group was not statistically significant, but the Alcalar group surpassed the others in intimacy and the averages were similar for independence and social participation.

In the domains past, present and future activities and spiritual relationship with death and the possibility of dying, no statistical significance was identified between the three groups; however, continuing the prevailing trend, the RSS group predominantly obtained the lowest average in comparison with the Alcalar and DCI groups. The Alcalar group obtained the best average results in the domain of past, present and future activities but achieved an intermediate score in the other domains.

This makes us suppose that, even though the Alcalar inhabitants are the oldest, they are in the most balanced position and they seem to have a more serene attitude towards life and human finitude. Also in this context, and taking into account the protective effects of biopsychic condition in interrelation with the social and environmental surroundings, the results of the Alcalar group seem to confirm our previous expectations.

For these reasons, we can conclude that the overall results of both QoL scales (BREF and OLD) seem to indicate that, in the areas with statistical significance, the average level of QoL perceived by people in the Alcalar group was predominantly higher than that perceived by residents of RSSs. Similarly, it was found that the average level of quality of life perceived by residents of RSSs was predominantly lower than the average levels of QoL reported by the Alcalar and DCI groups.

7. CONCLUSION

It is widely known that many of the developed Western countries, particularly the Portuguese population pyramid, are experiencing an unprecedented socio-demographic situation.⁷ Thus, we are facing countless challenges regarding old people's care, now and in the future. One of the many consequences of the Portuguese demographic and socio-economic dynamic changes that occurred in recent decades was the impact of those transformations on the traditional family patterns in supporting the elderly: traditional aid has increasingly shifted from the family to informal or formal caregivers. In this context institutional organizations (whether NGOs or entities with a for-profit nature) have been at the forefront of meeting the multiple needs of seniors.

As a consequence of Portuguese policies resulting from the implementation of the current model of the welfare state, a substantial part of the allocation of resources, in particular related to investment in institutional social support for the elderly, has benefited mainly two types of institutional residential dominant paradigms⁸: residential structures for seniors (RSSs) and day care institutions (DCIs).

However, there is a relatively unknown reality subsequent to this redistributive social policy supported by the Portuguese welfare state model toward the elderly: no one knows for sure what the qualitative return is consequential to the financial effort allocated to this important area of social support (whether it is private or public); that is, the qualitative value perceived by those beneficiaries supported by institutional residential services is unknown, regardless of the philosophical or organizational paradigms that inspire them.

In the present or in a future context, it seems imperative to evaluate the suitability and efficiency results of the current care models for the elderly, not only through formal assessment of basic care or regarding the sustainability of the current paradigms but also in relation to qualitative social gains, namely those that are experienced by the subjects of such support – the elderly.

⁷ The increasing age distribution of the population imbalance, to which we can refer as a demographic tsunami.

⁸ The two paradigms share common characteristics, such as the community residential institutional environment, and achieved structural growth higher than 30% in the last decade; in 2014 those Portuguese paradigms helped (on a daily or full-time basis) more than 140,000 elderly people (IGFSS, 2014; ISS, 2014).

Consequently, when we started this research,⁹ we considered it to be a priority to assess the subjects' perception of their quality of life (QoL) instead of focusing our attention on accounting for structural institutions, describing the organizational conditions of this or that institution or even measuring official data differences between institutional models. If this was the case, our main concern, instead of evaluating the seniors' perception of QoL, would be corroborating the assumption that the qualitative aspects associated with the perception of QoL (or other associated biopsychosocial domains) derive exclusively from the physical and organizational conditions dispersed across multiple institutions, this being a reductive enunciation that we refused *ab initio*.

Therefore, from the conception of this research, an underlying intention was implied: to evaluate comparatively individuals' perception of quality of life provided by the different residential institutional paradigms prevailing in Portugal, namely RSSs and DCIs. In addition to the inclusion of individuals from those prevailing paradigms, we considered the QoL perception provided by an extraordinary prototype RSS (institutional but innovative): the retirement village St. Joseph of Alcalar, in which seniors have a house that they might call "home sweet home" as well as being active members of a community village, seemed to have a tangible qualitative meaning for the elderly residents.

Summing up, in our study we considered the QoL perceptive evaluation of three groups of elderly people who received, correspondingly, the support provided by three types of residential institutions: the RSS and DCI paradigms and the Alcalar retirement village model. Subsequently, our objective allowed us to identify and make inferences about the comparative differences between the subjects' perception of QoL for those three residential paradigms considered. With the publication of this study, we hope to contribute to the reflection and debate on the reform of the social and environmental conditions in institutional residential care of the elderly.

Concerning the global QoL results for this study, including domains in which the comparisons were statistically significant, the QoL levels perceived by Alcalar retirement village inhabitants were predominantly higher than the QoL levels perceived by residents of RSSs. The trend in the QoL results obtained by the Alcalar retirement village inhabitants was only not absolute because they were surpassed by the DCI attendees' results in some (few) areas assessed in both WHOQOL scales.

Contrary to the results obtained by the Alcalar retirement village inhabitants, the levels of QoL assessed in residents of RSSs were comparatively and predominantly lower than the QoL levels perceived by the inhabitants of the Alcalar group and the attendees of DCIs.

Also concerning the results of this investigation, we found comparative significance levels of the global QoL perception between groups. The comparative differences were strong between the Alcalar group and, respectively, both the DCI and the RSS group, correspondingly in the order of $p < .001$. We also found a significant comparative difference ($p = .006$) between attendees of DCIs and RSS residents, with this latter group obtaining the lowest levels of QoL perception, considering both general and specific domains. It should be noted that the residents of RSSs scored the worst comparatively in all the QoL domains. By contrast, the residents of the Alcalar retirement village achieved predominantly better scores when compared with the other two groups.

Within the overall evaluation of QoL and taking into account the results, we believe that biopsychological conditions (such as health perception and psychological and physical aspects) associated with the socio-environmental surroundings (including marital, residential context – be it structural, environmental or architectural – and individuals' lifestyle, referring to independence, individual freedom and self-efficacy) seem to have an effect that is not

⁹ We can characterize our study as transversal, comparative, descriptive and inferential.

negligible and may have had a significant influence on the differences between groups regarding the perception of QoL.

Considering the last assumption, we recall that the inhabitants of the Alcalar retirement village, despite being under the influence of unfavorable predictors, such as income, literacy¹⁰ and age¹¹, seem to be favored as the socio-environmental surroundings and biopsychological conditions mentioned above, so it seems to be logical to assume a correlative influence of a multiplicity of factors previously described in the best overall results regarding the perception of QoL.

Like Lazarus (1998), Fernandez-Ballesteros (2000), Godfrey (2001), Fleck *et al.* (2003), Baltes and Smith (2004) and Langer (2009), we also think that it seems to be justified to deduce that among our subjects the influence of multiple elements usually associated with QoL appeared to be decisive, such as good health, physical dynamism, support and social interaction, the feeling of belonging and community participation, as well as an active and healthy lifestyle, self-efficacy and self-control, among multiple intra- and extra-individual variables associated with environmental circumstances. Thus, in agreement with the above authors and due to our own analysis of this investigation, we can reiterate the multidimensional significance that fundamentally underlies the perception of people's QoL.

Threatened with the psychophysiological degeneration of autonomic functions, which are essential for living in their own *home*, for the Portuguese elderly, at some point in their lives, being institutionalized in an RSS is one of the three first-line customary options. Regarding such a dilemma – the solution to which is vital for them and for their families – several complex issues are raised:

- i) Psychic and physiological degeneration, both organic and functional, are common throughout senescence and, in most cases, such processes are irreversible, which greatly reduces the autonomy of individuals;
- ii) There are significant changes in the socio-economic status resulting from employment inactivity or retirement;
- iii) Families' unwillingness to help older relatives on a daily basis is a quite common and increasingly frequent phenomenon;
- iv) Significant loss of loved ones becomes increasingly frequent throughout life, and the same applies to the reduction of emotional ties;
- v) Generally there is a strong emotional bond that unites a person to his or her original *home*; therefore, residence and surrounding space adaptability and *homelike* environments are essential to the successful permanence of the elderly in their own homes.

In summary, given the complexity of the personal variables associated with the progressive psychological and physiological degeneration throughout the ageing process as well as the social constraints that decisively influence seniors' permanence in their residences or when the elderly are faced with the imperative requirement of institutional confinement in an RSS, something that for many older people is felt as an imposed and radical change in their lives, we may pose the following questions. Due to housing conditions, which may be an obstacle to individual needs during the senescent process, how can one keep older people at *home* in a healthy environment, functionally and without anxiety? When faced with the prospect of admission to an RSS, how can we help the elderly to ease their suffering associated with the withdrawal from their habitual residence and how could we prevent the distress and anxiety often associated with the relocation to an institutional building that is not exactly a house with the same *home-sweet-home* spirit?

¹⁰ Regarding the influence of schooling level as a predictor of physical QoL and psychological QoL, such a correlation was not confirmed in our study because the subjects of the Alcalar group, despite being the oldest and the least literate of the three groups, showed, when compared with the other groups, better global QoL results in the physical and psychological domains.

¹¹ The Alcalar retirement village inhabitants, considering the average age and the distribution by age group, are older than the members of the other two sample groups, respectively.

In response to the first question set, we could say that it seems to us that any support strategies that allow the residential continuity of any elderly person in his or her original home, preferably in good living conditions that include functionality, comfort, security, autonomy and social inclusion, are justified.

Concerning the other questions mentioned above, we ought to have more doubts about these complex issues, which seem to require further discussion: if old age is just another stage of human life, will the interventional reasons generally accepted by families and state policies that often justify the option to keep the elderly in their residential habitat be absolutely irreproachable? Is it absolutely indispensable to deprive the elderly of their personal objects, condition them in their routines, limit them in their pleasures, freedom and autonomy and so on, supposedly for their benefit and so often against their real wishes?

In this context, many of the current and future institutional housing and care typologies for the elderly, as well as the majority of the currently supported models, follow an asylum mentality that must be rethought and reformulated. For these reasons, and taking into account the results of our investigation, we think that this debate in ageing societies has barely started.

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