

THE ALCALAR STUDY: A QUALITY OF LIFE COMPARATIVE STUDY ON INSTITUTIONALISED ELDERLY

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ABSTRACT

Summary: Comparative evaluation on *Quality of Life* (QoL) perception on different communitarian residential institutional environments for senior citizens.

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

Results: QoL levels perceived by Alcalar Retirement-village inhabitants were predominantly higher than QoL levels perceived by residents in RSS and DCI attendees. The trend in QoL results obtained by the Alcalar Retirement-village inhabitants just wasn't absolute because they were overcome by DCI attendees results in some (few) areas assessed in both WHOQOL scales.

Conclusion: The Alcalar Retirement-village group globally showed higher levels of Quality of Life perception by comparison with the other two group subjects' residents and attendees, respectively, from RSS and DCI.

Keywords: Alcalar, Elderly, Quality of Life, Retirement-village.

JEL Classification: D61, H54, I31, I38

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

Over the last decades of the twentieth century, until the dawn of this millennium, the *quality of life* expression has been increasingly used by common sense language and become customary in the current vocabulary. Historically, the phrase "quality of life" have been originally declared publicly in 1964 by President Lyndon Johnson on a speech in which he spoke "(...) 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). 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 for the concept.

However, the accurate conceptualization notion 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

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person to person, from culture to culture and even 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 increasingly paid to qualitative concepts such as standard of living and quality of life (hereinafter called the initials "QoL") is being shared by social scientists, philosophers and politicians, and both cover care practices as well as general official policies. According to Spilker (1990), the renewed interest in QoL was especially promoted by scientific areas as psychology and sociology, and also had great importance in the context of comprehensive health care and political management of economic resources. According to the same author, the increase of studies on QoL was due largely to technological and civilizational progress that led to the increased life expectancy of people, mostly due to changes in the 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 their continued well-being, it was also a growing social and scientific concern about the concept of QoL, 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 is 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, raised at the same time, a growing social unrest in concerning the progressive dehumanization of senior care provided to people. This unrest increased a public focus on QoL as well in social and humanities sciences, both of them inspired by the social-humanist movement which, in turn, played (and still plays) a substantial influence on policy determinations and, as might be expected, also influences on the biomedical sciences.

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

Nevertheless, we are aware that, due to the idiosyncratic subjectivity, the concept of QoL has limitations: people perception tends to be unstable because what today can be considered as good QoL might not continue to be so in the future; as people and societies change also modifies the way they evaluate their QoL.

In general, despite some identified conceptual limitations, the authors seem unanimous on two key aspects: besides being multidimensional, the characterization of 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 placed. Even though its conceptual diversity, it is encouraging to note that proliferation of definitions of QoL underlines the importance that the scientific community has devoted 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 organisation, political and spiritual, including economic and cultural aspects).

We recall that in the present and future socio-demographic context wherein the biotechnological developments allow an increasing longevity (which is also reflected by

increased prevalence of chronic pathologies), the central objective of the QoL concept is crucial to the determination of the medical practices and to back up health policies that would focus not only on the treatment focused on the healing but also in maintaining or promoting a good life existence. However, if 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 goes beyond pathology and functional deficits; therefore, such a definition should limit any QoL approaches that are exclusive of biomedical nature, even if 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, it is also dependent on an adaptable attitude of selection optimization and compensation (Baltes & Baltes, 1990).

QoL seems also correlative to the *joie de vivre*, their emotional skills and the establishment and maintenance of their community participation, as well as expectations about their future and other personal aspects. In addition, we also point out that the psychological dimension is closely linked to all of the other dimensions, in particular with spirituality, the physical dimension, functional and economic independence, social relationships, and also, in this particular case with the environment and the way they live the environmental space, whether it's natural or human.

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

To this understanding, has contributed studies of psycho-behavioural aspects connecting the surrounding environment, which includes the correlative analysis of the perception of their surroundings (whether it's natural or by human intervention) and the quest for understanding the levels of well-being in connection with the surrounding environment, these concepts were developed since the mid-twentieth century opening a new field of psychology - Environmental Psychology - which has as its main objective to study the inter-relational dynamics of human behaviour with the environment in which it operates, in other words, the reciprocal relationship between the person and the environment.

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

Currently, environmental psychology investigates the effects of environmental and structural conditions on human behaviours as well as studies how people perceive the environment conditions (natural and physical) and hence they act individually among themselves in and with the environment in which both coexist.

Claiming that environmental psychology should study the environment and analyse the behaviour and perceptions (individual and of the community) of their physical and social or communitarian contexts, Moser (2005) classifies the relationship between the person (or people) and the surroundings in four levels: i) individual level: the private space or the micro-environment (the workplace, housing, housing, private property, etc.); ii) neighbourhood-community level: the environments shared among people or semi-public spaces (the neighbourhood, apartment blocks, condominiums, nursing home, leisure parks, etc.); iii) individual-community level: public environments, the landscape, the intermediate

spaces (the settlement, the village, the town, the countryside, the beach, etc.); iv) social level: the global environment as a whole, encompassing both the built environment and the natural environment (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 interrelationship person-environment, giving it a higher complexity and dynamism: the cultural, physical, social, and temporal dimensions. The author argued that the well-being depends on the involvement with the environmental surroundings and, concomitantly, the identity processes, arguing that the way people, in self-awareness, interact with the environment and with each other in the environmental context contributes to its well-being, a view with which we do 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 lean to agree with (Ferreira, 1997) when he 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 residential institutional study for the elderly that we set out to do.

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

Mainly from the middle of the last century, as happened with the worldwide population contingent, also the average life expectancy increased to levels never seen before due to factors related to the tremendous scientific evolution occurred in technological and biomedical levels and also by factors attributable to socio-economic and cultural progress.

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

It becomes increasingly evident in contemporary society that living longer may have implications on 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 brought consequences that influence the QoL of other age groups of the population, in particular in close family members and caregivers of dependent elderly.

The arrays of elements associated with the QoL were also highlighted by Paúl (2005) where the authoress argued that the QoL of the elderly is modified to the extent that change the determining factors in a successful ageing: good health characteristics, the personal behaviour and the physical, social and economic environment.

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

Yet with respect to representations of older people themselves about the meaning of QoL, Silva (2003) indicated that they focus on the relative dimensions of autonomy, physical health, functional independence, psychological balance, social and family relations,

the economic aspects, citizenship, religion, transcendence and the environment. For the elderly subjects of a research carried out by Fernandes (1996), the author said 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 neighbourliness, mutual help and the ability to continue to live in their own homes as many years as possible were particularly valued by them as leading to 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 factors as well as socio-cultural, all associated with the environmental surroundings. To this end, there seem to be several causes that transmute the relational dynamic person-environment: emotional disorders, trauma, 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 often radically modified by human intervention. In this regard, in our research, this issue plays an important aspect in that it is supposed 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 have innumerable comments on their own perceptions about multiple aspects contained in our measured instruments especially suited for the evaluation of their QoL. In the dialogues that we have established with the elderly after running the tests, many of them enriched the sagacity, there was a cross 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 biological but also psychological level, the elderly are prone to potential changes in the state of health that may influence their QoL (Fernandes, 1996). Similar opinions express Garcia Banegas, Perez-Regadera, Cabrera and Rodriguez-Artalejo (2005) concluding that the health dimension when related to old age, is generally associated with lower levels of QoL. According to Bowling (2001), the elderly compared to younger subjects, give more importance to issues related to good health throughout the senescent process, being considered precious to allow longevity with low morbidity and also by allowing many opportunities for several experiences with multiple moments of well-being, being a vital dimension (but not exclusive), to a good QoL along the ageing process.

In our study, we had to avoid the proliferation of QoL concepts strongly influenced by the Anglo-Saxon culture. Our final choice fell on the World Health Organization (WHO) which defined QoL as “(...)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 the personal characteristics in their interdependent relationship with the environment depending on the idiosyncratic subjective evaluation. However, it should be noted that the concept of QoL proposed by WHO is not exempt from criticism or is 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. In this sense, to the QoL definition proposed by WHO we would like to see added to 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 globalised 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 was also supported by multiple civilisation factors for example security conditions, access to basic necessities, sanitation, increased labour rights, access to education, adequate housing, among other improvements.

However, despite the enormous civilizational and scientific development, it wasn't possible to eliminate all biological dysfunctions resulting from human senescence so we must continue to consider the consequent limitations arising from it. With increasing life expectancy, that extends an active life, the time living in their residence increases and that can prolong the needs associated within the housing space.

Planning of architectural projects may despise the relational dynamics of institutionalized people and disregard the identity of the resident who inexorably ages, resulting in the gradual difficulty in making full use of the residential space, whether on an inter-relational plane or even by enjoying their private space, often dramatically reduced the bed (bedridden) and the table bedside. 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 the elderly abuse - both cases common at residential environment with a "*hospital*" inspiration.

According to the 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 derive naturally from the gradual ageing.

Similarly, Luisa Pimentel (1995) found that the majority of elderly living in their homes revealed a desire to maintain the independence from their families and to continue to reside in their own homes as long as possible. Also, Christenson (1990), Marsden (2005) and Paul, Fonseca, Martín & Amado (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 this risk have been dominating and nauseam most regulations instilling in them markedly with *hospital* characteristics, which constitute the normative of the institutional spaces for residential care for the elderly.

For us, it is common ground that as the ageing progresses and the functional abilities decrease, it should be created structural and operative conditions that solve the frequently inadequate residential habitat (which however remained almost unchanged). It should create conditions adapted to older people so that they can modify adequately, as advocated by Baltes and Smith (2003), their patterns of behaviour in order to solve the functional and domestic difficulties caused by the progressive senescence.

Therefore, it seems desirable to us that the problem of senescence and the experience of residential spaces should be multidisciplinary debated in order to promote adaptive changes, not only on the behaviour of individuals but also through structural reforms in the housing area – being 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 in the elderly, in the resolution of functional problems and the relationship with their residential space - as derived from a natural senescent process - the

housing project and the environment, whether private or public, should be pro-actively planned in advance in order to enable the habitat to integrate any physical and psychological needs of all its inhabitants, from children to much older, in order to ensure the full use of whatever age and functional capacity. In this context, according to Peters (1999), that started his studies in 60's on architectural barriers and improvement of spaces that include an improved accessibility through *universal design*. Just as the *universal design* seeks to adapt different spaces to people with various anthropometric needs through specific solutions in order to mitigate unnecessary efforts particularly of people with physical limitations, we also differentiate aging from deficiency, because both singularities are often mixed up (it was 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 a mistake).

Under the principle of *universal design*, it is considered an appropriately adapted space 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 to all their direct and indirect components - materials, aesthetic, functional, environmental, human, etc. - as a complex and interrelated system (Sandhu, 2001).

The balance on 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 urban renewal. Such assumptions facilitate and promote the full enjoyment of everyday living environment, proactively optimised so it can be perceived not only as a residence but essentially as a living place. In this regard, the conception of *home* can find part of its significance as inseparable of a person's identity in relation to their closest members because, if we perceive the house as a third skin, the personal concept of *home* can be a collective skin integrating, protecting and uniting all of its members around a central focus, a spiritual symbol of family unification. In this sense, in their figurative significance, the *home* heats and bonds all member of a family in the same moment, that result of a complex condition that integrates memories and dramas, contains the past and present, projecting expectations about the future, includes a combination of personal rituals and collective routines, being a direct reflection of its inhabitants.

Thus the symbolic *home notion* is constituted as a strongly emotional concept and results of the continuous family life within the area, the emotional heat or insensitivity, of the calm or emotional storm, the balance or the relational disharmony, the noise or silence, all echo 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, personal space where you can enjoy privacy and which 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 which, through the hasty contemporary life has hardly been tapped or is often misconceived. Nevertheless, we think we should assume it as an architected structure that was built essentially for multi-family, institutional or sole use, and we hope that the experience of each resident or the relationship between its inhabitants can make any house a home.

3. THE TYPIFICATION OF PORTUGUESE SOCIAL CARE DIRECTED TO THE ELDERLY: RSS, DCI ... 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 corresponds, generally, to an increasing need for a long-term supportive care that could include skilled or specialised care. Portuguese Social care intervention policies are centralised 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 - in 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 non-profit private sector (IPSS/NGO's) as well as other business initiatives that are profit oriented.

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

3.1 Residential Structures for Seniors (RSS)

In Portugal homes for the elderly, nursing homes, hospice care, etc., have been designated as Residential Structures for Seniors (RSS). This care paradigm results from the recent organisational evolution⁴ of the services and standards that were determined by official standardisation of their quality requirements⁵.

RSS are collective institutions intended for the permanent residential care of the elderly, which can take different formats in regard to the provided accommodation. Each format obviously differs from each other. Theoretically, they are grouped into two main types: the *Nursing home* and the *Residence for the Elderly*.

In the first group of RSS, we find structures that shelter elderly and currently it's the most common model in Portugal. Commonly of a collective nature, these housing structures function mainly to provide basic long-term care services for the institutionalized seniors. In its turn, *Residences for the Elderly* are inspired by the *homelike* concept. It is 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 a purpose of providing permanent care to residents. The differences between both focus, on the wider variety and better quality of accommodation and the individualized services that the Residence could 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

⁴ On origin of modern Portuguese Nursing Homes are the oldest religious and mutual structures intended for the refuge of elderly, lunatics and mendicants previously referred to as asylum, whose origin, in Portugal, whose origin dates back to the fifteenth century.

⁵ The Portuguese legislation and the National System of Quality Management in RSS, have used as 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).

generally targeted structures for social classes with above average incomes, that constitute residual markets. The housing units of *Residences for the Elderly* are of a personalized nature, imitating a *homelike*⁶ Environment. On a collective residential model, the rooms are individual or for couples and usually of a private nature.

In total RSS functioning on the Portuguese mainland in 2012, the accommodation room is the predominant model (97%). Regarding the population living in RSS, according to the latest data, users with more than 80 years of age (in 2012), totalled about 70% of the total, of which 46% had 85 or more, which highlights the significant weight this long-lived age subgroup in which women are the majority. The statistical distribution of users according to the length of time spent in a RSS shows a high share of long-stays: 50% of users' remains in RSS for 3 or more years, 30% of which remain for a period exceeding five years. Longer stays have a higher prevalence on not to profit entities (33% stay over 5 years), while into profit entities, stays of short and medium term record a higher 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 RSS (IGFSS, 2014; ISS, 2014b).

3.2 Day Care Institutions for the elderly: Day Care Centres and Social Centres

Day Care Institutions (DCI) include Day Care Centres (DCC) and Social Centres. Both establishments are social responses aimed at providing adequate care services of the different daily needs of the elderly and/or activities that might contribute to their socialisation or even possibly delay some harmful consequences of the ageing process. Attendees attending DCI receive daily support without residential boarding, *i.e.* the elderly returns daily to their homes. One of the main aims of the Portuguese DCI is to prevent isolation or social exclusion and to promote interpersonal and intergenerational relationships. DCI supports the elderly during the day and favours their permanence in their habitual residence (ISS, 2014b).

As a principle, most DCI share some common objectives, however, between them, there are differences in the variety and scope of services. Comparing Day Care Centres with Social Centres we establish the DCC as a complete valence in which the support capacity is more comprehensive. In this sense, the Day Care Centres provide services such as adequate diet according to age and problematic health, proper hygiene and comfort, cleaning and organisation of their clothes and even facilitate access to information of different services of the community that might satisfy other needs. In DCC it is also possible to provide psychosocial support and the development of socio-cultural animation activities, recreational and occupational as well as religious assistance.

In its turn, Social Centres generally are institutions of less complexity which organise 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 have used the Portuguese Social Centres (IGFSS, 2014; ISS, 2014b).

With regard to DCI attendees, in 2012, about 50% were younger than 80 years old and were mostly composed of females, a trend that is found in all responses directed to the elderly population, which seems to confirm the preponderance of females in the frequency of RSS and also the DCI. 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, in Portugal (2014), there were about 62,928 clients who benefited from the services provided by DCI

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 wellness and leisure services with high quality such as dining a la carte service, spa, gym, personal trainer, hairdresser, beauty salon, concierge, and other hospitality services. However, it is a residential market increasingly geared towards the elderly socioeconomic elite.

being, respectively, 42,693 attendees supported by the DCC and 20,235 attendees attending Social Centres (IGFSS, 2014; ISS, 2014b).

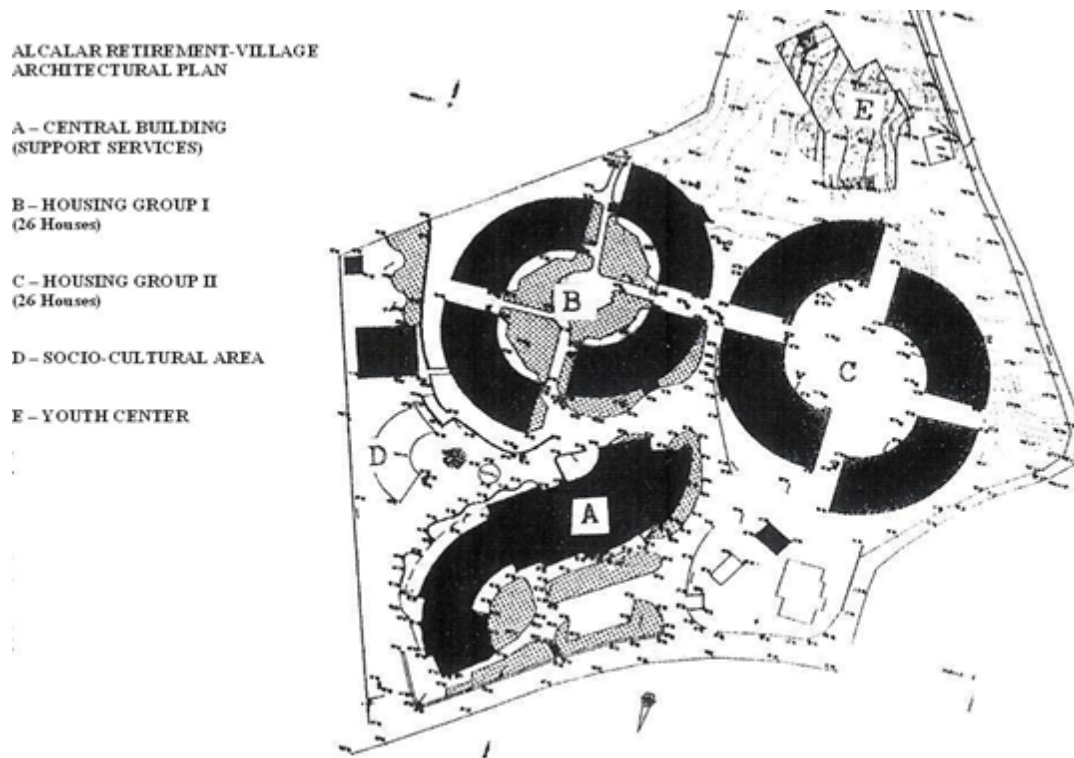
3.3 The Retirement-village St. Joseph of Alcalar: Community residential prototype for the elderly

In 1988, there were met the basic conditions for boosting the creation of a new model of a nursing home that could environmentally mimic a village. The Jesuit Father Domingos Costa began the architectural conceptualization closely 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 Centre and a Support Centre for visitors since contacts with foreign parishes favoured the arrival of students and also started seeding the idea of inter-generational socialisation, today made possible by their Nursery.

As shown in Figure 1, the big “S” (for Solidarity), the circular development for two housing units, creating free and conveniently landscaped spaces, allow the coexistence of great quality of life (Costa, 2000). According to Architect Martin Gracias 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 conceptualising the design of the proposed architecture).

The Retirement-Village of St. Joseph of Alcalar design had in mind a fluid and easy access between the common areas, in a design that promotes neighbourhood between houses arranged around a square.

Figure 1. Alcalar Village Scheme, designed by architect Martin Gracias



Source: 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 great big house, whose

two floors follow the gentle slope of the entrance of the property, was the first building to be built in the 3 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, hairdressing salon, laundry and ironing, cleaning services and household support, the general store, administrative services, meeting room, multi-purpose workshop, chapel, 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 amphitheatre in a clear and moving evocation of the Mediterranean. Adjacent is a small building which houses the bar run by village residents. The building once housed a small grocery store bar intended for use by residents which, however, ended by excess regulatory requirements by the Ministry of Finances. In this area, we could find outdoor exercise equipment and a communal barbecue area.

Each of the two housing units consists of 26 houses of T1 (29.00 m²), 18 T2 (48.60 m²) and 8 housing T3 (60.40 m²) which amounts to 52 houses in the village. Divided by two circular cores, the buildings form two 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 extended outwards by the protecting traditional porch which facilitates the use of living space. The communal porch promotes the coexistence with neighbours, with connecting personalised spaces, and functioning as a conduit passage between premises.

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

Both garden squares resulted from the layout of the buildings in a circle. The two housing units are torn 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 cobbled), the flow between the core and the housing is not a problem even considering people with disabilities. Community gardens were an initiative by the most active residents. Grown in the rear of the housing core (B and C) but could appear a bit everywhere, as the inhabitants seed 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 of each residence connects to an open space that integrates a living room, a dining room and a kitchenette with basic equipment. All residences are equipped with a full bathroom, hot and cold water, electricity, landline telephone, central heating, TV installation, stove, oven and a fridge. Residents are free to bring or purchase appliances, furniture, or other facilities they deem necessary for their comfort. The house decoration is done according to the taste of each resident which allows their space to be transformed in a *homelike* environment. If residents so prefer, the Board of the Retirement-village of St. Joseph of Alcalar could provide equipment and miscellaneous furniture, that are usually donated by companies or individuals.

Note also that the nearly 2 hectares of property also incorporate a Youth Centre attended throughout the week by about 140 children distributed by the valences of nursery, kindergarten, and an 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's not a resort for rich elderly. The doors of the village houses are always open to neighbours, friends and family. Visits are always welcome, at day or night. Users move in and out at will, help each other in a spirit of good neighbourhood.

Alcalar Retirement-village Houses were designed for elderly who cannot or do not want to live alone, they don't want to merely survive. In this Retirement-village, people live in a community type of environment, embedded in nature, which could enjoy their privacy or live more socially as they please. In their living quarters that were decorated according to the ability and the taste of each one, the elderly residents are formally institutionalised but feel completely autonomous allowing them to live effectively 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 elderly⁴ perception that attends a communitarian residential institution. In this context, the main challenge of this study went through the investigation of any relevant perceptual differences in their view of the quality of life, in terms of the different residential institutional contexts considered. We analysed the results through a comparative differential intergroup perspective.

Data was obtained from sample groups of institutionalised elderly in three different Community Residential environmental contexts, *i.e.*, old people in the Retirement-village of Alcalar, the residents in RSS and attendants of DCI.

After choosing the target institutions, preliminary exploratory contacts made us reveal our intentions and the subsequent commitment to the study. We started by sample selection that had some restraints by the representation of equiproportionality.

The sample selection variables chosen for each case tried to match the field reality in order to increase the quality of data and its degree of reliability, avoiding biased conclusions by standardising illegitimate. In this sense, subjects diagnosed with severe Psychiatric Pathologies and Neurodegenerative Diseases were excluded from the records. Consequently, we established a successful sample of 158 subjects, divided into three sub-samples, regarding each residential institution. For comparative purposes, the intergroup sample was divided into three similar groups. In each sub-sample, randomly selected subjects were chosen from among 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, was created three sub-samples, whose intergroup comparison was intended to study. The samples were constituted respectively: i) Alcalar subsample formed by residents in the Retirement-village of St. Joseph of Alcalar (n=50); ii) RSS subsample, consisting of elderly residents in RSS (n=56); iii) DCI subsample, consisting of elderly attendees of DCI (n=52). By gender, the sample consisted of 117 elderly women (77%) and 41 elderly men (23%).

We opted by a customised methodology with questionnaires self-applied or mediated by the investigator. Where this was applicable, we handed out questionnaires to subjects that were able to respond autonomously so we could allow the elaboration to proceed without oversight. We made a prior instruction so they would understand the type of questionnaire applied and at the end (when collected) we reviewed fully each item. On the cases where it was not possible to self-apply the test (for most varied reasons, from lack of vision to illiteracy) the questionnaires were administered by the field investigator through reading

aloud, strictly impartial and directive, with prior deontological information and safeguard privacy. The consecutive duration of the implementation of the set of tests did not exceed 45 minutes, during which we management of the length of time. Intervals between passages varied according to the availability of subjects, a rule imposed by us that such breaks were not shorter than 15 minutes between periods of continuous application. The application of the evaluation instruments began in September 2012 with completion in December of that year.

We performed a descriptive and inferential study as it was intended to describe and summarise the data analysed using descriptive statistics and generalising the results to the population studied; for this purpose, appropriate inferential statistical tests. Data were collected through questionnaires applied in a given time without any interference by the investigator on the behaviour of individuals and may, therefore, be classified in the study as a transversal and observational. In inferential statistical testing, it was intended to compare the individuals of the three group samples considered (Alcalar, RSS and DCI) for the studied instruments, i.e., 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 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 Alcalar group (84.02 years) and RSS group (83.52 years). Regarding the schooling level of the three groups analysed, the Alcalar group had more than half of its inhabitants (54%) unable to read or write, compared with 28.6% of residents in RSS and 23.1% the attendees of DCI.

Compared to Alcalar, the RSS and DCI groups have a wider distribution with regard to schooling education. In this context, the Alcalar group consists, in the large majority by illiterate or poorly educated 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 residents in RSS and 17% of attendees of DCI. In these last two groups, there is a predominance of labour activity in the tertiary sector.

Regarding marital status, about 36% of elderly in the Alcalar group are married or in a long-term committed relationship, compared with 12.5% of subjects from RSS group and 15% of subjects of DCI group. In the three groups, there is a predominance of widowers; however, Alcalar widowhood concerns only 52% of the population, compared with 76.8% of residents in RSS and with 69.2% of the attendees of DCI. Also in these last two groups, the percentage of older people in a situation of separation/divorce more than doubles comparing to the elderly of Alcalar group.

As for cohabitation and direct social support or proximity support, Alcalar and DCI groups scored very high values and comparable close nuclear family cohabitation (respectively 46% and 50%), while the RSS group scored a low value (3.6%) in this type of cohabitation. Attendees of DCI reveal a partition between the nuclear family cohabitation and living alone, respectively 50% and 42.3%, while the inhabitants in Alcalar Retirement-village express an approximate compartment between the 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) among people, it would be expected that there was no complete match between the percentages relating the civil status and the assessment regarding the form of cohabitation.

The economic situation in terms of monthly income, 44% of inhabitants in the Retirement-village of Alcalar, at the time of the data collection (end of 2012), enjoyed an income with ranging values between 485 Euros (€) and 970€ which, in percentage terms, outperforms the other two groups in the study. About 24% of inhabitants in 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 elderly of the Alcalar group (2% of the sub-sample) had an income exceeding 970€ and another elderly (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 RSS differs from the distribution of income of the inhabitants in the Retirement-village, specifically at the extreme levels: 7.1% of RSS residents have incomes above 970€ and, at the other extreme, 10.7% with incomes below 152.5€.

As for attendees of DCI and compared to 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%, which compared to 24% and 26.8%, respectively, of Alcalar and RSS groups).

Being health an essential dimension in the perception of QoL, there are differences between sample groups regarding the perception of disease, as there are differences between the groups regarding the consistency of the perception of disease and the identification of the existence of chronic diseases. In this context, among the three sample groups, the subjects of Alcalar group feel healthier, with 60% of older people denying that they are ill. This group also reveals consistency with regard to the recognition of chronic disease, with 40% confirming chronic diseases in their health. Regarding the statistical consistency of the aspects of the disease, half of RSS group feels sick but more than half (51.8%) claims to have chronic diseases. The same goes for attendees of DCI, among which only 48% say they feel sick when 51.8% claims to have a chronic disease.

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

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 a weak internal consistency ($\alpha = .677$) and the subscale domain Relationships showed an unacceptable Cronbach’s alpha value ($\alpha = .402$), even taking into account that it is a scale with only 3 items.

Regarding the evaluation of the *quality of life perception*, the results shown in Table 1 the level of overall perception of QoL in the sample of Alcalar group is higher than the corresponding perception assessed by the samples in RSS and also DCI. The differences are statistically significant between the Alcalar group and the other two ($p < .001$ for both comparisons). Specifically, among the RSS and DCI groups, it reveals also a significant difference in that dimension ($p = .006$). Just as compared to the Alcalar group, as we compare the DCI with the RSS it showed a significantly lower level of perception of the quality of life to the latter

one. Consequently, with this particular dimension, the Alcalar group got measurably and significantly a higher level of perception of the quality of life while the RSS group was found to have significantly lower.

As regards the perception of Health domain there were not statistically significant differences identified between the 3 sample groups ($X^2 [2] = 2.495; p = .287$).

Under the Physical Domain, the RSS group had a lower average when compared to Alcalar and DCI groups, with statistically significant differences between the RSS and DCI groups ($p = .014$) and at the limit of statistical significance between the group RSS and the Alcalar group ($p = .054$). We have not identified statistically significant differences between the Alcalar and DCI groups ($p = .614$).

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 ⁷	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 ⁸	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 testing by Dunn procedure.

Source: Malveiro, 2015

In the Psychological Domain, the RSS group had a lower average when compared to Alcalar and DCI groups, with significant differences in both groups ($p = .004$ and $p = .011$, respectively). In this area, there are no statistically significant differences between the Alcalar and DCI groups ($p = .719$).

⁷ Social Relationships Domain presented an unacceptable internal consistency ($\alpha = .402$).

⁸ Environmental Domain presented a weak internal consistency ($\alpha = .677$).

Regarding the Relationships Domain, the RSS group had a lower result compared to Alcalar and DCI groups. In this area, the difference is statistically significant only among residents in RSS and attendees of DCI ($p = .002$).

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

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

5.2 Perception of QoL through the WHOQOL-OLD Portugal

To evaluate the psychometric properties of the WHOQOL-OLD Portugal 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 five-point Likert scale. The WHOQOL-OLD instrument globally showed a good internal consistency with Cronbach's alpha value of 0.884.

With respect to each of the six subscales, there was a poor consistency in the Domain Past, Present and Future Activities ($\alpha = .662$). In turn, the Independence Domains and Spiritual relationship with Death and Dying possibility showed reasonable consistency ($\alpha = .749$ respectively and $\alpha = .758$). Sensorial Functioning and Social Participation Domains showed good consistency with Cronbach alpha values above 0.85. In turn, the Domain Intimacy presented a 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 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 groups ($p = .676$), but the average Alcalar result is higher among the 3 groups.

In the Sensorial Functioning Domain, the RSS group had a mean value lower than the values obtained by Alcalar and DCI groups, however, confirming statistically significant comparison between RSS and DCI groups ($p = .014$). The results shown in Table 2 indicate no statistically significant differences between Alcalar and DCI groups ($p = .193$) and the same occurs between Alcalar and RSS groups ($p = .271$).

Regarding the Independence Domain, as shown in Table 2 the RSS group had an average lower compared to the others, with statistically significant differences in both groups ($p = .002$ $p < .001$, respectively). There are no statistically significant differences between the Alcalar and DCI groups ($p = .561$).

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 compared to the others, with statistically significant differences in both groups ($p < .001$ and $p < .001$, respectively). There are no statistically significant differences between the Alcalar and the DCI groups ($p = .969$).

Table 2. WHOQOL-OLD PT - value comparison between groups

GROUPS →	Alcalar (n1 = 50)	RSS (n2 = 56)	DCI (n3 = 52)	KRUSKAL WALLIS ⁽¹⁾	MULTIPLE COMPARISONS (2)
DOMAINS ↓					
WHOQOL-OLD GLOBAL	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 $p < .001$

1) Kruskal-Wallis Test statistics and significance value; (2) Significance value of multiple comparisons testing by Dunn procedure.

Source: Malveiro, 2015

As regards the Spiritual relationship with Death and Dying possibility Domain, the results obtained show no statistically significant differences between the 3 groups, ($X^2 [2] = 0.350, p = .840$).

On the Intimacy Domain, the RSS group showed a lower value, compared to the Alcalar and DCI groups, with significant differences in both groups ($p < .001$ and $p < .001$, respectively). In this dimension, we have not identified statistically significant differences between the Alcalar and DCI groups ($p = .169$).

Therefore, the WHOQOL-OLD PT questionnaire showed significant comparative differences between Alcalar, RSS and DCI groups in all Domains except in two (Past, Present and Future Activities and Spiritual relationships). The RSS group obtained results (overall and by Domains) lower comparatively with the other groups. In turn, the Alcalar group obtained results (overall and by Domains prevalently and comparatively) higher than the corresponding results of the Attendees of DCI and the residents in RSS.

6. DISCUSSION

Bearing in mind the understanding of the influence of Space and Organization on perceptual living experience of QoL of institutionalized elderly, in terms of the results concerning the WHOQOL-BREF, the Quality of Life Perception Domain and in general, the level of QoL assessed by Alcalar group was higher than the QoL perceived by the RSS group and also higher than the DCI group, with statistically significant differences when comparing the Alcalar group with the others (respectively $p < .001$ in both cases). It was also significant the difference between DCI Attendees and RSS residents ($p = .006$). Moreover, as happened in the WHOQOL-OLD PT, also in this WHOQOL-BREF instrument the RSS group comparatively revealed the lowest results, in average, overall or in specific Domains.

As for the Health Perception Domain, although we have not identified significant differences in the intergroup comparison, there seems to be a comparative trend among the group's means. In this sense, when compared to 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 groups. It seems appropriate to recall that Paúl, Fonseca, Martin and Amado (2004) said that there are seniors who were assessed as having better health and those generally show higher levels of overall QoL, which seems to be confirmed by the average results obtained by 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 in RSS and attendees of DCI and close to the limit of significance between Alcalar and RSS samples.

As regards the Psychological Domain we are in agreement with Paul *et al.* (2004) when the authors argued that this dimension varies with marital status (ie, the level of psychological QoL in elderly is better in married or in a long-term relationship compared to single or widowers).

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

Still in the analysis of the WHOQOL-BREF and about the influence of the schooling level as a predictor of physical and psychological QoL as defended by Paul *et al.* (2004), we concluded that such a statement does not fully confirm in our study because the subjects of Alcalar group, despite being the most illiterate among the three groups are still the group of individuals who had comparatively the best result globally in the Psychological Domain besides revealing a medium result through intergroup comparison on the Physical Domain. 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 education and their perception of physical QoL and psychological QoL, an analytical perspective restricted to ERSS and DCI groups, seems to be confirmed the opinions of the authors mentioned above, the only exception being applicable to Alcalar group.

As regards to the relationship between age and QoL, Paul *et al.* (2004) argued 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 longitudinal correlation between age and QoL, both individually and in any group of individuals whose age distribution is approximately homogeneous. However, on this and due to the results obtained, the Alcalar group diverged from the above opinions: 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 (in average and in individual age groups), compared to the other two groups, the Alcalar group did not fail to obtain predominantly the best results in the perception of overall QoL comparatively.

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

The outcome of our study assumes that there are biopsychosocial and environmental factors (we are referring to the residential environments Alcalar, RSS or DCI) that may influence that inversely progressive correlation between age and perception of QoL. It seems 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 QoL of individuals, as evidenced by studies of Langer (2009) on the rejuvenation and reversal of functional dependence.

Given our results, we think that the perception of health, psychological and physical domains in association with environmental conditions strongly marked by the residential context and lifestyle, in association to 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 domains. In this regard, we remember that the Alcalar group having environmentally differentiated conditions, generally have more favourable results in those aspects compared to other groups, despite some unfavourable predictors such as age, income and education. Such environmental benefits may have influenced the intergroup comparative results, especially when we looked at the statistical behaviour of 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 surprised positively: in our opinion, based on the literature review, this will be due to the interdependence of factors particularly which are inherent to the environmental and psychosocial conditions described throughout our study, which is embodied in the residential paradigm in which they live, *i.e.*, the Alcalar model.

It should also be noted that in this WHOQOL-BREF instrument, residents in RSS show comparatively the worst results in the evaluated areas, while residents in Alcalar model got mostly good scores. Indeed, the trend in the results of the Alcalar inhabitants is not an absolute feature because attendees of DCI surpass them in some dimensions as happened particularly in the scores of Physical and Relationship Domains and, however, without the 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 us some reservation: the gender of the subjects in the sample distribution. As for 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, De Regt, Andries, Van Agt, Bijl & De Boer, 2000; Kirchengast & Haslinger, 2008). However we are in agreement with Fernández-Ballesteros (2000) when the authoress argued that the higher or lower QoL perceived by the elderly result strongly from the circumstances and

the context in which they live, as well as other multiple variables such as social status and lifestyle, especially in the long term, and not only depending on gender.

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

As for the results obtained from the WHOQOL-OLD PT, from a global point of view in the perception of QoL, residents in RSS 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). Among the Alcalar and DCI groups, there were no statistically significant differences.

In the Domain Sensorial Functioning, the RSS group had an average value below the average results of the rest; however the differences were not statistically significant between RSS and DCI groups ($p = .014$), which is not surprising since it is commonly accepted that it is an evaluative component essentially geriatric of nature therefore highly correlated with the physiological degeneration, whose intensity usually is more common in older ages (in this context, the RSS and the Alcalar groups consist of subjects on average, older than the results for the DCI group). The results that were distinguished by the positive were obtained by the Alcalar group. Although older, it obtained a higher average in the Sensorial Functioning Domain compared to the RSS group. Among the DCI group (slightly younger) and Alcalar group (older on average and age distribution), the difference between the means was not statistically significant.

With regard to the Domains Independence, Social Participation and Intimacy, the group of residents in RSS had lower average values in relation to the average results of Alcalar and DCI groups, with statistically significant differences.

On those three Domains of WHOQOL-OLD PT, the comparison of results between Alcalar and DCI groups was not statistically significant, but the Alcalar group surpassed in Intimacy and the averages were similar in Independence and Social Participation.

In the Domains Past, Present and Future Activities and Spiritual relationship with Death and Dying possibility, there was no statistical significance identified between the 3 groups; however, continuing again the prevailing trend the RSS predominantly obtained the lowest average compared to people in Alcalar and attendees of DCI. The Alcalar group obtained the best average results on the Domain of Past, Present and Future Activities but scored intermediate on the other Domains.

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

For these reasons, we think that we can conclude that the overall results in both QoL scales (BREF and OLD) seem to indicate that in areas with statistical significance, the average level of QoL perceived by people in Alcalar was predominantly higher than perceived by residents in RSS. Similarly, it was found that the average level of Quality of Life perceived by residents in RSS is predominantly lower than the average levels of QoL assessed in Alcalar and DCI.

7. CONCLUSION

As it is widely known that much of the developed Western Countries, particularly the Portuguese Population Pyramid, are experiencing an unprecedented socio-demographic situation⁹. Thus, we are facing countless challenges regarding old people care, now and in the future. One of the many consequences of the Portuguese demographic and socioeconomic dynamic changes that occurred in recent decades was the impact of those transformations on the traditional family patterns in supporting the elderly: traditional aid increasingly shifted from the family to informal or formal caregivers. In this context, institutional organisations (whether ONG`s or from a to-profit nature) have been at the forefront of the assistance of the multiple needs of the 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 to the elderly, have benefited mainly two type of institutional residential dominant paradigms¹⁰: the Residential Structures for Seniors (RSS) and the Day Care Institutions (DCI).

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 is the qualitative return consequential to the financial effort (whether it's private or public) allocated to this important area of social support, *i.e.*, it is unknown what is the qualitative value perceived by those beneficiaries supported by institutional residential services, whatever 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 current care models for the elderly, not only through formal assessment of basic care or regarding the sustainability of current paradigms, but as well in relation to qualitative social gaining, namely those that are experienced by subjects of such support - the elderly.

Consequently, when we started this research¹¹, we thought it as a priority to assess the subject's perception of quality of life (QoL) instead of focusing our attention on accounting structural institutions or describing organisational conditions on this or that institution or even measuring official data differences between institutional models. If it was this case, our main concern, instead of the evaluation of the seniors perception on QoL, we would be corroborating the assumption that the qualitative aspects associated with the perception of QoL (or other associated biopsychosocial dimensions), derives exclusively from the physical and organizational conditions dispersed across multiple institutions, a reductive enunciation that we refused *ab initio*.

Therefore in this research was implied, since its conception, an underlying intention: to evaluate comparatively the individual's perception of quality of life provided by different residential institutional paradigms prevailing in Portugal, *i.e.*, the RSS and the DCI. In addition to the inclusion of individuals from those prevailing paradigms, we also consider the subjects QoL perception provided by an extraordinary prototype RSS (institutional but innovative): the Retirement-village St. Joseph of Alcalar - in which a senior might have a house to which one might call "*home-sweet-home*" as well as being an active member of a community village, seemed to have a tangible qualitative meaning for the elderly residents. Summing up, on our study, we considered the QoL perceptive evaluation of three elderly groups who had, correspondingly, the support provided by three types of residential institutions: the RSS, the DCI paradigms and the Alcalar Retirement-village model. Subsequently, our objective

⁹ Increasing age distribution of the population imbalance to which we can refer to as a demographic tsunami.

¹⁰ Both paradigms share common characteristics such as the community residential institutional environment and both had a structural growth higher than 30% in the last decade; in 2014, those Portuguese paradigms helped (on a full-time or daily basis) more than 140,000 elderly (IGFSS, 2014; ISS, 2014).

¹¹ We can characterize our study as transversal, comparative, descriptive and inferential.

allows us to identify and infer about the comparative differences between the subject's perception on QoL on 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 the institutional residential care of the elderly.

Concerning the global QoL results for this study, including domains whose comparison were statistically significant, QoL levels perceived by Alcalar Retirement-village inhabitants were predominantly higher than QoL levels perceived by residents in RSS. The trend in QoL results obtained by the Alcalar Retirement-village inhabitants just wasn't absolute because they were overcome by DCI attendees results in some (few) areas assessed in both WHOQOL scales.

Contrary to the results obtained by Alcalar Retirement-village inhabitants, levels of QoL assessed in residents of RSS were comparative and predominantly lower than QoL levels perceived by inhabitants of the Alcalar group and the attendees of DCI.

Also concerning the results of this investigation, we found comparative significance levels on global QoL perception between groups. Comparative differences were strong between Alcalar group and, respectively, both DCI and RSS, correspondingly in the order of $p < .001$. We also found the significant comparative difference ($p = .006$) between attendees of DCI and RSS residents, with this last latter group obtaining the lowest levels of QoL perception, considering both general and specific domains.

It should be noted that residents of RSS scored the worst comparative results in all QoL domains. By contrast, residents in Alcalar Retirement-village achieved predominantly better scores when compared to 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 dimensions) associated with the socio-environmental surroundings (including marital, residential context - be structural, environmental or architectural - and individuals lifestyle in which autonomy, individual freedom and self-efficacy) seem to have an effect not to be negligible and may have had a significant influence on differences between groups regarding the perception of QoL. Considering the last assumption, we recall that the inhabitants of Alcalar Retirement-village model, despite being under the influence of unfavorable predictors such as income, literacy¹² and age¹³, seem to be favored as the socio-environmental surroundings and biopsychological conditions above mentioned, so it seems logical an assumption of a correlative influence of a multiplicity of factors previously described in the best overall results in the perception of QoL.

As Lazarus (1998), Fernandez-Ballesteros (2000), Godfrey (2001), Fleck, Chachamovich & Trentini (2003), Baltes and Smith (2004) and Langer (2009), we also think that it seems justified to deduct that among our subjects it appeared to be decisive the influence of multiple elements usually associated with QoL, 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. So, as the above authors and due to our own analysis on 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 one's lives, being institutionalised in a RSS is one of the three first-line customary options. Towards such a dilemma – whose solution is vital for them and for their families – several complex

¹² Regarding the influence of education level as a predictor of physical QOL and psychological QOL such correlation in our study was not confirmed because the subjects of Alcalar group, despite being the oldest and the most illiterate of the three groups, showed, when compared with the other groups, better global QoL results in physical and psychological domains.

¹³ The Alcalar Retirement-village inhabitants, considering the average age and the distribution by age group, are older when compared respectively with the other two sample groups.

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) Family unwillingness to help older relatives on a daily basis is a quite common and increasingly frequent phenomenon; iv) Significant loss of loved ones throughout life are increasingly frequent, and the same applies regarding the reduction of emotional ties; v) Generally there is a strong emotional bond which unites a person to his 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 personal variables associated with the progressive psychological and physiological degeneration throughout the ageing process as well as due to social constraints which decisively influence the 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 put the following questions: due to housing conditions, which may be an obstacle to individual needs along 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 an admission to a RSS, how can we help the elderly to ease his suffering associated with the withdrawal from their habitual residence and how could we prevent 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?

In response to the first question set, we could say: It seems to us justified any support strategies that allow the residential continuity of any elderly in their original homes, preferably in good living conditions that include functionality, comfort, security, autonomy and social inclusion.

Concerning the other questions above mentioned, we ought to have more doubts about these issues, which seems to require further discussion about this complex matter: if old age is just another stage of human life, will it be absolutely irreproachable the interventional reasons generally accepted by families and state policies that often justify the option that keeps the elderly of their residential habitat? It will be absolutely indispensable to deprive the elderly of their personal objects, condition them in their routines, limiting them on their pleasures, freedom and autonomy, etc., 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 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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