Dance Movement Therapy as a Health Promotion Tool in Aging.

The Portuguese case.

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Abstract

This literature review has the main objective to illustrate the contribution of the dance movement therapy in the promotion of healthy aging, in line with the concept of active aging that has been promoted by the World Health Organization, since 2002. Demographic aging has been increasing and projections suggest its progressive rise. Portugal is currently one of the countries in the world with the largest index of population aging, where there is an urgent need to change ageist ideas and also stimulate the elderly towards a healthy aging. The aging process corresponds to a dynamic and ongoing progression throughout life and it must be understood as a singular experience that combines chronological, biological, psychological and social aspects. The recent aging theories believe that it is possible to age successfully, focusing on the essential characteristics that must be present in the adaptive process (coping) of the elderly aiming at his/her well-being. It appears fundamental to promote a psychotherapeutic work with this population. Dance Movement Therapy, as an expressive psychotherapy that uses dancing and movement, is one of the most complete as it promotes the individual's physical, psychological, cognitive and social integration, providing a better life quality and well being for the senior citizens. Therefore, it is a valuable asset for the Portuguese current situation, as it is an important tool to promote a successful aging. Thus, a new field of opportunities may be taken into account to explore new projects and reinforce Dance Movement Therapy (DMT) investigation in Portugal.

Keywords: healthy aging, dance movement therapy, Portugal

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Since the mid-twentieth century, the aging of the world, european and especially portuguese population is becoming more and more evident. Relevant international and national entities (Pordata, 2014a, 2014b; United Nations Department of Economic and Social Affairs [UN DESA], 2013; World Health Organization [WHO], 2012) have been warning about the phenomenon, stating that the projections suggest that this scenario will accentuate. The growing contribution of science to the increase of average life expectancy is one of the driving factors, throughout the recent years.

It is worth to emphasize that even though one of the faces of global demographic aging is the result of quite positive social, economic and scientific changes, representing the success of mankind in many aspects, the other side includes new defying problems, leading to new thoughts on aging (Rosa, 2012; WHO, 2002). Ongoing reflection and consequent action become therefore more and more necessary.

In comparison to a recent past (1960), Portugal shows noticeable demographic changes, currently occupying the position of one of the most aged countries in Europe and in the world (Leão, Ataíde, Revés, Marques, & Ponte, 2011; Rosa, 2012; UN DESA, 2013). This rapid transformation is essentially due to the speed at which the levels of mortality and fertility have lowered and the subsequent increase of average life expectancy. Coinciding with population changes, profound alterations were also verified at a social, economic and cultural level (Barreto & Preto, 1996; Carneiro, Chau, Soares, Fialho, & Sacadura, 2012; Rosa, 2012). One may infer that the aging of Portuguese population was one of the responsible factors for these changes. Currently, Portugal displays a young population in steady decline and the active age group gets older and older. Thus, it is difficult to respond

with productivity to the current conjuncture, showing a visible economic deficit (Leão et al., 2011; Rosa, 2012).

This scenario of aging population growing has presented new needs and, therefore, a subsequent interest in creating adequate responses to the new reality, by suggesting the reformulation of the social, economic and cultural policies in the world, in Europe and in Portugal.

Gerontology is a field of professional action whose object of study is the morphological, psychological and social modifications resulting from the action of time on the organism, regardless of any pathological phenomenon (Spar & Rue, 2005). Gerontologists search for an explanation of aging as a process that occurs throughout time, from a bio psychosocial point of view. In this context, the concept of aging is defined as a set of transformations and processes in the organism of a biological and psychological nature (Fontaine, 2000; Spar & Rue, 2005). It is a process of progressive and differential degradation, whereby its speed, rhythm and severity vary from individual to individual (Oliveira, 2005; Rosa, 2012). The aging process also has repercussions at a social level, as a progressive and irreversible loss occurs concerning the ability of the organism to adjust to the changing conditions of the environment. In this process, factors inherent to the individual itself are present, such as age, suffered losses and adjustment to old age, but so are factors related to the environment in which the elderly person is placed (Fontaine, 2000).

According to people and societies, the image of old age is transformed and, throughout history, judgements and interpretations are made that either praise or repudiate it or still accept it neutrally. In spite of the three possibilities, population aging is often considered to be a menacing phenomenon that generates discomfort, especially where it manifests itself more intensely, as is the case in Portugal. The old age has been connoted negatively by our society, essentially focusing on the losses (of physical, cognitive and social

natures) and on a path that leads the subject, necessarily, to a pathologic state of senility. The discomfort in the face of population aging comes from the unavoidable consequences generated by it, such as low productivity, the increase in the indirect labour costs for the active population and the difficulty in renewing generations. On the other hand, this fear blocks the perception of the aging phenomenon as an opportunity (Carneiro et al., 2012; Marques, 2011; Nazareth, 2009; Ribeiro, 2007; Rosa, 2012). Fortunately, in line with this idea of opportunity, a change of paradigm has been arising, stimulating the view of aging as a process with potential and space for the appearance of new performances, especially in health promotion, seeking an improvement on the quality of life (WHO, 2002).

The objective of understanding and identifying the factors that determine the development of healthy aging, as opposed to pathological aging has been under research. Thus, successful aging depends on three factors: reduced probability of illness, maintenance of a high level of physical and cognitive functioning and maintenance of social participation, even after retirement (Fontaine, 2000; Rowe & Khan, 1997).

Based on the above mentioned new necessities and paradigms, the aim in this work is to considerate Dance Movement Therapy (DMT) as an alternative and complementary instrument (in relation to other areas in healthcare) for the promotion of healthy aging. While expressive psychotherapy works with body and non-verbal language, seeking the psycho-physical integration of the individual (body-mind), DMT is based on concrete theoretical principles and contemplates in its intervention the individual's physical, mental, cognitive and social components. It respects a setting and a structure of its own and offers a variety of techniques, selected in accordance to the needs of each population. In the case of intervention with elderly population, there is a wide range of diversified techniques that, as they are used in DMT sessions, may stimulate creativity and non-verbal communication as a way to

elaborate affective/emotional content, as well as potentiate interpersonal relationships (Cammany, 2005; Panhofer, 2005; Schmais, 1986).

In spite of the irreversible character of aging, considering its complex definition and all the determining factors and considering the possibilities that DMT may offer, in this work we also question the benefits and limitations of a DMT intervention in the health promotion of the senior population (65 years old or more or third and fourth ages). With this intervention, the aim is to potentiate the characteristics of each individual, promoting a better adaptation to old age, delaying the worsening of existing pathologies and preventing the arrival of others.

In this work, we feel it is appropriate to describe the following specific objectives:

- Concepts / theories of aging, namely successful aging;
- The history of DMT and its theoretical principles;
- The methodological structure of DMT, applied to the elderly population, in terms of the health promotion;
- The benefits and limitations of DMT in senior population;
- DMT in Portugal, its opportunities, limitations and challenges concerning elderly population.

Considering these specific objectives, this work is organised into five chapters. In the first one, the concepts and theories of aging are developed. Its demographic and societal aspects are approached, complemented with the example of the challenges that aging creates to the reality of the world, of Europe and specifically to the Portuguese reality. Afterwards, a description is made of the chronological and bio psychosocial aspects and the psychosocial theories on which the concept of successful aging was based. The second and third chapters describe the history of DMT, its theoretical principles and the most adequate methodological structure (*setting*; sessions structure; techniques; group sessions) concerning senior

population, in the scope of the health promotion. The fourth chapter describes the benefits and limitations of DMT, when applied to the elderly population, including its different components (physical, cognitive, psychological and social). Finally, the fifth chapter describes DMT in Portugal as well as the opportunities, constraints and future perspectives of its implementation, based on the health promotion in senior population.

Methodology

Observational and descriptive study (literature review).

Aging

Aging as a Societal and Demographic Phenomenon

While discussing aging, it is crucial to clarify at least two different concepts in order for it to be analyzed in a profound way. Rosa (2012) differentiates individual aging, which may include chronological and bio-psychological aging; from collective, which may also include the concepts of demographical aging (or of the population) and societal aging (or of society). It will be important primarily to develop the last two concepts about collective aging.

Inarguably there are countless changes that occur at an individual or collective level during the aging process of a population and the community must change and adapt in order to face this phenomenon. The manner in which a society understands and faces demographic aging may determine its level of societal aging and consequently its economic, cultural and psychological state. In this context, an aging population (with a larger percentage of seniors) does not necessarily imply an aging society, because it can adapt to change, creating new paradigms and possibilities. The aging of a society depends fundamentally on assumptions and organizational ideas, which are already largely rooted and accepted by that very same society, maintaining it stagnant and incapable of questioning, re-writing or reinventing itself (Rosa, 2012). The concept of demographic aging can be defined as a:

> (…) particular evolution of the age composition of the population that corresponds to the increase in statistical importance of elderly people (aging at the "top" of the age pyramid) or the decrease in statistical importance of young people (aging at the "base" of the age pyramid). (Rosa, 2012, p. 23)

The study of this type of aging, which supplies all the statistical data, calls for the definition of fixed age categories, in which all individuals are included, regardless of personal

attributes such as health, capacities, qualifications or competences. Corresponding to the main phases of the cycle of life, there are three categories or age groups we can distinguish: young age, which includes individuals until 15 years of age; active age that is drawn between 15 and 64; and senior age (or third age) that includes individuals aged 60/65 or over (depending on the country). It should be mentioned that some people consider that the senior person may be classified in a third age and fourth age (from 60/65 until 80 and from 80 years old on, respectively) (Rosa, 2012).

World panorama.

World aging is currently a reality that brings out countless challenges of social, economical, political and cultural nature. Even though it is distributed with different intensities according to region and country, it is essentially after the second half of the 20th century that is observed the acceleration in the growth of demographical aging worldwide. Many societies began to face the so-called *double aging*, which is visible at the *base* and *top* of the age pyramid, as a consequence of the reduction in the birth rate and also of the increase in average life expectancy (Rosa, 2012; United Nations Population Fund [UNFPA], 2011; UN DESA, 2013; WHO, 2012).

The relevance of this theme is highlighted by several world entities. The United Nations (2013) warns that the phenomenon of world aging may augment significantly in the near future. The world population between 1950 and 2011 increased from 2 thousand million to 6,5 thousand million. In 2013 there was a rise to 7,2 thousand million, which forecasts a continuous and accentuated population increase with an estimate of 9,6 thousand million in 2050 and 10,9 thousand million in 2100 (UNFPA, 2011; UN DESA, 2013).

Even though developed countries contribute to the population growth, developing countries are the ones that are particularly and mainly responsible for this phenomenon,

anticipating a continuation of quite high fertility rates and an increase in the number of elderly people over 65 years of age (UN DESA, 2013). The world population grows 1,2% each year, a rhythm of growth quite inferior to the elderly population's, which is 2,6%. Observation of the top of the current world age pyramid also shows that it presents a substantial growth, thus revealing the huge statistical weight of the senior population (individuals aged 60 or over) (Leão et al., 2011; Rosa, 2012; WHO, 2015).

The world percentage of third age augmented 3% from 1950 to 2009 (from 8% to 11%) and it is foreseeable that in 2050 it doubles (22%), i.e., in absolute terms, it may grow in 2050 to up to 2 thousand million individuals (Leão et al., 2011; WHO, 2014). The United Nations (2013) confirms that the population aged 60 or older will increase by 2050, in developed countries (from 287 to 417 millions) as well as in developing countries (from 554 to 1,6 thousand million). Beyond these indicators, it is also important to mention that the number of people aged 80 or over has also been growing, and it is foreseeable that until 2050 this number is quadrupled (UN DESA, 2013). Another cause favouring the aging of the age pyramid is the prediction of the increase of the world population's average age by about 10 years by 2050 (from 28 to 38 years of age) (Leão et al., 2011; Rosa 2012).

European panorama.

The percentage of European population in world population is increasingly smaller. Following world tendencies, European population is also rapidly growing older. Europe currently presents the highest population age average in the world. This indicator has been observed since 1950, signalling the European average age at 30 and foreseeing its increase to 47 years of age in 2050 (Leão et. al., 2011; Rosa, 2012; UN DESA, 2012a, 2013b).

The percentage of people aged 60 or over is augmenting significantly and it is predictable that by 2050 this number will almost double (25%), having as a reference the

14% reached in 2010. These phenomena can be explained by an increase in life expectancy and a considerable decline in fertility rate. The changes in behavioural and lifestyle patterns, the entry of women in the labour market, the increasingly older age at first childbirth or even the uncertainty regarding the future are possible causes for this reduction in the number of births per woman in Europe (Eurostat Statistics Esplained, 2013; Leão et. al., 2011; UN DESA, 2012a, 2013b).

Panorama in Portugal.

Analysis of the demographic evolution in Portugal since the middle of the 20th century until today, shows how notoriously and quickly is has been changing, especially when compared to other countries. These transformations coincide with the profound social, economical and cultural changes that have been writing the history of the country (Barreto & Preto, 1996; Carneiro et al., 2012; Gomes, Moreira, Azevedo, & Baptista, w.d.; Rosa 2012). From here it may be deducted that aging has impacted the changing of the social policies that have prioritized active aging and, among others, its social protection. These policies encourage senior health and well-being so that they may enjoy a physically and mentally healthy life, especially in terms of autonomy, independence, capacity and participation in social life (Carneiro et al., 2012).

Portugal has today an unprecedented population dynamic in its history, with a growing weight of senior population and a decreasing weight of the active population. From 1950 to 2014, Portugal managed to go from one of the least aged populations (comparing with the average of UE27) to one of the most aged countries in Europe, occupying the sixth position of the most aged countries in the world (Rosa, 2012; Population Reference Bureau [PRB], 2011; Pordata, 2014a, 2014b), or the ninth position according to United Nations (UN DESA, 2013).

As in Europe, the importance of third and fourth ages in the Portuguese population structure has been rising because, on one hand, of the decrease in births and, on the other hand, of the increase in average life expectancy. The number of elderly people aged 80 or over has gone from 340.000, in 2000, to 484.200, in 2010 (Bandeira et al., 2012; Carneiro et al., 2012; Rosa, 2012).

The population over 65 years of age should increase from 19% in 2011 to 32% in 2060 and the population over 80 years of age should reach 1,3 millions in 2060. The weight of the elderly population (65 or more years of age) in total increases from 19,2% in 2011 to 32,3% in 2060 (Leão et al., 2011).

In Portugal, as in many countries of the Mediterranean, family members (wives, parents, husbands) constitute the bulk of the caregivers for elderly people with difficulties in their daily life activities. Presently, the increase of single-parent families and the emergence of new family and conjugal forms have lead to an increase in the number of institutionalized seniors (Carneiro et al., 2012).

Aging: Biological Psychology and Social Aspects

After the development of the collective aging concepts, it will be approached the chronological and bio-psychological concepts allusive to individual aging (Rosa 2012).

All human being is unavoidably in a progressive aging process since his/her birth, even though its acceleration varies from individual to individual. Thus, it is only the age factor that defines chronological aging (Rosa, 2012). Chronological age, essentially used for statistical purposes, is the criterion that is most defining of the aged person. According to the WHO, worldwide, an elderly person is someone with 60 years of age or more and in Portugal we consider elderly population to be 65 years old or more.

Rosa (2012) defends that the age factor cannot, in turn, determine bio-psychological aging. It is experienced by each individual, independently from age, is a distinct way and depends on countless causes, such as lifestyle, gender, genetic conditionings or the environmental and social context. Several studies point to the heterogeneous character of aging, i.e., even though aging is a process that is natural, universal and common to all human beings, an individual's manner of aging is unique. It is impossible to precisely outline the beginning of *old age*. No human being can safely state that certain signs as they arise at a certain age are the appearing of *old age*. Faced with this differentiation, it is possible to conclude that, unlike the unquestionable factor of age, senescence is arguable and may be lived or perceived in many different ways. Thus, we can define aging as a set of transformations and processes of the organism of biological, psychological and social nature.

As quoted earlier, the aging process is progressive, being however more visible in the elderly person (Rosa, 2012), because at this stage there is a progressive and irreversible loss of the organism's capacity of adaptation to the changing conditions of the environment. In this way, factors inherent to the subject itself are present (such as age, suffered losses and its adjustment to old age), but also factors subjacent to the environment/context where the elderly person is. Elderly people are particularly vulnerable to the changes in the environment, partly due to their sensory deficits, among other limitations. So, when the environment is inappropriate and threatens the person's integrity, he/she may regress and his/her health state may deteriorate sharply (Oliveira, 2005). Also, aging is connected to morphological, physiological, biochemical and psychological modifications of the human organism throughout life. It also constitutes a progressive and unavoidable loss of the individual's capacity to resist to the changes in the environment. It should be noted that aging is not an illness, but a natural process (we are born, we mature, therefore we age). However,

this is not experienced equally by all, as it presents different rhythms according to the way the individual deals with the stages in his/her life (Spar & Rue, 2005). In other words:

> Aging is a differential process (very variable from one individual to another) that simultaneously reveals objective data (physical degradation, tendency to decrease perceptive and mnesic functioning) and also subjective data that constitute in fact the representation the person has of his/her own aging. (Fontaine, 2000, p. 23)

Thus, we can define aging as a dynamic, irreversible, slow and gradual process that is the sum of several processes involving bio-psychosocial aspects. Because its speed, rhythm and gravity vary from one individual to another, one cannot only take into account chronological age.

Adiccionally, there are three types of ages: biological, social and psychological. Biological age is associated to organic aging. Throughout life, each organ suffers modifications that diminish its performance over time and the ability to self-regulate becomes less effective. Not all organs age at the same rhythm. Aging will be expressed by degradation of your cardiovascular system, or by early brain aging, or still by the functional decline of other organs. Social age corresponds to the role, status and behaviour of the person in society. These factors are strongly influenced by his/her own culture and the historical characteristics of the country where the individual lives. At the transition from adulthood to elderly age, some people consider this *stage* as a social death, which may lead to feelings of uselessness, partly because work is valued to the extreme in our societies. Being set aside of paid activities can provoke severe psychological problems to some people (Fonseca, 2004; Schneider & Irigaray, 2008; Spar & Rue, 2005).

In what concerns psychological age, it derives from behavioural competences, including mnesic abilities (memory), intellectual abilities (intelligence) and motivations. Having a good preservation of these activities allows for a better self-esteem and the

conservation of a high level of autonomy and control (Fontaine, 2000; Oliveira, 2005; Spar & Rue, 2005).

Primary aging versus secondary aging.

Nowadays gerontologists defend that the aging process arises through the interaction of exogenous and endogenous aspects.

Aging of endogenous character is intrinsic and appears to be underlying at a genetic level to cell longevity, whereas aging of exogenous character derives from the accumulated effects of climate, socio-economic and cultural conditions, nutritional behaviours, consumption, life habits and personal experience, which differ from one individual to another (Spar & Rue, 2005).

Papalia, Olds and Feldman (2006) also consider that the aging process may be divided according to two stages: primary aging (normal) and secondary aging (pathological). Primary aging, or so-called normal, defines a gradual and unavoidable process of body deterioration that begins at birth and continues until the end of life. It is considered "normal" because there is no decline of the functional capacity, at biological and mental level. Pathological aging, as the name implies, assumes the existence of a severe pathology.

This is a more positive model in the sense that, in the absence of pathologies, it is possible to maintain the functioning of the central nervous system until the time of death. As such, illnesses should be avoided through control by the individual. The elderly person's health is determined by the combination of these two factors, with secondary factors (adoption of healthy life habits) being more decisive in the promotion of a successful aging (Papalia, Olds, & Feldman, 2006).

Biological aspects.

Physiological aging

Physiological aging comprehends a series of alterations in the organic and mental functions due exclusively to the effects of advancing age on the organism, causing a natural loss of the homeostatic balance of the organism and a gradual reduction of the functions. The organism that ages in normal conditions, may survive adequately. However when there are accumulated expositions to stressing events, difficulties may arise in maintaining the organism's balance, which may end in pathological processes through the respective impairment of the endocrine, nervous and immune systems. Therefore, we conclude that physiological aging significantly depends on the lifestyle the individual adopts from an early age (childhood/adolescence). The organism ages as a whole, whereas its organs, tissues and cells have different aging characteristics (Fontaine, 2000). The same author add that with primary aging several changes appear in the organism:

- Decreasing blood flow to the kidneys, liver and brain;
- Decreasing heart rate;
- Decreasing venting capacity;
- Decrease in the efficiency in eliminating and metabolizing pharmaceutical drugs;
- Loss of hearing and visual acuity;
- Weight loss;
- Skin and hair changes;
- Decrease in muscle formation and tonus;
- Changes in posture;
- Unbalance;
- Decrease in the intensity of the reflex;

- Sleep disorders;
- More propensity to chronic organic illnesses.

Perceptive aging.

Perceptive aging is also very differential, as it possesses important and serious consequences psychologically and socially. Some sensorial modalities are extremely affected by age, such as hearing, vision and balance, while others such as smell, taste and kinaesthetic show fewer alterations (Fontaine, 2000).

Aging of the nervous system.

The nervous system is the most complex organ in the organism and its aging results from a set of nervous modifications, such as: brain atrophy (loss of weight and volume); onset of senile plaques (lesions among cell bodies); neuro-fibrillar degeneration; decrease in neuroplasticity (even though it keeps a good level of efficiency); neuronal mortality; dendritic descent and enrichment, certain brain areas deteriorate and others grow (Fontaine, 2000)

Changes in the nervous system end up affecting cognitive performance as well. There is a progressive decline of the cognitive brain functions, especially in what concerns learning and problem-solving capacities, speed in processing information and memory. The differences that exist in specific aptitudes may be associated to declines in three fundamental resources of the cognitive process: slowing down of the execution of processing of information and response, affecting attention, memory and decision-making; decline of the aptitude of work memory, decreasing other complex cognitive aptitudes, such as reasoning; and reduction of the visual and hearing acuity, as well as other perceptual alterations (Fontaine, 2000).

As age advances, cognitive performance is increasingly variable. The factors that influence the degree of cognitive alteration as individuals age are: genetics, health, instruction, mental activity, physical activity, personality and humour (depression is associated to cognitive deficits); social and cultural environment, cognitive practice, gender differences (women may present more deficits in special tasks and men in verbal tasks); and specialized knowledge, i.e., elderly people that know the processes inherent to aging, adopt compensatory strategies to maintain their level of performance (Spar & Rue, 2005).

Mild cognitive deficit (MCD)

The cognitive decline that accompanies normal aging, sometimes, makes it difficult to detect and diagnose organic mental disturbances, such as dementia. DSM-V (2014) defines cognitive decline as being age-related, this indicating the existence of elderly people with mild cognitive alterations that are within the limits of the patterns of normality for their age group. Still according to DSM-IV, the functioning of elderly people with mild cognitive dysfunction in two or more areas, whose deficits fail to meet the criteria for dementia, *delirium,* or other organic mental disturbances, are in the criteria for the said mild neuro-cognitive disturbance (cognitive disturbance with no other specification).

Nowadays there are diagnostic criteria that differentiate age associated memory deficit (AAMD) from mild cognitive deficit (MCD). People with AAMD should be 50 years old or over and have subjective complaints of memory loss that affect daily activities. Their performance in memory pattern tests should only be inferior when compared to the average level of young adults. Concerning MCD, subjects present a deterioration of cognitive capacities above what would be expected for their chronological age, but still showing autonomy and not yet entering in dementia processes (Spar & Rue, 2005).

MCD is an initial stage of the neocortical expansion of the degenerative alterations concerning the high density of senile plates and neuro-fribiliar weaves. Its criteria are memory complaints (confirmed by a testimony); memory deficit (confirmed by normalized tests according to age and education); general cognitive function mostly intact; daily life activity preserved and absence of dementia (Bigotte de Almeida, 2010).

The most affected area in MCD is learning and memorising new information, even though in some cases we may notice difficulties in language, visual and space skills or reasoning. It is possible to observe a more subtle difficulty in more complex daily life activities, such as managing commodities. However, even this difficulty may be overcome with the adoption of behaviours and strategies of a countervailing character (Spar & Rue, 2005).

It is also important to mention that there is a significant proportion of individuals with MCD that ultimately develop dementia. So, early interventions are considered to delay the clinical evolution of the dementia frame. On the other hand, we must consider the regular monitoring of the person with MCD, because in these cases the individual must be informed about its diagnosis, encouraged to become active and to adopt compensatory strategies concerning the functional impact of the deficit. Cognitive stimulation programs are extremely important and have proved to have results in improving the intellectual ability of the elderly (Spar & Rue, 2005).

Psychological and social aspects of aging.

Personality aging.

Personality is a structure, an organization and an integrator of behaviours. The study of personality in aging is focused on the question of stability, namely if there are changes in the structure and its representations throughout life.

There are three major comprehensive approaches of personality in aging. The first one started with Cattell (1947) and Eysenck (1967), it consists of psychometrics, where personality is seen as a set of certain types of traits and factors that determine them. The second, referred to as developmental, comes from the theory of stages and seeks to identify a succession of universal phases in the evolution of personality, from childhood to old age. Each phase consists of an organization and integration of specific behaviours. An example is the Jung model (1933), which considers that personality has two fundamental and opposite orientations: extroversion, on one hand (attitudes towards the exterior world), introversion (subjective mental representations, interior world), on the other. Any individual with mental health has these two aspects in his/her personality. It is, however, necessary to have a balance between both, thus integrating the limitations of the environment with the wishes of the unconscious. Establishing a comparison with young people that tend towards extroversion (characteristic of the need for self-affirmation), we notice that with age comes a tendency for introversion, i.e., for an analysis and reflection concerning what was lived.

Another fundamental development model is Erikson's (1982) that sets up eight stages of psychological development of personality/identity, taking into account the complete cycle of life. Each stage corresponds to an interaction game, between maturity and environmental pressure, seeking to solve a crisis in a positive or negative way. The manner in which a person solves each crisis, throughout the different stages, will influence the capacity to solve conflicts in life. In his model, the last stage (over 65 years old until death) is called integrity versus despair. The Ego's integrity is the culmination of a successful development. It presupposes the acceptance of the life he/she has lived, accepting the mistakes that were made, understanding the consequences of the actions taken, without excessive remorse and with no despair in the face of death. The failure of the Ego's integrity leads to despair, to the notion that it is too late to change what needed to be changed, to the fear of death, to regret

and to a bitter picture of the world and of the life that was lived. The virtue to be conquered is wisdom, which allows acceptance and understanding of the world and of people, a certain sense of connection, no longer to a specific generation but to several cultures, generations and social environments. This stage may be the most difficult of all. The issue of death becomes pressing with the decrease in the time left to live and of the biologic capacities. In the face of this unavoidability, the individual may accept, or not, the life he/she led and, consequently, be or not be prepared to die.

The third approach is socio-cognitive (Whitbourne, 1987) i.e., it tries to explain how the individual integrates in his/her personality the modifications that are produced during his/her lifetime, in view of the environment.

Thus, personality is a structure, or an integrator of behaviours, whose evolution throughout life is based in continuity and stability. However, in senescence a feeling of loss of control occurs, which is translated, especially after 60 years of age, by a movement from an active to a passive attitude, from an interpersonal approach to an individual approach, seeking not the alteration of stressful situations, but the control of the feelings of anguish. Elderly people tend to use more frequently the approaches centred in emotions, rather than active approaches in the resolution of problems, *"*the priority conferred to emotion in elderly people, may be interpreted by some as a reaction to the little amount of life span they have left, or the end*"* (Spar & Rue, 2005, p.50). Next we will explore the concept of *coping* centred on emotions.

Adaptive strategies of coping in aging.

Psychological development throughout life is determined by factors connected to age (biological changes); factors linked to history (social, economic and political changes) and factors linked to life events (variable from one person to another in what concerns their

occurrence, form and time, such as divorce, retirement, widowhood, illnesses and accidents). These events cause stress and are a test to the limits of intra-individual plasticity and the subjects' adaptive capacity (Fonseca, 2005). *Stress* concerns involuntary responses triggered by the emotional and cognitive reactions of the individual in view of the expected and/or unpredictable life events; demonstrated when there is an imbalance between environmental demands and response capability. Inherent to the concept of *stress,* we find the concept of *coping.* Lazarus & Folkam (1991) claim that there are cognitive and behavioural efforts that try to dominate, reduce and/or tolerate the conditions generated by a *stress* situation. The *coping* process involves the elaboration and implementation of strategies to deal with internal situations (health state, menopause, etc.) or external situations (death of a loved one, retirement, widowhood, etc.) that appear in moments of stress and are rated as an overload to personal resources. Its main objective is to alter/change the situation that caused stress. They are equally responses learnt, kept and changed throughout life alongside the individual's life story.

In Lazarus and Folkman's opinion (1991) we can divide the *coping* process into two functional categories: *coping* centred on the emotions it tries to regulate, inadequate emotions, associated to and resulting from stressful events (e.g., self-censorship, avoidance, positive reappraisal); and *coping* centred on the problem, that tries to change the situation or problem that is causing the tension, i.e., to act on the origin of the situation, looking for ways to solve it.

The cognitive evaluation that the individuals make of the events that generate *stress* is at the origin of the different perceptions of those events, and of the different *coping* strategies used for their resolution (Lazarus & Folkman, 1991). The cognitive evaluation refers to the way an individual interprets the meaning of a given situation for his/her well-being (e.g. if it is threatening, positive or irrelevant).

Taking Lazarus and Folkman's theory (1991), other authors such as Skinner and Edge (1998) expanded the developmental perspective over the concept of *coping*. They considered it a process connected to the psychological development and the adaptive responses of the individuals to *stress*. Two types of *coping* therefore appeared: adaptive and non-adaptive. In the first one, the ways of *coping* are susceptible to be perfected as the person develops, allowing him/her to deal with stressful situations more and more effectively. In the second one, people are incapable of dealing with the difficulties they face, partly because of a life history full of constraints and unsuccessful relationships between him/herself, others and the environment.

Fonseca (2005) while analyzing the *stress* and *coping* processes that are connected to aging, accentuates the individual factor as the key to better understand them. In elderly people the impact of retirement, widowhood, health decline or loss of economic power is always interpreted subjectively, depending on the meaning each person assigns it. The author also defends that while working directly with elderly people, it is fundamental to identify the individual variables that provide the favourable or unfavourable adaptive responses in several domains (self-concept, health, social functioning) in order to induce answers and support services.

Furthermore, Fonseca (2005) suggests that third age is a rich and complex stage of emotional life and emotional prominence increases as time progresses. Healthy elderly people have a better control of emotions than young adults, because they reason with greater flexibility about dilemmas with emotional charge and recall information with an emotional charge more easily. In fact, elderly people tend to deal with stressful events differently than young adults. In this manner, they tend to use ways of dealing that are more emotional-oriented, rather than problem-solving active approaches. The way of coping oriented by emotion is characteristically more passive, more individualistic and suggests a greater control

of distressing feelings, in opposition to problem-oriented coping, that defines a more confrontational and interpersonal way of dealing, that seeks the alteration of the stressing event (Fonseca, 2005; Spar & Rue, 2005).

The authors also suggest that the problematic situations elderly people face are less susceptible to change, in comparison to young adults. As examples of ways of *coping* through emotion, we have the acceptance of responsibility, distancing from the problem and positive reappraisal of the problem. It is important not to measure elderly *coping* using youthful patterns. *Coping* centred in emotions may be an indicator of personality development rather than of regression, especially if the specific problem is difficult to solve by means of action (e.g. mourning or serious illness).

Notion of control and autonomy.

The control *locus* is another psychological dimension that affects the response to *stress* situations. The third age is the age group where differences between individuals are more evident; therefore studying aging and the behaviours inherent to it becomes more complex. However, the subjective feeling of well-being tends to be greater when you give the individuals a greater chance to regulate their own environment. The feeling of internal control is based in the capacity to make a decision concerning actions from him/herself. The frequency of daily activities and the internal representation of control constitute a narrow relationship and are good indicators of the elderly's satisfaction in life. Thus, the control of his/her own behaviour and the surrounding environment presents itself as a necessity, but also as a motivational factor. Thus, the loss of the notion of control may contribute to depression, or induce violence (Alaphilippe & Bailly, 2014; Spar & Rue, 2005).

One of the regulators of the internal representation of control derives from the feeling of self-efficacy, i.e., the feeling of competence that makes the individual commit to actions

that give a greater control of the surrounding environment and of the relationship with the others. The opposite leads necessarily to a feeling of external control, where the individual has the tendency to stop acting in face of the feeling of loss of efficacy over what is real, leading in some cases to depression and maladjustment. Bandura and Locke (2003) studied the phenomenon of self-efficacy defining two complementary processes. The first one concerns the action's result, which may lead either to success or to failure, depending on the goal that was set. The second one makes clear that for a feeling of efficacy to exist, a social recognition of that success must also exist, i.e., the action's success must be valued by the social environment.

Some elderly people can be valued by the competences they keep. However, those who suffer from isolation have no witnesses that can value their achievements concerning the ability to adapt to old age. In these cases, there is no reinforcement of the feeling of self-efficacy, or the internal representation of the control that results from it. It becomes crucial that healthcare technicians contribute to maintain or restore control in elderly people (Alaphilippe & Bailly, 2014).

Self- esteem and the concept of one's self.

Aging also affects one of the most important psychological dimensions, i.e., one's self-representation and what each one constructs of him /herself evolves with time. There are several aspects that come into one's self-representation. The first one concerns the physical appearance that defines approximately the individual's age. The second one concerns the representations connected to the functions, status and processes of identity, closely connected to the retirement process where the elderly person is deprived of the social role of work and its consequent valorisation. In family terms we can also indicate changes in its dynamic and the readjustment of roles.

This rupture in the nature of social insertion, implicates an ongoing work of adjustment from the elderly person who will have to reconstruct a position in society. In fact, the human being is defined by the social roles it takes on, as our positioning in the social context determines what we are, the representation we have of ourselves, and the one we transmit to others. We take on social roles within the family context as well as rights, duties, behaviours and ways of being. Each social area defines positions and roles. Professional activity strongly contributes to define a personal and a social identity. In today's societies, going into retirement characterises the individual as a member of the third age group, *"*strongly marked by preconceptions of depreciation of post-active life*"* (Pinto, 2007, p. 75). Identity is defined not only by name, but also by parentage and profession. Nevertheless, it is the profession that has a greater weight in personal appreciation either by the contribution the individual feels he/she is giving to society, or by the recognition of the social rights that come from it. The void that may come from leaving the professional life may in itself constitute the arising of risk factors in the elderly person. On the one hand, it may mean less economical income, which consequently demands adjustment. On the other hand, it may indicate a change in routines and a decrease in interpersonal relationships. Feelings such as uselessness, solitude may appear in the retired person and contribute to low self-esteem and the appearance of depression and/or anxiety symptoms (Alaphilippe & Bailly, 2014).

It is however important to note that the manner in which retirement will be lived, i.e., according to a positive or negative perspective, depends on the subject him/herself and on the context in which he/she is found. Retirement may be seen as a moment of opportunity and leisure, where the individual may finally dedicate him/herself to activities that provide him/her pleasure. Unfortunately, considering the importance that work has in society, retirement is often seen not as an opportunity but as a problem, and a major cost to those who remain active (Nazareth, 2009).

Coming back to the concept of one's self, some authors consider it to be a manifestation of auto-biographical memory, i.e., the set of events registered in the memory that concerned a specific person. Clinical observations of elderly adults demonstrate the importance of these mnesic aspects. Even though there are frequent complaints of memory loss, elderly people give great importance to their past life memories. That may be explained by the importance of evoking past events in their own expression and consequent elaboration through the past of what they represent in the present. Very frequently, psychotherapeutical approaches use reminiscence as a technique, accessing the elderly people's memories as a source of valorisation (Alaphilippe & Bailly, 2014; Spar & Rue, 2005).

Another fundamental psychological dimension is self-esteem that has already been referred in some aspects above mentioned. In the aging perspective, self-esteem is closely linked to comparison. Comparing one's self to another comes from the need to understand to what extent the individual is in the process of aging. In elderly people particularly, the so-called time comparison. In this case, the element of comparison is him/herself at a previous age. This process of comparison may have an unfavourable and depreciative character for the elderly, or it may serve as adaptive functioning (I am still capable of…) (Spar & Rue, 2005; Alaphilippe & Bailly, 2014).

Also, self-esteem's main goal is the psychological adaptation of the individual, according to the problems that arise throughout his/her lifetime. According to Maslow (1908-1970), a positive sense of self-worth constitutes a fundamental need of the human being. Thus, a low self-esteem would result in a dysfunction of the regulatory capacities, as well as a decline in the performances that accompany aging. The devaluation of one's self is related top depression. Alaphilippe and Bailly (2014) write:

> We may put forward the hypothesis that a socially well integrated person, manifesting a solid self-esteem will overcome aging problems more efficiently than someone with

> difficulties in his/her social situation and who is outcast concerning the dominant norms. (Alaphilippe & Bailly, 2014, p. 103)

The same authors defend that there is a negative relationship between age and self-esteem. It becomes essential for the elderly person to maintain the feeling of usefulness and self worth, continuing to learn and to stay active, and it also, leads to their well-being and longevity.

Psychological Theories of Aging

The first psychosocial theories of aging appear in the United States in the 50s and 60s. They mostly tried to describe aging and understand the form of well-being for elderly people. The psychosocial theories of functionalist character consider that the subject is defined by social roles, according his/her social status. On the other hand, the accent is in the individual adaptation during aging. Next, it will appear the main key ideas of three psychosocial theories: the theory of disengagement, the theory of activity and the theory of continuity.

Theory of disengagement.

Cumming and Henry (1961) are the authors responsible for the theory of disengagement, where they postulate that normal aging is accompanied by a mutual distancing or disengagement between the elderly person and his/her social environment. This phenomenon takes place in a natural and pain-free way, with no resistance from both parties. Thus, society takes back the social roles once performed by the individual, and he becomes slowly uninterested by society, increasingly turning into him/herself. Alaphilippe and Bailly (2014) add that the necessary conditions for successful aging imply the withdrawal of the elderly person from the public sphere, the reduction of social relationships, the centralization

in the affective aspects of human relationships and the freedom from social roles. Disengagement has therefore a functional, irreversible and universal character.

The theory of activity.

Later the theory of activity was developed which advocates the exact opposite. It presents as hypotheses the idea that a high level of investment in different social, or interpersonal, roles is significantly linked to a high level of adjustment, or satisfaction in life perceived by the elderly person. As such, in order to age well, new roles in society need to be found, or the same roles previously held need to be kept. Recently, studies have demonstrated that people that invest in new social roles present a better general health state and self-esteem (Alaphilippe & Bailly, 2014).

The theory of continuity.

Finally there is the theory of continuity that derives from the studies made around the issue of the impact of time over an eventual evolution of personality. This theory is centred in the internal dynamic of the subject, as a predominant factor for maintaining well-being, i.e., it doesn't depend on participation or non-participation in social activities, but rather on the individual's personality. Elderly people try to find continuity and familiarity in their way of functioning, i.e., in their internal (emotions) and external structures (activities and social roles). In this manner, the activities and the social involvement of the elderly person, in the present and in the future, are in continuity with their past. The elderly person needs references from the past to overcome possible difficulties in the present (Alaphilippe & Bailly, 2014).

The three theories described above, opened the field of investigation and had an important role in the subsequent formation of the concept of successful aging.

The Theories of Successful Aging

Concept of successful aging.

Rowe and Khan (1997) were the ones that, inspired by the theories of activity and continuity, indefatigably developed the concept of successful aging beyond the already mentioned normal and pathological. According to the authors, normal aging implies physical, cognitive and social normative events expected in the age group; pathological aging results from global changes with the presence of chronic illnesses; and successful aging (also called healthy aging) will be the one above normal aging expectations, i.e., the changes resulting from aging occur in a slow way and present a better physical, social and cognitive functioning than most people in the same age group.

The same authors state that successful aging implies three essential factors. The first one concerns the low probability of disease and incapacity, i.e., apart from the absence of illness, they add the presence/absence of risk factors for chronic diseases, thus differentiating, within normal aging, a *successful* subgroup that shows low risk. Next, we have the high cognitive and physical functioning (maximization of the cognitive and physical functions) and lastly, the commitment towards life that implies maintaining productive activities and interpersonal relationships (Almeida, 2007).

This model contributes to accentuate the modifiable character of aging aspects considered *normal,* thus allowing a more attentive look at the prevention of disease and incapacity. In this manner, it differentiates from the biomedical approaches, emphasizing a multidimensional and positive concept of successful aging (Almeida, 2007). So, as investigation continued, the successful aging expression was developed by other theoreticians and the understanding of this process became more and more directed towards the concept of well-being.

Baltes SOC model.

Following the work developed about the concept of successful aging, the authors Baltes and Baltes (1990) came along and suggested a model that seeks to understand the ways for aging well. The model of selection, optimization, and compensation (SOC), comes from a psychological perspective that is based on a life span development model, where there is a dynamic balance process between gains and losses, involving the interaction of three crucial processes: selection, optimization and compensation. Thus, the individuals select activities that are considered important according to personal aspirations, optimize resources that allow them to accomplish those activities and compensate for the losses in those domains (Alaphilippe & Bailly, 2014; Fonseca, 2005; Freund & Baltes, 2002; Oliveira, 2005).

As the individual ages and meets the decline of his/her capacities, he/she tries to select personal goals where he/she wishes to continue to be involved, according to his/her priorities, motivations and capacities. In this manner, he/she chooses a narrower number of activities (physical or intellectual) where he/she may invest more resources. There are two types of selection: elective selection based on the choices and negative selection based on the deficits associated to aging, which leads to a reorganisation of the objectives in accordance to those same deficits (Alaphilippe & Bailly, 2014; Fonseca, 2005; Oliveira, 2005).

Optimization and compensation are considered as regulation mechanisms. Optimization is based on the maximization of resources and on a strong investment in the previously selected activities, with the purpose of fulfilling them in the best possible way. Compensation is based on the minimization of losses, using alternative ways when resources are no longer enough to reach the required results. It is a more defensive process that seeks to maintain the fulfilling of personal goals by adopting new resources (internal and external). Seeking surrounding help (i.e. putting on a prosthesis, going through psychotherapy) helps to maintain a good level of functioning, counteracting the losses inherent to aging (Alaphilippe

& Bailly, 2014; Fonseca, 2005; Freund & Baltes, 2002; Oliveira, 2005). Fonseca (2005) writes:

> Successful aging is dependent on the acquisition of attitudes and of *coping* processes that allow for the elderly person, despite the increase in deficits or its peril, to remain independent, productive and socially active for the longest amount of time possible. (Fonseca, 2005, p. 122)

The SOC model gets back to the central idea inherent to the contextual paradigm, where it suggests that individuals model and are active agents of their own development. On the other hand, they force a change in thought and re-analysis concerning the nature of old age, underlining the importance of focusing attention also in the responsibility of the social environment in the production of different organisms, thus decreasing the exclusive focus on individuality (mental/biological) as a sole agent in the aging process (Fonseca, 2005; Freund & Baltes, 2002).

In the scope of the psychology of the lifecycle, the successful aging model defended by Baltes and Baltes (1990) has been explored and perfected until today by the same authors and other investigators, basing themselves on the three axis implicit in the conceptualization of perspectives: the balance between gains and losses; the resort to the SOC model as a basic explanation of the adaptive process, inherent to the capacity of successful aging; and the modification in the modalities of regulation of personal identity (Freund & Baltes, 2002).

The balance between gains and losses varies throughout life with aging, the elderly person would further maximise the gains, minimizing the losses associated with the advance in age. That means that faced with the alterations of biological, psychological, social and cultural functioning, the elderly person adopts strategies of reorientation of objectives and their consequent regulation. In this manner, the elderly person continues to develop and act over the surrounding environment (Alaphilippe & Bailly, 2014; Freund & Baltes, 2002).

Throughout life every moment is marked by a rotation between gains and losses, but with aging the frequency of losses becomes more accentuated as chronological age advances. This situation may be explained by the decrease in SOC strategies that are distinctive of aging. Still it was possible to verify through a study by Freund and Baltes (2002) that there is an increase of the strategies until 67 years of age, but after that, because of the lack of resources associated to old age, the use of those strategies becomes less affective, to the exception of elective selection. This strategy becomes more current in ages over 60, but it is also the one that persists the most as age advances.

There is also a close liaison between behaviour and subjective beliefs in aging, i.e., the individuals are aware that as age advances, the losses will progressively conquer the gains, especially after the age of 70 years old, and reach the peak of superposition at 80 years of age. However, even at 80, the belief subsides that wisdom may continue to augment (Fonseca, 2005).

In conclusion, the SOC model indicates the existence of a connection between the three processes (selection, optimization and compensation) with well-being, satisfaction in life, control, subjective age and absence of feelings of loneliness. Successful aging is an adaptive process that, through strategies of selective optimization with compensation, lets the individual manage the balance between losses and gains (tendentiously unfavourable as age advances) in an active way, maximising its effectiveness in the conquering of personal and priority goals, still in an unavoidable context of reduction of resources (internal/external). It is not a unilateral negative vision *versus* positive, or decay *versus* growth. This model defends the existence of a balance between gains *versus* losses, reinforcing the tonic of the capacity of *modifiability*, based on a panorama of unavoidability of losses. Aging becomes a dynamic and developmental process part of life's course (Almeida, 2007).

This model gave way to new perspectives in the study of adaptive processes associated to aging, from which emerged: Brandstadter's flexibility/tenacity model (2002), Heckhausen and Schulz's life-span theory control (1995), Carstensen's socio-emotional theory (1992) and Godfrey's socio-cultural model of successful aging (2004).

Brandstadter's flexibility/tenacity model.

This is a model that defends the use of instrumental processes of assimilation (tenacity) and accommodation (flexibility) as a form of *coping* and maintenance of the integrity of the self during old age. By assimilation we consider the process that favours the reduction of the distance between reality (losses associated with aging) and individual wishes. It is a process of adjustment where the subject seeks to adopt efforts in conformity to his/her personal objectives and that tend to modify the real situation. By accommodation, we designate the process of adaptation of goals and priorities, according to personal resources and developmental or contextual conditionings. Therefore, the elderly person stipulates objectives that are feasible, rather than any other objectives, he/she analyses alternatives and puts emphasis on new personal goals. Flexibility comes from the need the subject has to change his/her previous level of demand; it is not a behaviour that leads to resignation, but an adaptive activity (Alaphilippe & Bailly, 2014; Brandtstadter & Rothermund, 2002; Fonseca, 2005).

In this model, both assimilation and accommodation are adaptive strategies and are linked to life satisfaction, well-being and a small indicator of depression (Brandtstadter & Rothermund, 2002; Maes & Karoly 2005).

Brandtstadter and Rothermund (2002) considered that as age increases, individuals become more flexible rather than tenacious, including in the fourth age. When the scope of certain objectives exceeds the resources and/or abilities of the individual, there is a passage

from accommodation to assimilation that allows for a feeling of coherence, hope, effectiveness and control to be kept. The following passage from assimilation to accommodation would be made gradually. Flexibility (accommodation) is fundamental as age advances and in the process of successful aging, because it keeps emotions positive and reduces the values of the effects of age over depression (Alaphilippe & Bailly, 2014; Bailly, Joulain, Hervé, & Alaphilippe, 2012).

Heckhausen and Schulz's life-span theory control.

The importance of accepting losses, of abandoning a certain number of objectives, in face of the reduction of abilities, leads to the development of the theory based on control, starting from the principle that all human beings has an inherent desire to control the environment (previously mentioned in the chapter on control *locus*).

Heckhausen and Schulz's life-span theory control (1995) focuses its attention on the primary and secondary control mechanisms. Primary control is similar to the concept of accommodation/tenacity in Brandtstader's model (2002) because it implies a control of the efforts facing difficulties, and a direct action over the environment in order to reach the sought-after necessities and objectives. Facing an irreversible condition, the subject is led to choose a determined number of possible paths, and to limit the focus on the chosen path. Secondary control leads to the minimization of losses as well as to the conservation and enlargement of the primary control values. When the instrumental efforts to modify events (primary control) prove to be insufficient, the individual tends to make adaptive adjustments using cognitive mechanisms (secondary control), whereby, for example, he/she reduces the objectives to be accomplished, or establishes comparisons with the others that are of benefit. Thus, the purpose of secondary control is the preservation of the emotional well-being, self-

esteem and motivation (Alaphilippe & Bailly, 2014; Fonseca, 2004; Fonseca, 2005; Heckhausen, Schulz's, & Wrosch, 2010).

Carstensen's socioemotional selectivity theory.

Carstensen's socioemotional selectivity theory (1992) demonstrates that aging is also associated with the pursuit of positive emotions, as an adaptive environment. In this theory, emotions gain importance, in the sense that when cognitive strategies cease to function favourably, because of cognitive decline inherent to the aging process, the subject can always resort to the maintenance or pursuit of positive emotions until the end of his/her life (Carstensen & Fung, 2006).

The human being is guided by a common set of socio-emotional objectives throughout his/her life cycle. These objectives include, among others, the search for novelty, expansion of horizons, belonging to a community. Even though the objectives are kept, the hierarchy among them changes according to the life cycle stage the subject is in. In elderly people, the priority goes to objectives related to the present that maximize the emotional sense/meaning. In this case, the emphasis is put in close and meaningful social relationships. The perspective of a reduced future makes the present moment more important. The expenses linked to the acquisition of information concerning the future are abandoned, in favour of current experience. The social network is reduced, in an effort to optimize it, allowing for less instrumental interactions and more interactions with close social partners of importance for the individual. Emotional regulation is processed through the avoidance of negative states and an intensification of the positive ones. Emotional contents are favoured as opposed to more neutral, or solely informative, contents (Alaphilippe & Bailly, 2014; Carstensen & Fung, 2006; Fonseca, 2005)

Recalling the past, positive memories are favoured. This is called the positive effect (Carstensen & Mikels, 2005). It implies an interconnection between emotion and cognition, where emotional contents are valued rather than purely informative contents. Through a series of experiments, the authors showed that attention and memory in elderly individuals, as opposed to young individuals, have superior performances when the stimuli are emotional. In addition, age differences are still more accentuated when the emotional contents is positive. The socio-emotional theory comes in this way to demonstrate that the elderly's social involvement and hierarchy of objectives are restricted by the time they still expect to life. On the other hand, the emotional component has an important contribution for the elderly's well-being.

Socio-cultural model of successful aging.

It is a model developed by Godfrey, Towsend and Denby (2004) that seeks to contextualize the aging process in a macro-structure, at the socio-economical and cultural environment's level. They consider successful aging a result of an adaptive response that comes from a selective optimization with compensation model (SOC), with the aim of reaching the objectives, in a dynamic balance between gains and losses. These processes are measured according to the individual meaning of the personal experience, personal resources (intra-individual, social support and community) and the social-economic situation (physical/social environment and material aspects). Thus it is important to better understand the influence of expectations, norms, ethnicity, social status and cultural values over the worth the individuals attribute to their conquests and losses, the behaviours they adopt as well as the constraints and the opportunities they face throughout life (Almeida, 2007).

Promoting Health Aging

Concept of active aging.

From the definitions and theoretical approaches presented earlier, even though gains and losses associated to aging are considered, in the last few years investigation and intervention in this area has been focusing on the ideal results of the aging process. The change of thought and beliefs concerning the notion of aging has also been increasingly sought, namely stereotypes linked to a reductionist and negative conception. In fact, false beliefs end up conditioning social policies themselves.

Following those efforts, in 2002, the WHO instituted a new paradigm based on an intergenerational vision and claims programs that support life-long learning. Here appears the concept of active aging, defined as a process of optimization and opportunities for health, participation and safety, aiming for the increase in quality of life during the aging process, which presupposes competent, autonomous and independent elderly people. Basically it is founded on a conception of health as substantiation, throughout life, of the potential for well-being (where the mental and social domains are as important as the physical one) adding two fundamental pillars: participation and safety. The latter encompasses the idea of protection, dignity and special care in old age, in a perspective of rights rather than assuming elderly people are passive receivers of care. The term “active” implies not only physical or labour force, but it is also strongly associated to the continuous participation of the elderly person in social, economical, cultural, spiritual and civic life (Almeida, 2007; Osório, 2007; WHO, 2002).

In order to achieve active aging effectively, it is crucial that the healthcare system implements actions to promote health and preventing disease. On the other hand, a social protection policy is necessary to ensure the elderly person has income that allows him/her to

live with dignity. The physical environment is also another factor to take into account because it influences the elderly person's independence.

Thus, active aging depends on a set of influences at the level of the individual, the family support network and of society in general (Direcção Geral de Saúde [DGS], 2008). According to Ribeiro and Paul (2011) the existence of formal, but especially informal, support networks is crucial in order to ensure autonomy, self-esteem, mental health and well-being.

Considering the dynamic character of the aging process, it becomes important that this new paradigm is integrated in society, so that prevention measure may occur at political, social and individual levels. Therefore, we may consider active aging as "a product of adaptation that occurs throughout life and through which we achieve an optimal physical, cognitive, emotional and social functioning" (Fernández-Ballesteros, 2009, p.97*).* The promotion of healthy aging implies the optimisation of conditions by means of bio-medical, physical, psychological and socio-environmental interventions; the prevention of diseases and incapacity; bearing in mind the maximisation of well-being and quality of life (Fernández-Ballesteros, 2009).

Quality of life and well-being in elderly people.

The notion of well-being is relatively complex, because it includes close concepts such as satisfaction with life, quality of life, affections, morale and happiness. The concept of well-being and happiness may be defined through affective and cognitive components. The affective dimension includes emotions (positive/negative) and feelings. The cognitive dimension includes the judgement concerning satisfaction with life in comparison to an ideal, or expectations (perception that expectations and wishes were met) (Alaphilippe & Bailly, 2014).

Recent researchers (Alaphilippe & Bailly, 2014; Ribeiro, Ferreira, & Lima, 2013), reveal that in non-pathological population the well-being indicator does not tend to decrease with age. These results show that the objective conditions of life, even though they can influence the perception the elderly person has of well-being; they are not the only ones to define it. Equally, it is important to differentiate the objective conditions of well-being that concern health, financial power, social networks of support, etc., from the subjective conditions that focus on the evaluation the person makes of his/her own health, financial power and social networks of support. Trying to reinforce the importance of the multidimensional character of successful aging, the same authors defend that even though the objective indicators, such as health situation, are crucial measurements to evaluate successful aging, subjective indicators such as the perception the individual has of his health situation, enrich its evaluation. From what was observed, there are several views over successful aging that differentiate their definitions and approaches by the value they attribute to their objective or subjective aspects.

The WHO defined quality of life (QOL) as the perception the individual has about position in life, cultural context and system of values where he/she is inserted, in relation to his/her personal objectives, expectations, patterns and preoccupations. It is a wide concept, "affected in a complex way by physical health, psychological state, independence level, social relationships and environmental factors" (WHO, 1997, p.1). So, contrary to what people may think, it is in general influenced by many factors, that go beyond health.

Despite the difficulty observed in the clear definition of the concept of QOL, two relevant aspects of this concept seem to be consensual among the scholars of the area: multidimensionality (aspect that follows the bio-psychosocial model of health), because it is a global perception of personal life, dependant from the contribution of several domains and components; and subjectivity, choosing to ground the evaluation mainly on the perceptions

and expectations of the individual, being, therefore, a dynamic process (Seidl & Zannon, 2004).

Thus, the list of dimensions that constitute QOL could be endless and in a simplification of the list he mentions: religious component, spiritual, psychological, cultural, affective, social, economical, labour-related and physical, where the physical components are more easily evaluated and interpreted, whereas the components related to the social, relational, etc., aspect are more difficult to evaluate. Also, the individual expectations and abilities to deal with situations may affect the individual perception of health. In the same way, two people with the same health condition may present different results of QOL (Capitan, 1996).

The other aspect that is common in the definitions of QOL is, in fact, subjectivity. The concept of well-being is essentially subjective; therefore we can only get to its evaluation through auto-information. In this manner, investigation in QOL is strongly supported by auto-evaluation, i.e., the subjective evaluation of the functioning of people. Snoek (2000) points out that, in this context, the term subjective, as opposed to objective, doesn't mean less worthy of trust, as we could assume, but rather that it refers to the source of information: the subject, with his/her own values and beliefs that determine the evaluation. The essence of this concept is in recognising that the perception people have of their own state of physical, psychic, social and spiritual well-being depends greatly on their own values and beliefs, on their own cultural context and personal history. Therefore, it cannot in any way be independent from each one's cultural norms, patterns of conduct and expectations (Schwartzmann, 2003).

Prevention measures in aging.

Developmental psychology has contributed to the systematisation of knowledge in the prevention of mental health. Previously, mention was made to the idea that part of the attributes for successful aging derives from an individual control of the subject and, as such, it can be object of intervention throughout the life cycle, thus preventing future incapacities and chronic diseases at an older age. According to Moreira (2004) prevention may be defined as the programmed development of activities that prevent the manifestation of a certain condition.

According to the models and theory of successful aging, prevention must bear in mind the psychosocial aspects of the individual. For that, it appears to be fundamental to intervene as soon as possible in order to maximize the potentialities with a view to reduce risk factors. Thus, the younger the adult, the bigger his/her capacity is to select, optimize and compensate in the different domains, for a better aging, as opposed to older adults who demonstrate fewer resources and capacity of reaction. In this manner, prevention measures may be used to favour and support the selection processes through compensatory optimization, maximizing gains and minimizing losses (Ribeiro et al., 2013).

Here, risk factors, ate meant to stand for the context and/or the individual characteristics that reduce the psychosocial capacities so that he/her is able to maintain his/her well-being. In this way, risk factors increase the predisposition for the occurrence of disturbances, their probability being as large as the set of fragilities. Following risk factors, there are the so-called protection factors. They are characteristics that will be worked on to protect the individual from risks. Specifically with senior population, the main objective in prevention is the improvement of the quality of life, the long-term objective is the reduction of psychopathology and the short-term one it the decrease in risk factors, favouring the increase in protection factors.

It's important to point out that resilience is a key-process in this balance between risk and protection factors. In fact, it is the:

> Capacity of the individual for a successful adaptation, positive functioning or competences in the presence of adversity, involving multiple risks and internal/external threats or, still, the capacity of recuperation after a prolonged traumatic experience (Soares, 2000, p. 28).

It's important for the professional to encourage their characteristics of self-efficacy (control) of the individual/group he/she is working with, so that it may favour motivation and have positive results. The creation of a trust relationship is the basis of any intervention with therapeutic aims, especially when we are approaching the field of psychotherapy. In this manner:

> The identification of risk and protection factors is fundamental, as it allows for a better comprehension of the phenomenon, from where results a greater intentionality in drawing up preventive interventions. This makes possible the implementation of strategies that allow for, on the one hand, to annul risk factors and, on the other hand, to increase the protection factors (Moreira, 2004, p. 18).

Associated to prevention there are important social and political advantages with the implementation of preventive programs, for they will allow also to prevent more expensive services (Godfrey, 2001)

Medicine and public health categorize prevention as: primary, secondary and tertiary. Primary prevention points to intervention before the problem, aiming to avoid it. Secondary prevention makes reference to efforts to decrease duration and severity. Whereas, tertiary prevention is occupied in rehabilitating, through solving the problem or its sequels (Ribeiro et al., 2013).

Dance Movement Therapy

Historical Context

Dance Movement Therapy was originated in the United States of America in the 40s, through Modern Dance, when dance teachers started developing their work in psychiatric clinics/hospitals, hence uniting the two fields. Marian Chace (1896-1970) was one of the pioneers in DMT work with psychiatric patients and other names followed with their contribution to the fusion of modern dance in the psychiatry movement, such as Mary Whitehouse, Trudi Schoop, Liljan Espenak, Blanche Evan, Alma Hawkins, Francisca Boas and Janet Adler (Panhofer & Rodríguez, 2005).

Schmais and White (1986) detach three main sources that originated DMT. One of them concerns the therapeutic use of dance throughout history, that goes back to ancient cultures, where dancing and primitive rituals were used to celebrate important events such as harvests, wars, births, deaths, etc. Another one is the creative aspects of modern dance (20th century) and improvisation, emphasizing the expressive, emotional and communicative part, i.e., dance authenticity and spontaneity, which expresses emotion beyond form and technique. Finally, it´s possible point out the psychological aspects of movement, i.e., the meaning of the movement in psychotherapy, having the body/mind relation as a base.

Since decade 70, DMT is increasingly growing in Europe, for example, in Spain, England, The Netherlands, Germany, Italy, Sweden, Finland, Poland, among others (Karkou & Sanderson, 2001). DMT is set in different intervention contexts, such as schools, hospitals, day care centres, homes, prisons, foster homes, among others. It is transversal through all ages, and it can work preventively or as a treatment for several psychopathologies. Karkou and Meekums (2014) refer that DMT is also a type of psychotherapy that suits populations with cognitive and physical handicaps. The author also emphasizes that it is an effective

therapeutic model for individuals that have difficulties to express their emotional contents through verbal language, as may be the case of elderly population, who we will deal subsequently. In DMT the objective is not to move better, the individual can explore new ways to feel, through movement experimentation and hence access to feelings that cannot be verbalized (Stanton Jones, 1992).

Definition and Theoretical Principles

The American Dance Therapy Association (ADTA, 2015) defines Dance/Movement Therapy (DMT) as a psychotherapeutic specialty that uses the body and non-verbal language to promote the individual's emotional, social, cognitive and physical integration. It is the psychotherapeutic use of movement and dance, based mainly in the connection between them and the emotion, seeking a psychophysical integration (mind/body) of the individual.

> Dance Movement Psychotherapy (DMP) recognises body movement as an implicit and expressive instrument of communication and expression. DMP is a relational process in which client/s and therapist engage creatively using body movement and dance to assist integration of emotional, cognitive, physical, social and spiritual aspects of self. The philosophical orientation of DMP is based on the intrinsic belief in the inter-relationship between psyche, soma and spirit as evidenced in the potential held in creative processes (Association for Dance Movement Psychotherapy UK [ADMP UK], 2013).

As DMT works with the contents expressed by the patient, it can use many models. One of them refers to the non-verbal interaction between the therapist and the client, giving the example of Marian Chace's model (Karkou & Meekums, 2014). Another one focuses on the movement improvisation associated to the expression of the client's inner contents, in the presence of the therapist as a witness. In this one Karkou and Meekums (2014) refer Mary

Whitehouse's model, entitled Authentic Movement. Finally, the authors distinguishes the tool Movement Observation and Analysis (Laban and/or Kestenberg) to describe the movement quality and find possible psychological meanings. Apart from being based on these models, this psychotherapy is also based on psychological theories, such as developmental psychology, psychodynamic and humanist guidance, group dynamics, psychopathology, among others. DMT belongs to the group of expressive psychotherapies (music therapy, art therapy, psycho/socio-drama, etc), sharing affinities with many of them. Nevertheless, it is different from them because it has a clear somatic component, using specific techniques such as relaxing, mirroring and body empathy (Goodill, 2005). As a consequence it can be confused with other body psychotherapies. However, it is the only one that focuses on creative self-expression (Goodill, 2005) and "on movement improvisation associated with internal work, in the presence of the therapies. An example of this type of approach comes from Authentic Movement" (Karkou & Meekums, 2014, p. 2).

DMT is characterised by defending the following theoretical principles:

- Body and the mind are connected; therefore, the movement changes have an influence over the functioning of the individual (Panhofer, 2005; Stanton-Jones, 1992);
- The way an individual moves reflects his/her personality and inner state (Panhofer, 2005; Stanton-Jones, 1992);
- Therapy is based in the use of non-verbal means, which allows the contact with pre-verbal states and consequently relive childhood (Panhofer, 2005);
- The therapeutic process always occurs by promoting the relationship between the individual and the therapist, and it is essentially established through non-verbal expression, using certain techniques (Panhofer, 2005),
- Using different types of movement in therapy, provides an opportunity for the

individual to live different ways of being (Stanton-Jones, 1992);

- A larger repertoire of movements corresponds to good mental health, because indicates the individual has multiple resources to deal with stressful events (Panhofer, 2005; Schmais & White, 1986);
- Movement can contain a symbolic function helping to access the unconscious (Panhofer, 2005; Schmais, 1985; Stanton-Jones, 1992).

According to these principles, it can be concluded that DMT integrates three components: the educational component, the therapeutic process and the creative process. In relation to the first one, the structure is more directed, there is a development of the movement itself and the work is focused on the body conscience. Where the therapeutic process is concerned, the main focus is given to insight; nevertheless the process in itself is also very important. Finally, the creative process gives special emphasis to spontaneity and improvisation, and these arise through dance and/or movement (Meekums, 2002).

Dance Movement Therapy with the Elderly

In order to address the application of DMT in the elderly population, it is essential to mention Marian Chace, who also worked with elderly people in a psychiatric context, using empathic movement as her main technique (Chaiklin, 1975). It is also necessary to mention Susan Sandel, who worked with third age groups between 1950 and 1960 (Sandel & Hollander, 1995). She defended that DMT brings psychosocial benefits, through it different techniques, which will be mentioned later. In addition, Eva Desca Garnet, created a specific intervention with elderly people, focusing more on the somatic in opposition to the psychological aspects, (Stockley, 1992).

Therapeutic Relation in DMT

An important aspect that the therapist must have in a DMT intervention is to allow them to feel safe. This happens by creating a space that evokes feelings of stability and familiarity in the individuals, i.e., creating a secure setting. The sessions must be held in an adequate setting, organized and consistent throughout time. They must also respect a structure, with moments for movement and for verbalization. The group must have simple rituals at the beginning and ending of the sessions, as a way to enable the creation of a union feeling and predictability towards what is expected from the session (Cammany, 2005). Depending on the person's issues, it is necessary to give the adequate support that lets the senior feel more calm and relaxed during the therapeutic process. Bräuninger (2014) shows in one of her studies that DMT promotes security for the elderly through some methodologies such as:

> Providing choices (what movements do I like? Where do I feel comfortable?); promotes self-awareness; focusing on movement resources decreases feelings of insufficiency; walking in various manners provides security; sensory stimulation of the feet promotes stability; light or strong movements and light music vitalise; moving means to collect joy. (Bräuninger, 2014, p. 146)

Also, the therapist must be available to create an environment of acceptance and tolerance, facing the physical limitations and the different emotional rhythms presented by the individual. In view of this, there must be an adjustment of the techniques and propositions used in DMT (Sandel & Hollander, 1995) and, on the other hand, DMT must seek to develop coping strategies to be able to deal with their beliefs, fears and prejudice towards ageing. Bräuninger (2014) quoted: "In order to sustain the joy of life and work, it seems helpful to be centered on and mindful of one´s own body signals" (p. 148). Levy (1995) says that it is very important to have in a therapeutic relationship a sense of trust, acceptance and safety, it

means the establishment of a genuine empathic communication between both therapist and patient. Others defend that:

> A lack of natural movement and disconnection from one's inner states provides a unique challenge for dance movement therapies that necessitates a refined attention to the client's more subtle movements. Depth and rhythm of breath, posture and muscle tension, or a shift and direction of eye gaze are ways in which DMT can attune to a client's non-verbal experience, when larger intentionally expressive movement may be too overwhelming or even re-traumatizing. (Rappaport, 2013, p. 98)

When difficulties occur and/or refusal to move in a more expressive way, that does not constitute an obstacle to the development of the work in DMT with the elderly. It is possible to maintain the focus on the body, because any body intervention coming from the individual is considered to be useful and informative material for the therapist. Also, by doing that, the DMT accepts his/her limitations and wills, which contributes to restore some sense of self-control in the senior. In this manner, DMT is a discipline that is based not only on dancing, but also on the simplest and/or internal movement, valuing gestures, shadow movements, body postures, voice tones and small tensions. Damásio (2012) states:

> Some actions that are actually movements, like movement that you can do, change your face for example, in fear, or movements that are internal, that happen in your heart or in your gut, and movements that are actually not muscular movements, but rather, releases of molecules. (Damásio, 2012)

In these cases, the stimulation of body conscience may help to expand the non-verbal vocabulary, allowing the senior to connect with the body in a gradual and gentle way. Rappaport (2013) quotes:

> When a sense of safety and present experience accompanies mindful attention of one's internally felt sense, clients can begin to feel freed from a frozen state and even

> begin to express themselves in movement. Attention to the body as mindful interventions can foster the safety, self-awareness and self efficacy that may then fortify attention with the body in movement, offering the possible experience of an integrated healthy aliveness. (Rappaport, 2013, p. 100)

On the other hand, the increase of body conscience allows for the understanding of feelings through the perception of the emotions and body reactions that come from them. Damásio (2012) quotes: “Then the feeling is actually a portrayal of what is going on in the organs when you are having an emotion.”. A DMT therapist tries to connect and integrate both body and mind of the senior. If possible, DMT seeks the patient’s understanding and consciousness of the feelings and emotions in his/her body. In other words, how the mind influences the body shape and movement, and the reverse. Furthermore, establishing a connexion between emotions and feelings accesses memories of life experiences (Damásio, 2012; Levy, 2005). Cammany (2005), refer that reminiscence is a fundamental technique, which promotes communication and sharing among elderly people. DMT must pay attention to this phenomenon and facilitate, through movement, the manifestation of memories associated to past and meaningful experiences. As Noble (w.d.) says:

> Emotions use in first place the body and its primary language, which is movement to be expressed. On working on the movement we can then work as well on our emotions. Moving can bring us to our deep memories and reveals whatever resides in ourselves, in need for expression. Our emotions can give us messages that we can learn to welcome and encounter in order to inform us about meanings for our life. Whatever it is fear, joy, anger or sadness, we can learn to welcome and be creative with what arise in us and find responses consciously supported by the container of the art. (Noble, w.d.)

A fundamental belief of DMT is that emotions manifest themselves in the sensations

and energies of the body and are of equal importance to the discovery of an awareness of one's cognitive processes. Therefore, a common treatment goal in DMT is to increase a client's body awareness with the intention of increasing emotional self-awareness (Levy, 2005). According to Krantz (1999), "reconnecting the body with the feeling allows the client to experience affect and express her inner world, to recognize meaning in her behaviour and relationships, and to develop healthy psychophysical unity" (p. 1).

Structure of the Sessions

According to the model created by Marian Chace, the DMT sessions are usually structured, always having in mind the characteristics of the elements in the group and the established therapeutic objectives. This pioneer highlights four important moments that occur during each session, which can be implemented in a DMT intervention with elderly people. The *check in* (initial verbalization), where the elderly people come in, form a circle and have the opportunity to share how they feel emotionally and physically. In this first stage, the therapist observes the patients attentively, with the purpose of gathering information about the body needs they show and the themes that might be developed in the session. The subsequent moment is the preparation of the body for the session. The main purposes of this *warm-up* are to mobilize the participants' capacity of emotional expression and to awake their body conscience to the *here and now*.

Based on the dynamics that arise during the warm-up, it´s possible to proceed to the third phase of the process, *theme development*. If no specific theme stands out, the therapist may lead, by suggesting a dynamic according to the needs of the process. In order to end the session, a *check-out* or closure (final verbalization) will be necessary, again forming a circle where ideas, sensations, *insights* that occurred during the DMT session are shared, enabling the integration and elaboration of the experiences of each one and of the group itself. It is

also a moment of transition to the exterior space, where the therapist may often have a role of group restraint. At this stage, as well as at the check-in non-verbal expressive vehicles may be used, in case the seniors show difficulties in using verbal language.

Gayvoronskaya and Shapovalov (2014), when working with elderly people, recommend the above-mentioned structure and also consider important to give the elderly person tasks (homework) between sessions, with the purpose of consolidating the process, bringing it to everyday life, "Such an investigation in itself leads to his/her psychological transformation as well as to the formation of psychophysical skills in his/ her real life." (p. 193).

DMT Techniques

DMT has several techniques that may generally be applied to all populations, but it will always be important to check which ones are more adequate to respond to the needs of a specific population. Next it will appear the techniques that respond adequately to the elderly population.

Mirroring, affective attunement and empathic movement.

The *mirroring technique* consists in trying to grasp the quality of the other's movement, not limited to imitation. The objective is for the individual to feel accepted and recognised by the therapist and the group, experiencing his/her movement through the other. In the *affective attunement* technique, the therapist experiences the other's movement and provides validation. These two techniques favour the empathic relationship between the therapist and the patient, which is easier to understand the individual's inner world from his/her corporality for dance movement therapist to have a better understanding of the individual's inner world from his/her corporality. (Bräuninger, 2014; Karkou & Meekums,

2014; McGarry & Russo, 2011).

Empathic movement constitutes one of the main characteristics that differentiate DMT from other body disciplines. The dance movement therapist guides the interaction between individuals, through observation and incorporation of the movements that arise from the group and subsequent return of those same movements with the purpose of stimulating self-expression, thus responding to the emotional content expressed by the group. This technique enables to read kinaesthetically the emotional state of the patient, i.e., the therapist adapts to the posture, breathing, muscle tension and movement qualities. (Cammany, 2005; Karkou & Meekums, 2014). “It puts itself in his/her skin and in his/her shoes in order to receive more information about his/her physical and emotional perception” (Panhofer, 2005, p. 116).

Leadership exercises.

It is a widely used technique in DMT sessions, because it provides an opportunity for each individual, to try to lead the group through movement. While one person leads creating a movement, the others must follow him/her or repeat the movement. After having experienced that role, the individual may pass it on to another element in the group. These are exercises that activate the body, but also stimulate creativity, interpersonal relationships, based in trust and self-esteem, since the group values each element individually. They also enable the satisfaction of some self-control needs, as well as the development of the capacity to make decisions and take the responsibility for them (Bräuninger, 2014; Capello, 2008; Schmais, 1985).

Circle formation.

Sessions that are made in a circle with elderly people facilitate eye contact between all the elements in the group. This technique is mostly used at the beginning and at the end of

the sessions. Initially, its purpose would be to make the individuals concentrate on themselves, on the group and on the therapeutic context that characterizes these sessions (here and now). At the end the objectives are: give n opportunity to the elaboration of the therapeutic process occurred and emphasize the end of the session, containing the group. The circle formation also contributes to reinforce the perception of the group's unity and increase the sense of belonging. (Bräuninger, 2014; Cammany, 2005; Hamill, Smith, & Rohricht, 2011; Stockley, 1992)

Hamill, Smith and Rohricht (2011) claim that dancing in circle go back to rituals of ancient and traditional cultures, with the purpose of promoting community approach and the sense of well-being, also:

> Circle dance provides an opportunity to engage in touching, holding, moving together gently and to be part of a group; this is promoting re-attachment and connection by overcoming communication difficulties trough the use of non verbal means and verbalization of those experiences whenever possible and as required. (Hamill et al., 2011, p. 4)

Mutual Touch.

The use of touch is a technique that can set off the therapeutic purpose in DMT, because it facilitates the establishing and growth of the therapeutic relationship. This technique has two main qualities, with different objectives. The provocation, which may come into contact with the individual's emotional material; and the comfort that, in turn, may contain that very same material. Any individual, as long as he/she is conscious and functional, will always have a reaction to another person's touch (Penfield, 1992).

Touch can be quite an important element to be used in DMT sessions, because the action of touching (through massages or holding another person's hand) stimulates social relationships (Bräuninger, 2014; Cammany, 2005).

Music, rhythm and vocalisation.

Sound is an element invariably present in DMT sessions and may be used in a useful and effective way. Its use may occur in several ways, either more premeditated or not. Not being an essential technique, it is frequent to use music in DMT sessions with elderly people, whether requested by the members of the group, or as part of a proposal from the therapist, to give room to non-verbal language (Gayvoronskaya & Shapovalov, 2014). It may be used at any moment in the session, as long as it respects the verbalization moments. The music, not only has a stimulating function, activating the body at the beginning of the session, it promotes, more spontaneously, that the elements in the group interact with each other through its rhythm.

While working with elderly people, it is recommended to provide a musical choice with a stronger rhythm, providing more structure and organization for the individual and the group. This does not mean other choices should be rejected, as the different individuals' needs should be met. Music choices may also refer to certain periods, stimulating each one's memories and offering the possibility to subsequently be shared in a verbal or non-verbal way (Bräuninger, 2014; Cammany, 2005; Stockley, 1992). The use of music should be avoided in dramatic moments, because it can potentiate them. On the other hand, the elderly person may move symbolically, respecting his/her own rhythm (Gayvoronskaya & Shapovalov, 2014).

Rhythm is also a very important component, that may be present not only in the possible musical choices, but also in the dialogues and the movements produced by the

members of the group, that occur during the sessions. These rhythmic information can be informative material quite relevant for the therapist. Besides being a facilitator of the group communication, it develops the feeling of group cohesion. It has a unifying and organizational function and facilitates the restraint and the structuring of the emotions (Bräuninger, 2014; Capello, 2008; Meekums, 2002).

Accentuating the therapeutic context, sound may also occur through the emission of vocal sounds while the individuals in the group are moving. Cammany (2005) defends that these sounds stimulate breathing and extend movement. When the group feels comfortable with the vocalization of sounds, the therapist may stimulate the sounds emission that identify feelings, which combined with movement may increase the range of expressive and communicative conducts.

Materials.

The use of different objects in sessions is also a technique that promotes the relationships between the elements in the group and between them and the therapist, allowing its unification and cohesion subsequently (Cammany, 2005). They may be a facilitating and non-invasive means for physical contact to occur (massages with ball). Besides, they may stimulate different qualities of movement and physical activity, allowing access to the inner world of the individual (Cammany, 2005). The characteristics of these materials should meet the demands of it use in the therapeutic context (Bräuninger, 2014). Its use with populations with a higher level of autonomy will probably be limited to the beginning of the session (Cammany, 2005).

Reminiscence, symbolic movement and use of metaphors.

The use of reminiscence as a therapeutic tool appeared with Butler (1963). This author defends that the revision of life is a spontaneous and natural process that characterizes the return to consciousness of past experiences and, particularly to the need to resolve still unsolved conflicts. In this manner, this technique consists in evoking meaningful experiences (auto-biographical memories), usually with a positive or negative connotation, that are accessed with the purpose of being reviewed, repeated, interpreted and many times shared with other people, thus promoting the adaptation to the current moment in life. The therapy of reminiscence consists in the "use of the memory of past events, feelings and thoughts to facilitate pleasure, quality of life or the adaptation to current circumstances" (Dochterman & Bulechek, 2008, p. 614).

The reminiscence phenomenon appears progressively as the individual ages, precipitated by the biological and psychological approximation of death. However, even though the author-recognizes that people of all ages review their past and that any crisis may trigger the access to memories, is pointed out that that revision of life is more intense and more frequent in elderly people. It is a defense mechanism used in different moments in life, such as leaving the world of work, the manifestation of physical limitations and/or illnesses or simply the notion of death's proximity that leads to the necessity of seizing the time for self-reflection (Gonçalves, Albuquerque, & Martin, 2008).

Nevertheless, this technique is sometimes discouraged by formal and/or informal caretakers, because it is considered a source of reinforcement to the symptom or to mental deterioration, as for example in the case of dementia (Gonçalves et al., 2008). Butler (1963) had an important contribute in the development of the effectiveness of this technique with elderly people. This author was the first researcher to counteract the harmful effects attributed to reminiscence.

Through the use of movement and imagination (promoted by metaphors and symbols), DMT allows the access to autobiographic memories. Imagination is another technique that characterizes DMT, through the development of images and metaphors associated to movement (Dosamantes, 1980; Payne, 1992; Stanton-Jones, 1992). Stanton Jones (1992) defines movement as a channel that enables the unconscious content to be materialized symbolically, similarly to dreams and free association of ideas. In this way, the experience that comes from the action is modified by the sum of the symbolic content and this one arises spontaneously through images associated with movement, evoked by the elderly people and/or the therapist. The use of images and metaphors shifts the focus on action to focus on feelings, thoughts and memories, making the movement experience more real for those who experience it (Cammany, 2005). In this line Samaritter (2009) adds:

> When we dance, we move (from) the metaphor, instead of just listening to it or just looking at it: that is to say that we step inside the images as we move them. Dancing the metaphor generates actual feelings and sensations; while dancing in the imagined context, we experience actual movement sensations. We are at the same time dancing in the metaphor (expressing the image given in movement) and dancing from the metaphor (using it as a source to develop movement improvisation). In doing so, we "enliven" the metaphor, we bring it to life and live in it (Samaritter, 2009, p. 35).

On the other hand, the use of metaphors also allows more easily to access to memories of a more distressing nature and, at the same time, to create emotional distancing in view of them. Thus, the elaboration of this distressing content becomes more reassuring, hence favouring changes at the thoughts and feelings level (Bräuninger, 2014; Meekums, 2002; Meekums, Karkou, & Nelson 2012; Samaritter, 2009).

Even though symbolism is an important component in the therapeutic process, the individual's verbal contribution (when he/she is capable of doing so) concerning the

symbolic process is essential in acquiring its understanding (Samaritter, 2009). Verbalization is a component that may occur during the DMT sessions, in some cases quite predominantly. Rappaport (2013) claims that DMT intervention isn't always about the movement. Sometimes a dance movement therapist needs to respond verbally to the patient's needs, beyond the nonverbal communication.

Guided imagery, breathing exercises and mindful body.

Sometimes to bridge the *movement gaps*, DMT therapists can use other techniques, such us guided imagery, breathing exercises and relaxation. Alma Hawkins was one of the DMT pioneers that used these techniques. Dempsey (2009) conducted a study using guided imagery as a method of reducing anxiety for clients in addiction treatment. Guided imagery is a form of relaxation and meditation that focuses and directs the imagination to consciously focus internally, allowing one the opportunity to create positive images. Mindful body is another technique based on meditative practices, such as focusing on breath, practicing non-judgment of thoughts, and concentrating focus on present moment experience. Also, the same author claims:

> Whereas meditation helps people become connected to the present moment, DMT can meet meditation half way by incorporating and expanding the experience of physical manifestations of emotional states in the therapeutic process; providing the ability to experience, identify, accept, hold and move them through the body acceptance of the initial craving response; without judging, analyzing or reacting (Dempsey, 2009, p. 219).

There are similarities between DMT and mindfulness meditation and they complement each other in purpose and practice. The idea of present moment awareness is a key to mindfulness. DMT also lives in the present, movement happens in the now and

focusing attention to present-time produces mindfulness. In essence, DMT is a mindful practice (Dempsey, 2009). Thus, DMT and mindfulness meditation can provide a safe and nurturing environment for those with high body defenses, so they can begin to connect with their self.

Other creative therapies.

The use of other art forms as a complementary approach on the DMT setting can facilitate the therapeutic process and even the movement. The therapist finds necessary to use other art forms to help the client express himself. Additionally it helps when some people feel too inhibited to make use of movement, and perhaps will find meaningful expression in other art forms. It is possible to draw and use drama tools (role playing) in some sessions to project inner states more easily (Bräuninger, 2014; Levy, 1995). Levy (1995) states:

> Drawings are projective tools from which we can draw certain hypotheses about how individuals see themselves and what dynamic conflicts may be influencing their behaviour, ideation and feelings. Drawings are a means through which an individual can unconsciously tell the therapist important things that may not be accessible in words…drawings help people project into the outside world something of what they experience inside. (Levy, 1995, p. 13)

With the drawing the therapist can also see the qualities of the movement in the trace; the space occupied in the paper, can be correlated with body space. Levy (1995) says, “when an individual’s body is frozen from trauma, drawing can sometimes pave the way for full body expression*”* (p. 2).

DMT with Groups

At the beginning of this work, was made a reference to some theoretical models that focus on the psychotherapeutic practice of DMT. The group theory, specifically the group dynamic, contributes to the understanding of the phenomena in a DMT session in group context. Besides group dynamics, therapies in a group context may be based in psychodynamic (such as group analysis), humanist and cognitive-behavioural models.

Rebelo (2007) refer that group interventions with elderly people facilitate the achievement of therapeutic objectives that are compromised in individual approaches. Studies reveal that, specifically with elderly people, they tend to show more positive results when the intervention is made in a group, because it increases self-confidence, self-esteem, communication and interpersonal relationship, hence diminishing isolation and solitude (Angeli, 2001; Bräuninger, 2014; Gayvoronskaya & Shapovalov, 2014; Rebelo, 2007; Ribeiro et al., 2013). They also allow the use of a variety of therapeutic strategies and provide, almost always, an improvement in physical and mental symptomatology and a better quality of life (Gayvoronskaya & Shapovalov, 2014; Rebelo, 2007).

The group is considered to be a space that contains anguishes, that favours the communication between the elderly person and the other, decreasing feelings of solitude and reinforcing the possibility to share common concerns, i.e., it promotes (re)socialization and the construction of new meanings for this stage in life (Rebelo, 2007). It is also a space that leads to transformation and personal growth. The purpose is the promotion of abilities to deal with internal and external conflicts, i.e., to help elderly people to face their incapacities and tolerate physical, functional and other resulting disadvantages. It allows the creation of support relationships (Oliveira, 2005). Likewise, Schmais (1985) says “a supportive, nonjudgmental group allows people to weep and not feel guilty. Feelings that were denied in a repressive atmosphere are resurrected in an atmosphere of acceptance.” (p. 21).

Elderly people in a group share similar difficulties and problems, which enables them to learn different strategies for their resolution as well as to acquire new attitudes towards life and feel useful helping others. The group acts therapeutically, suppressing symptoms, but mostly facilitating the individuals' adaptation and integration. Initially this adaptation and integration occurs in the group itself, with repercussions in society subsequently (Oliveira, 2005). In this way:

> Group work with elderly people enables: to uproot the belief that problems are unique and unchangeable; to discover points in common and consequently to decrease the isolation felt by some elderly people; to install hope; to promote social interaction, learn new relationship skills, encouraging cohesion and, consequently, acceptance; to increase self-esteem through altruism and empathy (the elderly person feels valued by being able to support another person); to develop one's self unconditional acceptance; to supply models allowing imitative behaviour; to implement independence from the technician; to promote the realistic planning of objectives; to privilege learning and training of skills; to get and share information on changes and transitions. (Rebelo, 2007, p. 551)

In DMT, the use of several psycho-physical techniques (such as mirroring) enables the experience in the body and mind of the previously described phenomena. Additionally verbal and non-verbal forms of expression are useful for the (mutual) learning process of patients. They learn from what they bring to the session but also from other patients contributions (Schmais, 1985). In other words:

> While engaged in movement experiences, patients learn about themselves, relationships and life. (...) in dancing out each other´s themes, patients accumulate knowledge of their own capacities (...) they recognize that while some people have patterns similar to their own, others move in a manner that seems rooted in another

> way of being. Looking at how other people move, they can distinguish their own unique qualities, and looking at the group as a whole they find a commonality of experience. (Schmais, 1985, p. 31)

Finally, if group therapies present positive results in this population, when approaching the possibility to create prevention programs for healthy aging with DMT, it appears to be appropriate to have them in a group context. On the other hand, considering the growing number of elderly people, the lack of responses and the need to reduce the costs of human and financial resources, reinforce this idea (Ribeiro et al., 2013).

While approaching Dance Movement Therapy with elderly people, Sandel and Hollander (1995) considers that there are different typologies of groups according to the elderly people's characteristics and the objectives to achive. In her work, the author defines the following groups:

- *Physically Challenged* – destined for people with disabling, chronic and/or degenerative illnesses;
- *Psychiatric Disorders* – destined for people with psychopathology diagnosis, whether acute or chronic;
- *Cognitively Impaired* – destined for people with cognitive deterioration (Alzheimer, for example);
- *Frail Elderly* – destined for people with a rather high level of dependence, due to the compromise of their physical and mental functions;
- *Well-Elderly* group – destined for individuals between 65 and 85 years old, who are healthy, even though they may present some physical limitations due to aging.

Sandel and Hollander (1995), by setting out the *Well-Elderly* group, already defends the possibility of a preventive approach in aging. This age group can benefit from DMT, to

achieve physical and emotional well-being, through expression, creativity and the increase of social interaction. The themes developed in this group may refer to retirement, changes in the family, losses, among others. The elaborating these events and its repercussions in the physical and emotional state of the individual, allows recreate new directions and solutions, which aim the adaptation to aging.

Dance Movement Therapy with Elderly People in Health Promotion

Several risk factors have already been mentioned that may take place during aging, namely low self-esteem and low self-concept; solitude and isolation; depression (with eventual suicide risk); anxiety; varied losses; cognitive deterioration; family context (physical/psychological violence and neglect); physical illness and/or decline; and economical need (Ribeiro et al., 2013; Santos, 2010).

The depression rate in elderly people is inferior to that of the younger population and is frequently linked to age, rather than valued as a health problem in itself. Nevertheless, Ribeiro, Ferreira and Lima (2013) claim that intervention must occur there. Psychotherapeutic intervention at a senior depression level has a high success rate, specifically if it is detected early on (Rebelo, 2007; Santos, 2010). The authors also state that through reducing suffering and increasing quality of life and well-fare, occurs optimal levels of functioning and autonomy. Likewise, a pessimist lifestyle is associated with more regular manifestation of depressive symptoms, even though depending on specific individual characteristics, this aspect must be considered in preventive interventions for depression (Rebelo, 2007; Ribeiro et al., 2013; Santos, 2010; Seligman, Rashid, & Parks, 2006).

Additionally, physical health problems precipitate depressive symptoms in elderly people, and it has been verified that an increase of incapacity and health decline precede depression and vice-versa that the lack of physical health and depressive symptoms maintain

a close link with, and have a negative consequence for, physical, cognitive, psychological and social decline of the elderly person (Fonseca, 2004; Fontaine, 2000; Oliveira, 2005; Rebelo, 2007; Santos, 2010; Spar & Rue, 2005).

The health issue is a fundamental aspect in aging, and it is at the top of the senior population concerns where, as we mentioned before, physical health has a powerful impact in the elderly person's psychological well-being. Within this framework, the mood depends on his/her own state of health as perceived by the individual, and on his/her physical and psychological capacity to adjust to stress situations throughout aging (Oliveira, 2005). The effects of physical and mental illness may provoke a decrease in income, loss of autonomy, loss of social roles, fear and general discomfort. For that reason, health is increasingly held as a determining factor for satisfaction in life and well-being (Fonseca, 2004).

Lastly, it is also important to recall the influence of the social dimension in the aging process. Going into retirement is a transitional stage that presupposes a reorganisation in life and has repercussions in a new management of time and of the relationships' dynamics with the family, as well as a more limited social life (Spar & Rue, 2005). The experience of retirement, health decline and the loss of economical power is always variable from one individual to another and strongly depends on socio-economical aspects. At this stage, feelings of loss of control may arise, which may contribute towards depression (Spar & Rue, 2005). Also, the frequency of daily activities and the internal representation of control, constitute a close connection and are good indicators of the elderly's satisfaction in life (Alaphilippe & Bailey, 2014).

Previously, we also approached psychosocial theories that consider that the individual is defined by social roles and the emphasis of aging is placed on each one's individual adaptation. In this manner, they preceded the theories on successful aging that postulate the adaptive capacity of the elderly person to face negative events. The Baltes and Baltes' (1990)

model of selective optimization through compensation (SOC) mentions that the elderly person has an active role in his/her aging, through a dynamic process between minimizing losses and maximizing gains. According to the authors, this mechanism allows for a better aging and for maintaining a considerable level of well-being. However, despite the increase in the deficits inherent to aging, the elderly person must seek *coping* strategies that help him/her remain autonomous and socially active (Lazarus, 1991). The adaptive strategies are connected to a larger sensation of well-being and a smaller level of depression (Alaphilippe & Bailey, 2014).

Additionally, Rowe and Kahn (1997) defend that successful aging implies three essential factors: low probability of illness and incapacity; maximization of the cognitive and physical functions; and active participation in life. Ribeiro et al. (2013), add that self-perception about one's state of health, enriches the notion of successful aging.

The WHO (2002) develops the concept of active aging, defining it as a process of optimization of opportunities for health, participation, safety and education in order to increase the quality of life during the aging process. The term "active" refers to a continuous participation in social, economic, cultural, spiritual and civic issues, and not only being physically active or in the work market. Therefore, the elderly person still contributes positively to his/her family and community.

Based on these assumptions, social and health policies have been seeking to implement strategies and programs that aim at the scientific advance in the areas of healthy aging and improvement of quality of life of senior population. Considering the characteristics of the aging process and the risk factors that come from them, it seems pertinent that DMT, as a psychotherapy that covers the physical, mental, cognitive and social components of the individual, may be a rich instrument of support to preventive measures in third age (Bräuninger, 2014; Koch, Kunz, Lykou, & Cruz, 2013; Sandel & Hollander, 1995). Thus, and

regarding the chapter we will develop subsequently, we aim at describing the benefits and limitations of DMT in the process of successful aging, as well as at clarifying how DMT can respond to the challenges associated with each one of its previously mentioned components.

Benefits and Limitations

The benefits and limitations of DMT, for a didactic question, may be synthesised through its physical, psychological, cognitive and social components, where well-being and quality of life are reflected. In order to sustain the four components, we present subsequently a theoretical revision, which contemplates studies on the benefits of physical exercise, dance and DMT for the general population and predominantly for the senior population.

Physical component.

Physical activity coming from dance and movement stimulates the respiratory, circulatory and the musculoskeletal systems, as well as brain activity, preventing falls, favouring coordination, spatial orientation and balance (Cammany, 2005). Also, among other causes, falls of elderly people are often a consequence of their lack of balance (Eyigor, Karapolat, Durmaz, Ibisoglu, & Cakir, 2009). Additionally, Connolly and Redding (2010) state that falls are one of the causes of suffering, injury and death in senior population, adding that falls and the fear of them may provoke high levels of anxiety. Because it is a frequent and highly serious problem, the need to bridge it has been stimulating research, so as to create programs that look for the best strategies to answer the phenomenon. The same authors concluded that individuals with Parkinson, showed improvements in balance and stability in posture through physical exercise. Also, Eyigor, Karapolat, Durmaz, Ibisoglu and Cakir (2009), defends that an improvement in physicality, balance and quality of life are essential

to increase and/or maintain autonomy in the elderly person. They refer Turkish folkloric dance as a support tool to reach those goals, mentioning positive results with senior women.

Rose (2008), concludes that physical exercise in elderly people is effective in reducing physical risk factors normally associated to the high risk of falls. Implemented as an individual strategy, the author confirms its efficacy, namely in the population that presents a lower risk of falls. However, in the population with a high risk of falls, it is necessary to use a multifactor strategy to obtain effectiveness. Borges and Colleagues (2014) add that elderly people that are institutionalised for a long time and that present a considerable level of sedentary lifestyle, may improve their balance through ballroom dancing, thus reducing the risk of falls.

In line with what was mentioned, McKinley and Colleagues (2008), state the Argentinean dance Tango as a physical activity in senior age is adequate and may improve physical aptitude and balance, thus avoiding the risk of falls. They wanted to compare this activity with walking. In the intervention with Argentinean Tango, they obtained good results such as improvement in balance and elderly people showed they had improved their speed in walking. The latter, in turn, was also a source of strengthening and reinforced the improvement in speed. The authors revealed that elderly people showed pleasure in dancing the Argentinean Tango, and many of them continued with this activity after the study.

Hui, Chui and Woo (2009) defend that a structured dance program may be effective in improving physicality in chinese seniors. They recommend that dancing should be encouraged in the elderly community as something pleasurable, beneficial and adequate. Keogh, Kilding, Pidgeon, Ashley and Gillis (2009), also agree and state that dance proves to be an activity with potential to improve the physical state of the senior individual. They defend that there are clear evidences that indicate that dancing can “improve the aerobic power, lower body muscle endurance, strength and flexibility, static and dynamic

balance/agility, and gait speed of older, especially female adults." (p. 17). They add it may help in reducing the number of falls and cardiovascular problems in old age.

Mavrovouniotis, Argiriadou and Papaioannou (2010), concluded that Greek traditional dances may be used to produce physical and mental benefits in elderly population. Through the development of work with seniors that were considered to be healthy and largely physically active, they demonstrated that the process used in traditional Greek dances improves the psychosomatic state of the elderly person, thus increasing his/her general well-being and decreasing their levels of stress and anxiety. They recommend that this type of dance should be applied with moderate intensity and accompanied by music. They also mention a study with elderly woman that practice movements of Korean traditional dances and have shown a higher satisfaction and self-confidence, thus improving their psychological state.

In agreement, Vries, Ravensberg, Hobbelen, Rikkert and Staal (2012) state physical exercise and an active lifestyle are factors that help to improve physicality and contribute to the prevention of several chronic diseases. A therapeutic intervention through physical exercise in elderly people of reduced mobility, physical and/or multi-morbidity deficiency may show positive results, especially if it is applied with high intensity. These improvements may prevent and reduce the level of fragility, dependence and mortality. Also, Stojanovska, Apostolopoulos, Polman, & Borkoles (2014) claim that a regular exercise is associated to a better quality of life and to general health, avoiding the deterioration of illnesses already diagnosed and their appearance. In a more detailed way, it singles out countless benefits associated with physical exercise, such as, "increases in endurance, metabolism and energy, aids in healthier muscles, joints and bones, decreases stress, improved cognitive functioning and promotes better sleeping patterns." (p. 319).

Finally, Fernández-Arguelles, Rodríguez-Mansilla, Antunez, Garrido-Ardila and Muñoz (2015) identify the therapeutic effects of dance, using it as a physical exercise. They conclude that there are positive effects in decreasing the risk of falls, which is connected to other factors such as *balance, gait and dynamic mobility, strength and flexibility*. However, they also conclude, through the analysis they make of the literature, that most studies contain shortcomings in the quality of the methodology, in the quantification of the sample, in the lack of homogeneity of the variables and measuring tools and the huge diversity of the type of dances that are mentioned. Therefore, it is not possible to scientifically prove that dance has significant benefits for seniors. Other authors (Connoly & Redding, 2010; Keogh, Kilding, Pidgeon, Ashley, & Gillis, 2009; McKinley et al., 2008; Rose, 2008) also share this opinion.

Cognitive component.

Several authors have mentioned positive results in the intervention of DMT in dementia states and also in their prevention (Coaten & Newman-Bluestein, 2013; Guzman-García, 2012; Hamill et al., 2011; Hanna, 2011; Hill, 1999a, 2003b, 2011c; Karkou & Meekums, 2014; Se-Hong et al., 2011).

Hanna (2011) claims DMT has an important role in the prevention of mental deterioration, suggesting a correlation between stress and the appearance of cognitive deficits. She states that dance decreases the risk of Alzheimer's disease by 76% of the elderly population, which may be explained by the contribution that dancing has in reducing stress. Others (Bräuninger, 2012; Guzmán-García, Hughes, James, & Rochester 2013; Rainbow, 2005) also mention the importance that dance therapy has in reducing the level of stress.

Also, the experience lived by the elderly person in a DMT session, helps the practice of the superior mental functions such as memory, attention, language, laterality, body

scheme, imagination and learning, among others (Cammany, 2005; Hokkanen et al., 2008). Additionally, Guzmán-García, Hughes, James and Rochester (2013) approache the beneficial effects of DMT in improving memory (implicit), an essential cognitive function to maintain functionality in the elderly person. Furthermore, Hamill et al. (2012) discovered that dancing in circle and body psychotherapy with patients suffering from Alzheimer, improves the feelings of well-being, humour, concentration and communication.

Finally, Karkou and Meekums (2014) state DMT produces a positive effect in avoiding and/or delaying cognitive deterioration, while improving humours and social interaction. In addition to the use of dance as a physical exercise and music as a vehicle of memories, the therapeutic relationship and DMT's specific methodology – such as improvisation, creativity and imagination (symbolic movement) – enables the access to the incarnated memories and consequently the work on the reminiscences.

Psychological and social component.

The psychotherapeutic component allows for the elaboration of the emotional contents through movement and, as previously mentioned, the stimulus to creativity is an important tool in that process. This is one of the components DMT endeavours to stimulate through different techniques subjacent to the therapeutic process. The use of creativity enables the individual to develop the capacity to adjust to change and consequently to create new ways/solutions in view of the challenges that come before him/her (Capello, 2008; Karkou & Sanderson, 2001; Stanton Jones, 1992). Also, courage, independent thinking, concentration and persistence are essential for creativity and are equally explored and worked in a DMT session (Capello, 2008). In other words: "Creativity and improvised movement work enable participants to develop new ways of being in the world in themselves and in

interaction with others, and to delay cognitive deterioration" (Karkou & Meekums, 2014, p. 3).

Several authors refer that dance improves the depressive symptoms. Pinniger, Brown, Thorsteinsson and Mckinley (2012), for example, explore the positive effects of Mindfulness-meditation and tango dance in the treatment of depression and/or inclusion in stress management programmes. Akandere and Demir (2011) verified that in university students, a dance program improves the levels of depressive symptoms. Vankova and colleagues (2014) validated that dance decreases depressive symptoms in institutionalised elderly people, mostly in those with a larger cognitive deterioration and more dependent on DLAs (Daily Life Activities). Thus, physical activity and dancing help to reduce the effects of depression and the improvement in the mobility of the elderly person appears to contribute to the reduction of depressive symptoms, because there is a close relationship between it and the functional capacities. Additionally, they conclude that dance also has an important social component that provides benefits in this area. Likewise, Haboush, Floyd, Caron, Lasota and Alvarez (2006) conclude that DMT has been having positive effects in the improvement of depression symptoms. By using recreational dance programs, specifically, ballroom dance, he had positive, yet not meaningful results. Zajenkowski, Jankowski and Kolata (2014), share the same opinion, by stating that recreational dances increase well-being and decrease depression and psychological distress. It also improves the energy levels (consistent with the findings that physical exercise improves energy) and produces positive changes in the mood.

Accordingly, Connolly and Redding (2008a, 2010b) consider that dancing has positive effects in the well-being of seniors and promotes their self-concept. In their theoretical revision called *dancing towards well-being in the third age* they approach the project of creative dancing *Young and Heart* where, an improvement in elderly people was demonstrated at social interaction and well-being levels, increasing the feelings of self-

confidence and self-perception of gains, especially in physical terms. In agreement, Federici, Bellagamba and Rocchi (2005) also mention in their research the significant results with dance in satisfaction, well-being and social involvement. In the project called *Dance 4 Health* (2009) it was also shown that dance can be an appropriate and engaging activity for those with Alzheimer´s disease as well as healthy older people.

Also dancing increases the elderly's social activity and consequently his/her psychosocial well-being (Guzmán-García et al., 2013; Hui, Chui, & Woo, 2009). The development of the sessions in a group context stimulates social skills, promoting the sharing of experiences and practices among the several elements of the group. In line with what was mentioned, Hackney and Earhart (2010) explored the effects of social partners in a significant improvement in anxiety and depression in patients that suffer from serious and persistent mental illness. These results may indicate that the interpersonal relationship that is created in a group activity, using dance, may be beneficial in the reduction of depressive symptoms. Another study that showed significant results in this matter was an investigation lead by author Eyigor and colleagues (2009), where he observes the effects of traditional dances in circle (Turkish folklore) on elderly people, with improvements in social interaction and quality of life. Additionally, the relational context decreases isolation and possible feelings of loneliness (Dong, Chang, Wong, & Simon, 2012). Feelings of solitude may entail serious consequences for the senior person's health, as solitude may result in depressive symptoms, cognitive deterioration, physical health deficit and increase of natural death and/or suicide risk. For these authors, the feelings of loneliness are associated to aspects of social life and of society and are as important in decreasing them and the psychological and physical aspects. Also, formal and informal social support may serve as a preventive mechanism against solitude. In this manner, the early detection of this feeling may help to maintain the senior's

health and promote his/her general well-being (Masi, Chen, Hawkley, & Cacioppo, 2011; Hevari-karimooi, Anoosheh, Foroughan, Sheykhi, & Hajizadeh, 2010).

For the previously mentioned authors, it is recurrent to have dance benefits at the level of the reduction of depression and anxiety symptoms as well as an improvement in the aspects of mobility and social interaction (closely linked to psychological symptoms). Because DMT is a psychotherapy that makes its intervention through dance and movement, the verification of these results is pertinent. Nevertheless, studies prove the positive effects of DMT in the psychological dimensions we are assessing.

Jeong and colleagues (2006) conducted a study using DMT with adolescent girls suffering from mild depression. They observed that DMT improves the negative psychological symptoms and modulated serotonin and dopamine concentrations. This suggests that DMT as relaxation affects, stabilizes the sympathetic nervous system and may be beneficial in improving the symptoms of mild depression. Likewise, Kothari (2015) refers that with DMT, the depression and anxiety symptoms decrease, as higher levels of productivity arise. Also, in Koch, Morlinghaus and Fuchs (2007) opinion, DMT produces results in reducing depression and increasing vitality in patients. According to his investigation, the groups of participants that benefited from dance had better results in reducing depression and anxiety symptoms, in tension, in increasing vitality and in affections. They had better results in dimensions such as motivation and *coping*. Koch and Bräuninger (2006) as well mention a positive correlation between DMT and several psychological dimensions, such as well-being, self-perception, perception of social relationships and acceptance of life's story. Investigations lead by some authors, such as Bräuninger (2012), Koch et al. (2007), Ritter and Low (1996) and Sandel and colleagues (2005) also showed a significant reduction in depression and anxiety symptoms with the use of DMT.

Finally, Gayvoronskaya and Shapovalov (2014) verified that DMT is an important tool in the aging process because it promotes the social and psychosomatic adaptation in the face of the anguishing content due to aging, thus improving the quality of life. Also, DMT influences the strategies of problem-solving and changes perspectives. Accordingly, they suggest that DMT may be an innovative and successful treatment where aging is concerned. The results show that when it is held in a group, DMT is more effective in reducing levels of stress and psychological suffering. Rebelo (2007) and Ribeiro et al. (2013) share the same opinion, mentioning that there are improvements in depression symptoms in elderly people through psychotherapy, especially when it is held in a group.

Quality of life (QOL) and well-being.

Ho (2005) refers that DMT contributes to the improvement of the quality of life in oncologic patients. Many cancer patients experience a sense of lack of control over their own body and lack of direction in life, which, according to the theory that has been described in previous chapters, may also occur in the aging process. Through DMT patients recovered the feeling of control over their own bodies and showed more capacity for psychological adjustment (*coping*). If the values for well-being, self-esteem and quality of life increase, those for stress and isolation decrease. Also, Bräuninger (2014) reveal that women with breast cancer, through a DMT program, decrease their anxiety levels and increase mindfulness and quality of life.

These findings suggest that DMT may be one way to increase the QOL and the reserve capacities of the elderly, maintaining and performing their daily activities (Strassel, Cherkin, Steuten, Sherman, & Vrijhoef, 2011). Furthermore, according to Haboush and colleagues (2006) DMT helps support disease self management because being in a group seems to improve motivation, and the body awareness improvements could lead to better

perceiving their bodies and the need for self care. Finally, DMT seems to incorporate qualities that increase QOL support the process of dealing with chronic disease and improve well-being and self-esteem in the elderly. (Eyigor et al., 2009; Hokannen, 2008; Strassel, Cherkin, Steuten, Sherman, & Vrijhoef, 2011).

Accordingly, Bräuninger (2012) refers that DMT and dance are a meaningful intervention in the quality of life of patients with cancer, Parkinson and chronic heart problems, thus concluding that DMT is an effective way to improve the quality of life of individuals suffering from stress. Therefore, she defends that DMT should be considered valid as an instrument to increase quality of life. The same author (2014), conducted a study directed at DMT professionals that work with elderly people, collecting their opinions about the effectiveness of their intervention in elderly population. The author concludes that:

> Practitioners agreed that DMT supports the elderly to improve QOL through self-awareness by stabilising physical health, reducing physical limitations and increasing psychological health, social relationships, autonomy and participation, and this is not only true for the elderly, Furthermore, they point out that DMT stabilises cognitive functions, respects the dignity of the elderly and is an economical approach. Consequently, DMT may be suitable to be integrated as a standard treatment in all health service and facility settings for the elderly. DMT in the community may promote hope, joy and a sense of belonging. (Bräuninger, 2014, pp. 150-151)

Finally, Koch and colleagues (2013) verify that DMT and dance show positive results in increasing quality of life and reducing clinical symptoms, namely in depression and anxiety, as well as improving well-being, humour, affection and self-esteem. Therefore, they conclude that DMT is beneficial when used in a clinical context and/or in prevention. In agreement, Ribeiro et al. (2013), through a prevention program called *Positivity*, aimed at a group of elderly people, reduced depression symptoms and increased well-being. According

to them, depressive symptoms are negatively correlated with well-fare and this one is related to a bigger satisfaction in life.

Dance Movement Therapy in Portugal

Historical Context

DMT's path in Portugal began in 1999 with the work of pioneer Isabel Figueira, trained at Laban Centre, City University, London, United Kingdom. This recent road that is still taken by a rather small number of national professional is still quite unexplored, which is simultaneously a sign of countless difficulties and a world of opportunities. DMT is not acknowledged in Portugal as a profession and nowadays it is not possible to train professionals here. The main official initiative to turn it into a reality was lead by Isabel Figueira with the collaboration of other professionals, starting a Post-graduation in Dance Therapy and Non-Verbal Communication at the Universidade Autónoma de Lisboa (2003-2006). The few Dance Movement Therapists that work in Portugal are mostly concentrated in the Lisbon and Oporto areas, developing their work with different populations in varied contexts.

In view of what was already accomplished by DMT in Portugal, it is clear that there is still a lot to be done and it is important to continue to encourage curiosity concerning the area. Making one's self known, not only to professionals of multiple areas but also to general public, is the first step to create intervention opportunities in varied and multidisciplinary contexts, with diversified populations, in order to become aware of the flexibility and adaptability of this psychotherapy in action. By intervening, it will be possible to present results and consequently progress towards the recognition of DMT in Portugal.

DMT with Elderly People: Opportunities, Limitations and Challenges

The need to continue to implement DMT in Portugal demands a valorisation of intervention propositions in the community. In an aged country with projections that indicate the accentuation of this scenario, it seems timely to create DMT projects that favour the intervention in the senior population. Plus the fact that these interventions meet many of the ideas defended globally in recent years that emphasize the stimulation and defence of a successful and active aging, which is closely linked to the promotion of health in third and fourth ages.

Thus, it will be important that future DMT interventions with people with 65 years old or more establish guidelines based on the concepts integrated in the promotion of health, quality of life and subjective well-being. The health promotion is a process that aims to increase the individuals and the communities capacity concerning the control of their own health, in order to improve it (Loureiro & Miranda, 2010; WHO, Ottawa Charter, 1986). This process is based on the definition of health made by the WHO (2015, Ottawa Charter, 1986): a state of complete physical, mental and social well-being and not only the absence of illness. Therefore, the individual or group must be able to identify and fulfil its aspirations, to satisfy its needs and to modify or adjust to the environment (Loureiro & Miranda, 2010; WHO, Ottawa Charter, 1986). The definition of these limits for intervention favours the DMT action in the elderly population, because, as mentioned earlier, it is a psychotherapy that fits in the described objectives.

The intervention of DMT in elderly population in Portugal is still almost null and until today nothing has been published nationally about this theme. There is therefore no idea about the methodologies that have been used or the results that have been achieved. In this work, after showing the benefits and limitations of the DMT intervention in elderly population, directed at the promotion of its health, there is a desire and motivation to suggest

and prepare a way that allows for the beginning of varied interventions in this area in Portugal.

The current economic, social and cultural framework, because it is unfavourable, shows a series of inhibitory constraints for the development of countless areas, such as DMT. However, this scenario offers a fertile land of opportunities for the intervention of this psychotherapy in the context of senior population. Apart from the growing number of this population group in the country, the number of responses directed at it are still scarce and with a small degree of effectiveness, even though policies defending active aging already exist (Marques, 2011; Programa de ação do Ano Europeu do Envelhecimento Ativo e da Solidariedade entre Gerações [AEEASG] Portugal, 2012).

Reflecting what was previously developed in this work, it is possible to understand that, in its action, DMT covers the various components that are to be worked with third and fourth ages (physical, cognitive, psychological and social). Consequently, this expressive psychotherapy may intervene in order to decrease possible and several risk factors. Through the achievement of satisfactory results, it must be accepted as another option, able to promote health in the senior individual, making him/her more autonomous and as such, capable of indirectly decreasing public expenses. In parallel, it may contribute to the change of mentalities concerning the current image people have of old age and the aging process.

Being an innovative approach in Portugal, DMT has the opportunity to offer new possibilities of solving problems to the institutional environments that are increasingly saturated, frustrated and anxious for more effective changes.

Plus, DMT intervention in the country's senior population may still meet some constraints, namely the fact that this psychotherapy cannot change some isolation situations, nor stop the aging process, i.e., avoid losses and illnesses.

In Portugal, DMT is quite an unknown area that is not recognized as a professional activity, in which the lack of human resources is evident, where there are almost no studies to support it and which is still accepted by very few entities. Therefore, it generates in the community, with the same degree of importance, non-acceptance and/or curiosity. Considering that it is a psychotherapeutical process that uses the body, dancing and movement, from the outset, that may be something elderly people do not identify with.

Generalized negative attitudes and practices concerning individuals, based solely on their age, also called *ageists*, are frequently directed at the senior population in Portuguese society (Carneiro et al., 2012; Marques, 2011; Ribeiro, 2007). These attitudes are normally associated to the tendency of attributing a homogeneous character to all the elderly population, focusing many times on the negative aspects, and to its discrimination. The predisposition for this type of practices or ideas is also associated to beliefs, stereotypes and prejudices that the general population, including even healthcare providers or the seniors themselves (with 60 years old or more), insists on directing at third and fourth ages. The negative image people have of aging and old age in Portugal is transversal to any generation. Normally, this is the image that prevails over the positive or neutral image, being that it is associated to illness, dependence, incapacity, sadness, among others (Carneiro et al., 2012; Marques, 2011; Ribeiro, 2007; Rosa, 2012). Within this scope, some suggest that the manner in which each individual perceives his/her aging may influence his/her state of health, wherein more positive perceptions about the process, significantly improve health and the survival rate some years later (Levy, 2002; Levy, Slade, & Kasl, 2003; Marques, 2011). DMT as an intervention instrument in the promotion of health in the senior population may have an important role as a stimulus to the change of mentalities and subsequent *ageist* attitudes and practices directed at this population.

Facing many of the mentioned constraints, the possibility to transform them into opportunities comes creatively. In planning future DMT proposals of as a form of intervention in the promotion of health in senior population, it is necessary to plan health policies favourable to its implementation as an additional tool to the increase in quality of life. Thus, the strategy of implementation of DMT in this type of intervention requires the strengthening of community action; the development of personal skills; the enabling, mediation and stimulation of creativity; the creation of favourable environmental conditions and the re-orientation of healthcare services (Loureiro & Miranda, 2010; WHO, Ottawa Charter, 1986).

Taking into account the data concerning demographic aging in Portugal, namely in the interior of the country (Bandeira et al., 2012; Carneiro et al., 2012), it is appropriate to present an example: a typical parish in the interior of Portugal, called Casteleiro (Sabugal region), where a door to door inquiry revealed 492 houses, 389 of which are not inhabited (80,2%). From the 110 houses that are permanently lived in (22,4%), the majority has 1 inhabitant. From here the desertification that has been progressive in the recent years in the interior of the country is rendered evident. It should also be noted that the age average is 68, with a percentage of 56,4% female and 43,6% male individuals. These data reflect an age pyramid completely inverted, with the great majority of people over 64 years old (Baptista, personal communication, April 5, 2015).

In this context there is a need to present DMT projects where:

1. Elderly people are stratified by cognitive and psychophysical capacity;
2. Adequate intervention methodologies are planned according to the needs found in the stratification process;
3. Groups are formed for the DMT sessions, taking into account the needs found in the stratification process;

4. There is a specific number of DMT sessions, on a weekly basis, adequate to the needs found in each of the previously stratified groups;
5. An analysis is made concerning the movement of the participants at the beginning, middle and end of the psychotherapeutical process;
6. An enquiry is made to the participants, at the beginning and end of the process, for the purpose of assessing the state perceived by the groups concerning the physical, mental, cognitive and social components;
7. An assessment is made at the beginning and end of the psychotherapeutical process concerning the physical, cognitive, mental, and social components of the different groups.

Discussion

The thesis focused on the contribution of DMT to the promotion of healthy aging. It was found that this expressive psychotherapy can be an important tool.

The main motivation for this work came from a concern about the aging phenomenon in Portugal, its social image and the need to create responses in accordance to the concept of active aging, considering DMT as one of these responses.

The demographic aging of the world, of Europe and Portugal has been increasing and projections suggest its progressive rise. Portugal is currently one of the countries in the world with the largest index of population aging (PRB, 2011; Pordata, 2014a, 2014b; UN DESA, 2013), due to the decrease in the fertility and mortality indexes and the subsequent increase of average life expectancy (Bandeira et al., 2012; Carneiro et al., 2012; Rosa, 2012). There were never so many people with 65 years or more of age, so few births and young people and an active age population with such visible signs of aging. This accentuated demographic aging added to the current situation of economic deficit in Portugal appears to contribute even more to the disturbing and negative vision that exists concerning aging. This context may increase health risks, solitude, family isolation and poverty as well as undermine the renewal of generations, the decrease in productivity and financial sustainability of social security, thus affecting the way we live with aging.

However, this growth of aging population may be considered as an opportunity to act in several domains of this process, because of its heterogeneity on the one hand and because of its specifications and different theoretical models, on the other. This opportunity is expressed in the continuing intervention for the promotion of health of this population, setting forth the positive ideas about aging and disregarding the negative and ageist ones that sadly prevail currently in Portugal.

The singularity of aging, even though it is common to all, is experienced individually and it is dependent on the socio-cultural context, coming from the combination of primary (genetic and irreversible) and secondary (external causes) factors. In the latter, greater opportunities are found to promote healthy aging.

Some authors, such as Jung (1933), Erikson (1982), Whitebourne (1987), in accordance to the perspectives of development, perceive that aging does not correspond to a limited moment, but rather to a dynamic and ongoing process throughout life. Thus, faced with bio psychosocial alterations, the elderly person, which continues to interact with the surroundings, begins to adopt re-orientation strategies regarding his/her goals and subsequent regulation.

This new paradigm initially came from the psychosocial theories that consider that the individual is defined by a set of social roles, and that the emphasis of aging is in the individual process of adaptation to it (Alaphilippe & Bailey, 2014). In fact, retirement is held as a sensitive period in our society, because work is quite valued (Pinto, 2007) The elderly person is fairly vulnerable at this stage, and programs to prepare for retirement are rather pertinent so that feelings of uselessness and solitude are prevented and therefore well-being and quality of life are guaranteed. Later, the theories on successful aging arose, considering it to be above normal aging (Rowe & Kahn, 1997). Later, these theories lead to the coming about of the concept of active aging (WHO, 2002).

The theories on successful aging focus on the essential characteristics that must be present in the adaptive (coping) process of the elderly aiming at his/her well-being (Almeida, 2007) From this set of theories, the selective optimization model by compensation (SOC), by Baltes and Baltes (1990) stands out, placing the senior person in an active role, through a dynamic process between minimizing losses and maximizing gains. The frequent use of coping strategies centred on emotions (Carstensen & Fung, 2006) as age progresses is also

worth mentioning, partly because of the unavoidable losses that are difficult to change. Ultimately, the elderly person perceives the wisdom he/she gets as being a gain (Fonseca, 2005). For that reason it appears fundamental to promote the psychotherapeutical work with this population in the promotion of healthy aging, as it is a complex and dynamic process and as it is highly dependent on the adaptive capacity of the elderly person. In this context, the coping strategies may be worked on and/or developed so that there is an adequate behavioural and, most of all, emotional regulation resulting from everyday challenges, promoting well-being and quality of life.

For the senior person, the impact of retirement, widowhood, health decline or loss of economic power is always interpreted subjectively (Fonseca, 2005). It is also known that the subjective feeling of well-being is greater, as is the autonomy to regulate the environment. In addition, the internal representation of control comes from the individual's own effectiveness acquired through him/herself and the recognition of the other (Ribeiro et al., 2013). In this aspect, isolation is considered to constitute a risk factor that should be avoided. And the technician may have an important role in restoring the *locus* control. It is equally important to create formal and informal support networks as well as programs that promote interpersonal relationships, such as DMT.

In 2002, WHO presented the concept of active aging, considering it depends not only on age, but fundamentally on the lifelong opportunities for health, participation, education, safety and construction of solidarity bonds with other ages, having as a sole purpose the improvement of people's quality of life as they get older. This concept fits the idea of promotion of health as an everyday life resource, being not only an objective to attain, based on the social and individual resources and physical abilities (WHO, 2002). As such the word *active* does not imply being in the labour market, or physically active, but rather that the elderly is still able to continue to participate positively in his/her family and community.

In view of these new concepts, a new perspective has been arising, which partly appears to have contributed also to the growing need for change aimed at a more adequate, more informed and more individualized intervention. Accordingly, it is important to note the growing relevance of the adoption of healthy lifestyles that, according to a developmental perspective, have greater benefits the sooner they begin. Based on these assumptions, it appears to be extremely important to be more careful in adopting healthy lifestyles earlier, in a perspective that we age according to the way in which we live. It also appears to be increasingly crucial that preventive measures are developed in the various fields of action (social, political and cultural), focusing on the maximization of protection factors, in order to reduce risk factors deriving from aging; resilience being a fundamental process to adopt.

The main objective in the promotion of health is the improvement of the quality of life and well-being, and it is essential that healthcare professionals know how to develop characteristics of self-effectiveness and control in the elderly person, in order to promote motivation and self-esteem, leading to more positive results. The creation of a relationship of trust is the basis for any intervention, especially when approaching the fields of psychotherapy, as is the case in DMT.

In the previously described context, the psychotherapeutical intervention in aging is pertinent (Rebelo, 2007) and DMT is an innovative method, adequate and effective in the obtainment of results aimed at the promotion of successful/healthy aging.

Dance Movement Therapy, as an expressive psychotherapy that uses dancing and movement, is based on theoretical principles that stimulate the psychophysical integration of the subject (Panhofer, 2005). The intervention of this psychotherapy is one of the most complete as it promotes the individual's physical, psychological, cognitive and social integration (Panhofer, 2005), fields of action that are essential for the promotion of a successful aging process.

In the specific case of intervention with the elderly population, there are some techniques that are more adequate and used more frequently by the Dance Movement Therapists. From them, the following must be highlighted: mirroring, affective attunement and empathic movement; leadership exercises; use of the circle; guided imagery, breathing exercises and mindful body; use of materials, music and touch; and the use of reminiscence, symbolic movement and metaphors.

Reliving the past is essential for the self-concept and adaptive process of the senior person. The use of movement in DMT allows for the remembrance of the story of life, which helps in the elaboration of the emotional content and in the valorisation and acceptance of what was lived and what is yet to be lived (Erikson, 1982). So, working with reminiscences favours coping. The use of metaphors facilitates the access to emotions, making the movement experience more real (Cammany, 2005) and creating an emotional distancing in face of possible distressing feelings (Meekums, Karkou, & Nelson 2012). It is important to retain that the emotional component has an important contribution to the adaptation and well-being of the elderly person (Carstensen & Mikels, 2005). Thus, through movement, DMT facilitates the access to memories and allows for the experiencing of positive emotions through a psychophysical integration. This work favours the posterior access to the positive emotions in everyday life, which is essential for well-being and successful aging.

All these techniques favour the conscience of the body through movement and enable:

- access to emotional content and containment;
- reduction of possible levels of anxiety;
- boost of feelings of sharing and empathy;
- stimulation of interpersonal relationships, memory, imagination, creativity and a therapeutic relation of trust;

- reinforcement of self-esteem, self-expression, acceptance of the other and of one's self;
- development of autonomy, self-concept, self-control and self-effectiveness.

The presence of these aspects is fundamental for successful aging.

DMT respects an adequate setting, promoting a family environment, safe and accepting (Cammany, 2005), where there is no criticism or moral judgement. While working with senior people it is fundamental to be tolerant in view of possible physical, cognitive and emotional limitations. Because it is a psychotherapy that uses dance and movement, apart from verbal language, it does not necessarily imply that the elderly person must dance or be in full physical fitness in order to participate in the session; small movements, gestures, postures, breathing, facial expressions are accepted. Therefore, this environment of acceptance shared by the entire group of senior people, where the limits and wills of each one are respected, unavoidably reinforces the feeling of belonging and self-control, making them feel used and acknowledged.

The increase of body conscience enlarges the non-verbal vocabulary. On the other hand, by working body posture, emotional content is also worked on and vice-versa (Levy, 2005). This allows for a greater connexion with the body so that the valorisation of it may be worked on, through the acceptance of the deficits that unavoidably come with time. Through the change in body posture and the use of creativity, obstacles are overcome and new ways for expression are discovered. This reinforces the feeling of acceptance and consequently the self-esteem and adaptive capacity of the senior person in the self-management between losses and gains resulting from the bio-psychosocial alterations. On the other hand, the emotional and body experience of overcoming and/or accepting limitations, experienced in a DMT session, may be later replicated in everyday life.

It is also important to mention that the work developed in DMT sessions, respects the thematic material that the group/individual brings to the session, which reinforces the feelings of self-effectiveness, self-esteem and well-being. The moments of verbalisation are equally relevant for the integration of what was lived, and moments of sharing exist always (Rappaport, 2013).

The intervention of DMT with elderly people should be made in a group context, since the therapeutic work reveals more positive results (Rebelo, 2007). The group offers a containing space and favours interpersonal relationships and communication, decreasing solitude. With the use of DMT techniques, the senior person feels what it is like to be in another person's shoes and/or feels like he/she is seen and acknowledged by the other.

In this work, it was possible to observe that several studies demonstrate the benefits of DMT in the promotion of health in elderly population, including its different components (physical, cognitive, psychological and social), well-being and quality of life (Bräuninger, 2014; Haboush & colleagues, 2006; Koch & colleagues, 2013; Strassel et al., 2011). It is therefore possible to state that DMT may be used as a valuable tool in the promotion of healthy aging.

The main benefits found in the different components have a mutual influence upon one another: they favour physicality, vitality, body posture; improve mobility, balance and the reduction of falls; decrease stress levels; and promote cognitive activity and humour.

Additionally, the fact is that significant results are shown in the prevention or delaying of dementia states and in the improvement of superior mental functions such as memory and language. As it is a psychotherapy, results inevitably arise that prove the decrease in depressive and anxious symptoms. It also promotes strategies of coping, motivation, acceptance of story of life, self-concept, self-perception of gains, satisfaction, well-being and social involvement.

Even though some studies do not specifically focus in the intervention with elderly people, it was equally important to make references to them, in order to reinforce the impact that DMT has in the different components, regardless of the age group. Another aspect to make clear was the need to contemplate studies in the area of dance beyond DMT, on the one hand because of the lack of specific studies about this expressive psychotherapy in promoting healthy aging, on the other hand because of the significant quantity of studies about this matter using solely dancing. Because dance and movement are integrating elements of the DMT method, a reference to these studies is valid as they also reveal positive results in the intervention with elderly people. Finally, reference was also made to studies with elderly people already in pathological states, as is the case of dementias. Most of these studies did not focus specifically on the area of promotion of healthy aging. However, it is pertinent to take into account their positive results in dementia situations, as they reinforce the idea that prior intervention may avoid/delay the appearance of symptoms.

In spite of being less significant, limitations were also observed in the intervention of DMT, which should be mentioned since some of them may even be equally opportunities. In this sense, limitations such as the lack of studies in DMT with elderly people in the promotion of health and/or the non-rigorous methodology followed in some studies are the most relevant. Therefore it is important to develop more studies with elderly population in the promotion of health, aimed at promoting healthy aging. On the other hand it is necessary that future investigations take into account a series of methodological criteria that determine significant results. This situation was essentially verified in the studies that focused on the physical component. There was, however, no study that showed unfavourable results in the use of DMT.

However, there have been no studies that showed unfavourable results in the use of DMT. It is therefore pertinent for more DMT researches to be developed with elderly people

for the promotion of health, defending healthy aging, as it is relevant that they take into account a series of methodological criteria in order to obtain meaningful results.

The history of DMT in Portugal is still quite recent (1999). In the country, it is not known or acknowledged as a profession and there is currently no institutional offer for training in the area. Thus, there are few Portuguese dance movement therapists, and of those that exist, only a small amount is working in Portugal, in their majority in the cities of Lisbon and Porto. DMT intervention and investigation with the elderly in Portugal is almost null. Therefore, there is a necessity to continue to implement DMT in Portugal, namely in the intervention with elderly people. It must become better known nationally, in order for intervention opportunities to be created, and subsequently for results to be presented, thus progressing towards acknowledgement.

The negative attitudes and images concerning aging and old age in Portugal are rather frequent and transversal to any generation (Carneiro et al., 2012; Marques, 2011; Ribeiro, 2007; Rosa, 2012). This factor has an influence in the health state of the senior person (Levy, 2002; Levy et al., 2003; Marques, 2011). DMT may stimulate the change in mentality, counteracting these ageist ideas. The scenario of an increasingly aging country, demands from the government policies the defence of active aging as well as the creation of DMT projects that favour it. DMT is able to respond to this purpose in an innovative way, since it integrates in its action all the concepts inherent to the promotion of health and includes the several components that are to be worked with in aging population. Therefore, it reduces the probability of illness and incapacity, maximizes the physical and cognitive functions and promotes the active participation of the senior person in life (Rowe & Kahn, 1997). Indirectly, it may also still decrease public costs, so elevated due to aging of the population.

Today the challenge will be to materialize DMT projects with senior people in Portugal. For that, limitations must be overcome and focus must be kept on the opportunities

offered by the country. This work is an incentive so that future research programs may be developed, according to adequate methods, in order to make the profession demonstrate statistically meaningful results and be acknowledged in Portugal. For the country, it is also important that DMT contributes to the change in mentalities and paradigms related to aging, thus accompanying the current social policies that advocate active aging.

Conclusion

In this thesis the main objective was to research and understand the characteristics that lead to a healthy aging process and also show the relevance of an early intervention for a better quality of life in elderly people, and through it explore the contribution of the Dance Movement Therapy in this matter. Through an extensive review it was possible to corroborate that-DMT, as a psychotherapy that covers the physical, mental, cognitive and social components of the individual, is indeed a rich instrument that promotes a healthy aging. Taking into account these results, we find it necessary, in a near future, to create DMT projects that go along with the concept of active aging, especially in Portugal, a country that presents one of the highest levels of aging, a challenging socio-economical context and also a place where DMT is not yet recognized. Despite the limitations, it has a great deal of opportunities that need to be taken seriously. Finally, due the lack of studies in the prevention, more research is needed in this area to better support the thesis findings and also to develop the DMT profession in the Portugal.

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