Quality of life and physical activity in elderly people: Autonomy, social participation and well-being Qualità della vita e attività fisica negli anziani: Autonomia, partecipazione sociale e benessere

Claudia Maulini

Department of Sport Sciences and Wellness Parthenope University, Naples, Italy claudia.maulini@uniparthenope.it

https://orcid.org/0000-0002-8649-4755 Emanuele Federici

Department of Sport Sciences and Wellness Parthenope University, Naples, Italy emanuele.federici@uniparthenope.it

Mascia Migliorati

Niccolò Cusano University, Rome, Italy – mascia.migliorati@unicusano.it https://orcid.org/0000-0002-2925-216X

Enrico Miatto

IUSVE, Salesian Pontifical University, Venice, Italy – e.miatto@iusve.it https://orcid.org/0000-0002-8614-3509

ABSTRACT

The article presents the results of the qualitative survey "Quality of life and physical activity in Elderly People" which aimed to investigate the influence of physical activity on the quality of life of the elderly people. Five focus groups were carried out to find out the opinion of 35 participants of an exercise programme in an Italian center for training and introduction to sport. The content analysis was carried out through the application of the Schalock and Verdugo's Quality of Life Scale. The survey showed that participation in this physical activity programme enabled participants to counteract the onset of physical and physiological age-related limitations; it favoured processes of personal and community empowerment, positively affecting aspects relating to the emotional and psychological dimension, the development of self-esteem and self-efficacy, the management of relational dynamics and promoting participation, social inclusion and the establishment of meaningful relationships.

L'articolo presenta i risultati dell'indagine qualitativa "Qualità della vita e attività fisica negli anziani", che mirava a indagare l'influenza dell'attività fisica sulla qualità della vita degli anziani. Sono stati condotti cinque focus group per conoscere l'opinione di 35 partecipanti a un programma di esercizio fisico in un centro italiano di attività fisica e sportiva. L'analisi del contenuto è stata condotta attraverso l'applicazione della Scala della Qualità della Vita di Schalock e Verdugo. Dall'indagine è emerso che la partecipazione a questo programma di attività fisica ha permesso ai partecipanti di contrastare l'insorgere di limitazioni fisiche e fisiologiche legate all'età; ha favorito processi di empowerment personale e comunitario, influenzando positivamente aspetti relativi alla dimensione emotiva e psicologica, allo sviluppo dell'au-

tostima e dell'autoefficacia, alla gestione delle dinamiche relazionali e promuovendo la partecipazione, l'inclusione sociale e l'instaurazione di relazioni significative.

KEYWORDS

Quality of Life, Physical Activity, Pedagogy, Elderly People Qualità della vita, Attività fisica, Pedagogia, Anziani

CONFLICTS OF INTEREST

The Authors declare no conflict of interest.

1. Introduction

Aging is increasing in Italy (ISTAT, 2019). This phenomenon requires welfare measures capable of guaranteeing conditions of health and functional autonomy, which inevitably brings with it an increased risk and frequency of pathologies, chronicity and disability, typically linked to the functional decline inherent in old age (Tramma, 2017).

Research on psychophysical well-being in young-old and old-old, shows that the practice of moderate physical activity is one predictive factor for an active lifestyle or for disability during old age (Vitulli et al., 2012; Booth et al., 2012; Charansonney, 2011; Leveille et al., 1999, Frändin, 2009), including cognitive, emotional and physical benefits that significantly extend the active life span (Vaccaro et al., 2019; Gerber et al., 2009; Netz et al., 2005, Laurin et al., 2001; Fox, 1999). When physical activity programmes are also associated with social and recreational activities it is possible to contrast loneliness, isolation and the poor social support that old people are usually faced with, that may negatively impact on psychophysical health and on life quality, the positive effects of physical activity are increased (Stahl et al., 2001; Karelina & DeVries, 2011; Mookadam, 2004; Belza et al., 2004; Chiang et al., 2000; Mudrák, Slepi ka, & Šiška, 2011; Hamar et al., 2013; Lindsay-Smith et al., 2019).

Pinto Minerva (2012, p. 41) points out that «the elder in his biologic dimension, as a human being, should always be seen in his own context, linked to his body, his space and time. Changes that must be interpreted in the network of relations of the super-biological link me-world».

In Italy, in the National Health Plan since 1998, the promotion of physical activity is addressed as a priority for Public Health. In March 2019 the Ministry of Health, according to the OMS Global Action Plan on physical activity for 2018-2030, has approved the guidelines for different ages with reference to physiopathological conditions and to specific populations, where several recommendations for health promotion in the elderly are presented. The Health Minister recommends the creation of the so-called age-friendly communities, able to promote physical activity through multidiscipline network interventions, encouraging low-cost and time-saving activities that could increase psycho-social well-being and thus the quality of life in the elderly. Numerous studies consider that a stimulating social context, support from friends and relatives, socialization and mutual support between participants, the availability of structures for sport and leisure are strongly associated with regular physical activity participation in the elderly

as much as some personal determinants, e.g. motivation, self-efficacy and self-regulation ability (Gill et al., 2013; Park, 2014; McAuley et al., 2011; Stahl et al., 2001; Belza et al., 2004; Chiang et al., 2000; Mudrák, Slepi ka & Šiška, 2011; Hamar et al., 2013; Lindsay-Smith et al., 2019).

Therefore, the perspective is given by community care oriented to start up the processes that aim «to optimize the health-related opportunities, participation and safety, in order to improve the quality of life in the elderly» (WHO, 2002, p.12).

From a pedagogical point of view, it is fundamental to start from the resources they still have or that are able to activate and support them in «reinventing and reorganizing their own existence» making them able to «avoid to break-off contacts with the world» (Pinto Minerva, 2012, p. 41).

Research into pedagogical aspects of physical activity in the elderly moves from the concept of Quality of Life (QOL) meaning «the individual perception of his position in life in the context of the cultural systems and of the reference values in relation to his objectives, expectations, standards and interests». This definition is the result of a polyhedral concept that in the last decades has progressively gained the attention of many disciplines. Since the 70s, in fact, QOL has become an object of interest not only by social and economic sciences (Duncan, 1969) but also by human sciences that claimed the individuation of the subjective element in this analysis (Campbell, Converse, & Rodgers, 1976).

The adoption of a bio-psycho-social model incorporates but also goes beyond the medical approach to take an interest in people's health (Engel, 1977) including the analysis of the physical, psychological, and social elements of well-being give new impetus to the concept of QOL (Kim-Prieto et al., 2005). Nowadays the QOL surveys tend to refer to a multidimensional construct characterized by subjective and objective determinants.

In this perspective, the research Physical Activity and Health in the elderly aims to investigate the influence of physical activity on QOL in the elderly through the participation of 35 participants in structured and adapted free-body physical exercise sessions lasting one hour, twice a week. These sessions were offered by the Center for Training and Introduction to Sport of the Municipality of Terni (Ce.f.f.a.s. Foundation).

Specifically, in the present study the Schalock and Verdugo QOL model (Schalock & Verdugo, 2002; Verdugo, Schalock et al., 2005) was considered as reference for its large acceptation by the international scientific community and the numerous practical applications to many fields, including the elderly (Gómez, et al., 2007, 2008).

Referring to this model (Brown, Keith, & Schalock, 2004; Schalock & Verdugo, 2007; Verdugo, 2006), individual QOL is determined by three factors: independency, social participation and wellness. Thereby QOL can be described as a desired status of personal wellness (Gómez et al., 2008) which is multidimensional; it has ethical and emic properties (Jenaro et al., 2005; Schalock et al., 2005); it has subjective and objective components; it is influenced by personal and environmental factors; finally it embodies the perspective of the systems including those multiple environments that have influence on people's lives (Keith Bonham, 2005; Schalock, Gardner & Bradley, 2007; Schalock, Bonham & Verdugo, 2008; Schalock et al., 2008).

2. Materials and methods

Schalock and Verdugo's scale to analyze QOL (Schalock & Verdugo, 2002; Verdugo et al., 2005) consists of 8 dimensions: emotional well-being, interpersonal relationships, material well-being, personal development, physical well-being, self-determination, social inclusion and rights (Verdugo et al., 2009). These dimensions formed the system of reference categories for the analysis of the contents of this survey. Each of them has been considered and appropriately adapted to the context of the analysis. In order to investigate the topic of the study, 5 focus groups consisted of 7 participants per group for a total of 35 people aged between 65 and 80, (30 women and 5 men) within the so-called young elderly people, with an average age of 69 who practiced physical activity in a specific programme developed by the Ce.f.f.a.s. Foundation.

The participants were selected according to strategic and personal criteria, respecting relevance and homogeneity, as indicated by Krueger and Casey (2015) since all the participants in the study are part of the Ceffas physical activity programme. The heterogeneity of the participants, necessary to ensure enough variation within each group (Krueger & Casey, 2015, p. 197), is determined by differences in social and professional status, gender, age and frequency of physical activity with several experts specialized in physical activities sciences in different gyms located in the city.

Before the start of the focus groups, a questionnaire was used to collect useful information for the survey on the participants' lifestyles as well as personal data, education level, employment, social status and health conditions.

In particular, it was found that almost all participants in the survey are retired (97%) and the majority (77%) live alone but lead an active and interesting life. 80% are engaged in voluntary activities. More than 90% like to travel, go to the cinema or theatre and read books and newspapers. 80% have attended and/or are attending training courses. 56% have always practiced sports continually throughout their lives. 30%, for at least 6 years, have participated in physical activity programmes promoted by Ce.f.f.a.s. Foundation 37% report suffering from age-related diseases (hypertension, arthrosis, diabetes, cholesterolemia, etc.).

The focus groups lasted on average one and a half hours and were led by a facilitator and an observer for each group, audited and faithfully transcribed. For the analysis of the contents, the results of which are presented in the following paragraph, the paragraph was chosen as the textual unit.

3. Results

The analysis of the content of the textual units, based on the theoretical categories identified, made it possible to track the results of the work the results of the study.

With respect to the physical well-being category, it emerged that the participants consider physical activity a health partner, positively influencing both the regression of diseases and the contribution of general wellbeing:

- «Physical activity is a drug!!! It is a therapy that has no side-effects».
- «All the doctors, the cardiologist, the orthopedic, told me to resume physical activity».
- «The gym is a way of taking care of myself».
- «I feel good, more dynamic, I move well, I'm 79 years old but I don't feel it».

Participants perceive an emotional and psychological well-being that comes from practicing physical activity, recognizing it as a tool to lighten the burden of daily commitments and promote the development of self-esteem and self-efficacy:

«Doing physical activity helps me on a psychological level, I am not saying that it is more important than being physically well, but on a psychological level it has its own value».

«It's like recharging your batteries, maybe you get up, with your thoughts, your problems, your family, then you go to the gym, take a shower, go out and it's sunny! It's also a way to distract yourself from all the things around us. You feel like you're at peace with yourself and you feel well!».

«The years go by but thanks to gymnastics we discover that we are still able to do a lot».

«Self-esteem grows so you can and know how to deal with situations better if you're attractive and strong».

The emotional wellbeing that comes from the practice of physical activity, according to the focus group participants, also has a positive impact on interpersonal relationships and the importance of the support of friends and family to participate in physical activity programmes, both as an encouragement to participate and as involvement in them, emerges.

«Physical activity makes you feel good and helps to facilitate relationships with others as we relate to others».

«After I started going to the gym I opened up and became more sociable». «I have to say that at home my daughters encourage me. My husband doesn't come with me, but he encourages me».

With regard to the social inclusion category, the participants highlighted how in their experience practicing physical activity means becoming part of and/or feeling part of a group and a community, benefiting from human resources—i.e., the experts in Physical Activities—who work within the physical activity programme promoted by the Ce.f.f.a.s. Foundation. From the words of the participants in the survey it is clear that these experts have, in addition to technical and sports skills, educational skills aimed at support, promotion and social inclusion.

«This experience is a way to socialize, to feel part of a group outside the family».

«Retirement can represent a period of crisis in which one gets out of the social context and can feel marginalized. Going to the gym gives you the opportunity to be part of society».

«The role of the instructor is fundamental, it is one of the reasons why we do not give up!».

«Instructors support you, they don't judge you, everyone does what they can do. You don't feel you're in difficulty».

In the words of the participants, compared to the personal development category, it emerged that physical activity is a very important tool in order to know one's own resources and limits, to be able to build strategies of overcoming and improvement useful to counteract the functional decline typical of aging.

«This is confirmation of some resources. Knowing one's own body one is aware of one's own limits and resources and can enjoy new successes... it is

a desire to combat against advancing age».

«It is important to know your body and to be educated to understand what your limits are and how to overcome them».

From the comments of some participants it shows how physical activity positively influences self-determination. This ability is the expression of a strong awareness necessary to pursue one's own goals, to give satisfactory responses to one's own needs, to envisage new perspectives of meaning and, finally, to make choices in line with one's own values.

«If I can't do an exercise I take it badly at the time, I sigh but I do not give up, I strive to succeed and this gives me satisfaction».

«I feel good so I can plan my life in the long term because I feel healthy ... so I plan to travel without setting limits. Yes, with the gym the desire to travel has increased».

«Movement is something you have to put in your head. You have to do it regularly!».

The category rights in the words of the participants is inextricably linked to indicators linked to material well-being. It has emerged, in fact, that it is important to encourage the participation of everyone in the practice of sports, and that the activities are offered at different times and locations and are inexpensive.

«One of the positive features of this type of course is the flexibility that it allows you to choose the time and location».

«They have started these courses outdoors and free of charge! That's how we started, little by little, it was cheap. The economic aspect motivated us».

After the analysis of the data, in the following paragraph, the discussion of the results is presented.

4. Discussions

From the exposure and interpretation of the results obtained, it can be seen that the perception of the focus group participants with respect to the physical well-being category is in agreement with that indicated by Booth et al. (2012), Charansonney, (2011); Leveille et al. (1999), regarding the positive impact of regular physical activity in the elderly in terms of health in all age groups. On the contrary, sedentariness contributes, together with other risk factors, to the development of numerous chronic and degenerative diseases and in particular those of the cardiovascular, metabolic and osteoarticular system. Participants report, in fact, a reduction of symptoms and regression of pathologies, recognized in some cases by the doctors themselves. The same studies show that the release of neuro-hormonal mediators such as endorphins and serotonin give a feeling of general well-being. In this regard, participants report that they perceive physical activity as a beneficial source of energy and vitality.

The results showed a strong correlation between the dimensions of physical and emotional well-being. The benefits of physical activity help people to live their experiences with less worry and without stress, promoting well-being and security. This makes our participants feel that they are better able to cope with difficulties. All this also has a positive impact on the sense of self-esteem understood as a pos-

itive global judgement of oneself, closely related to self-acceptance and self-valorization (Rosenberg, 1965; Sedikides & Gress, 2003) and consequently to self-efficacy as the beliefs about one's own ability to organize and carry out the actions necessary to produce certain results (Bandura, 1997) which involves satisfaction, a sense of fulfilment and pleasure for one's life. These results are in line with the study by Deforche and De Bourdeaudhuij (2000), highlighting how the elderly, participants in group physical activity programmes, reported higher overall activity respect to the past and a greater sense of self-efficacy. From the results it emerges, with respect to the personal development category, how physical activity is an opportunity to acquire a greater self-awareness, not only bodily, which allows to confirm and/or discover one's own abilities, potential and areas of improvement, desires and aspirations as pushes towards the conquest of greater autonomy and independence and therefore towards self-fulfillment.

The results highlight how physical activity positively influences self-determination, meant as the ability to choose and to make these choices, rather than strengthening contingencies, drives or any other force or pressure, are the determinants of one's actions (Deci & Ryan, 1985).

Research participants recognize the importance of being aware of one's own possibilities, that is, of one's own abilities and boundaries, but also of desires and expectations. The objectives they set themselves, the commitment and self-regulation of their behaviour to pursue them, to achieve greater autonomy and independence that allows them to make choices that respect their preferences and values, are therefore of great importance (Pinto Minerva, 2012). The study shows how physical activity also has a positive impact on interpersonal relationships, that is, on the processes of communication, interaction and socialization with others. In fact, the objective of socialization is one of the main elements that encourage participation in physical activities. However, it also emerges how interpersonal relationships improve thanks to the practice of sport because the person, feeling «good», shows a greater willingness towards others (McAuley et al., 2011). Openness towards others improves the quality of interpersonal relationships and therefore the relational climate in general, an element that contributes to the well-being of the person. Studies by Ryff et al. (2004) have also shown that older women with quality relationships are healthier.

Physical activity means becoming part of and/or feeling part of a group and of a stimulating social community. Many studies argue that socialization and mutual support among participants, and support from friends and family, are strongly associated with participation in regular physical activity programmes by older people, as are some personal determinants, especially motivation, self-efficacy and self-regulation (Stahl et al., 2001; Belza et al., 2004; Chiang et al., 2000; Mudrák, Slepi ka, & Šiška, 2011; Hamar et al., 2013; Lindsay-Smith et al., 2019).

The figure of the expert in motor sciences, who must necessarily possess not only technical sports skills, but also educational skills aimed at support, promotion and social inclusion, is then relevant.

In Schalock and Verdugo's model the two previous dimensions of QOL, interpersonal relations and social inclusion, include the concept of "support" to be understood as a system of resources and strategies oriented to promote the development, education, interests and well-being of the person and that improve human functioning aligned and oriented to the improvement of the quality of life (Schalock & Verdugo, 2002; Verdugo et al., 2005; Schalock, Luckasson, & Shogren, 2007).

The availability of facilities for exercise and/or recreation is strongly associated with participation in regular physical activity programmes by older people (Park,

2014; Stahl et al., 2001; Belza et al., 2004; Chiang et al., 2000; Hamar et al., 2013; Lindsay-Smith et al., 2019). There is, therefore, a correlation between the categories rights and material well-being. Specifically with regard to the "rights" dimension, it should be pointed out that in this work, in addition to fundamental human and legal rights, to which this dimension refers in the scale of Verdugo, Gómez, Arias and Schalock (2009), this should also be understood as the Right to sport for all. This right is well specified in the *Charter of the Principles of Sport for All* (Consiglio Nazionale del Forum Permanente del Terzo Settore, 2004), according to which: «to practise sport is a right of citizens of all ages and social categories [...] and must therefore be accessible to all, respecting aspirations and abilities of each individual and in the diversity of competitive or amateur, organized or individual practices» (art.1). The same Charter also specifies that

«sport for all consists of differentiated and qualified proposals for different activities for different age groups, without anybody being excluded because of their psychophysical condition and economic possibilities, as well as the social and environmental conditions in which they live. The concept of sport for all expresses a call and a commitment to the maximum diffusion of sport, in all its forms, among all citizens» (art. 5).

The analysis of the contents revealed the importance, also indicated in the Guidelines on physical activity for different age groups and with reference to physiological and physio-pathological situations and to specific population subgroups of the Ministry of Health (2019), for participants, that the activities should have low costs and that they should be proposed at different times and locations throughout the city (Park, 2014).

According to the results above presented, the conclusions of the study are drawn in the following paragraph.

5. Conclusions

The influence of physical activity on the dimensions of the "Quality of Life" construct has been analysed through Schalock's model on people between 65 and 80 years of age. Although we are aware that the results of qualitative research are not representative of the entire population of elderly people practicing physical activity, this survey testifies that activities such as those promoted by Ce.f.f.as Foundation are important examples of community care, i.e. of contexts capable of promoting active ageing understood as that «process of optimization of opportunities for health, participation and safety» (WHO, 2002), in which the elderly have the possibility to choose activities capable of improving their lifestyle and therefore to act positively on personal well-being. This is also in line with the recommendations of the Italian Ministry of Health, for the promotion of age-friendly communities in which physical activity plays «a fundamental role in improving the functional abilities of the elderly and their quality of life» (Ministero della Salute, 2019, p. 37).

In addition to countering the emergence of physical and physiological limitations for age, the survey shows how physical activity fosters processes of personal and community empowerment, positively affecting aspects related to the emotional and psychological dimension, the development of self-esteem and self-efficacy, the management of relational dynamics and promoting participation and

the establishment of meaningful relationships both with experienced instructors in physical activities and with other members of the group.

With regard to the dimension of social inclusion, a key element for the promotion of active ageing, the survey also shows how this is the outcome of an effective educational process, promoted by sports educators and therefore by physical activities experts pedagogically competent to support the latent or residual potential of an individual or of a group and to foster a positive change/adaptation between the individual (or group) and the vital worlds in which he or she is inserted (Cairo, 1993). In conclusion, we can affirm that the survey not only postponed the complexity and interdependence of the dimensions constituting the quality of life system, but also showed that it is possible to avoid the image of senile age as defective and expropriated by roles and functions to which it must be subjected (Dozza & Frabboni, 2010), highlighting how physical activity becomes a capacitating and pervasive opportunity of the QOL domains and useful to promote change and well-being in the whole personal system.

References

- Bandura, A. (1997). Self-efficacy: the exercise of control. New York: Freeman and Co.
- Belza, B., Walwick, J., Shiu-Thornton, S., Schwartz, S., Taylor, M., & LoGerfo, J. (2004). Older adult perspectives on physical activity and exercise: Voices from multiple cultures. *Preventing chronic disease*, 1 (4), A09. Retrieved August 30, 2022, from http://www.ncbi.nlm.nih.gov/pmc/articles/pmc1277949/
- Booth, F. W., Roberts, C. K., Laye, M. J. (2012). Lack of exercise is a major cause of chronic diseases. *Comprehensive Physiology*, 2(2), 1143–1211. https://doi.org/10.1002%-2Fcphy.c110025
- Brown, I., Keith, K. D., & Schalock, R. L. (2004). Quality of life conceptualization, measurement, and application: Validation of the SIRG-QOL consumer principles. *Journal of Intellectual Disability Research*, 48, 451.
- Cairo, M. T. (1993). Educazione alla salute. Soggetti e luoghi. Milano: Vita e Pensiero.
- Campbell, A., Converse, P. E., & Rodgers, W. L. (1976). *The Quality of American Life*. New York: Russell Sage Foundation.
- Charansonney, O.L. (2011). Physical activity and aging: a life-long story. *Discovery Medicine*, 12(64), 177–185.
- Chiang, K. C., Seman, L., Belza B., & Tsai J. H. (2008). "It is our exercise family": Experiences of ethnic older adults in a group-based exercise program. *Preventing chronic disease*, 5(1), A05. http://www.ncbi.nlm.nih.gov/pmc/articles/pmc2248786/
- Consiglio Nazionale del Forum Permanente del Terzo Settore (2004). *Carta dei principi dello sport per tutti*. Retrieved August 30, 2022, from: http://www.forumterzosettore.it/multimedia/allegati/Carta%20dei%20principi%20sport%20x%20tutti%202004.pdf
- Deci, E. L., and Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- Deforche, B., & De Bourdeaudhuij, I. (2000). Differences in psychosocial determinants of physical activity in older adults participating in organised versus non-organised activities. *The Journal of Sports Medicine and Physical Fitness*, 40(4): 362–372.
- Dozza, L., & Frabboni, F. (2012). *Pianeta anziani: immagini, dimensioni e condizioni esistenziali*. Milano: Franco Angeli.
- Duncan, O. D. (1969). *Toward Social Reporting: next Steps.* New York: Russell Sage Foundation.
- Engel, G. L. (1977). The Need for a New Medical Model: A Challenge for Biomedicine. *Science*, 196, 4286, 129–136. https://doi.org/10.1126/science.847460
- Fox, K. R. (1999). The influence of physical activity on mental well-being. *Public Health and Nutrition*, 2(3): 411–418. https://doi.org/10.1017/S1368980099000567

- Frändin, K. (2009). Physical Activity and Functional Performance in a Population Studied Longitudinally from 70 to 76 Years of Age. *Scandinavian Journal of Occupational Therapy*, 2(1). https://doi.org/10.3109/11038129509106799
- Gerber, Y., Benyamini, Y., Goldbourt, U., & Drory, Y. (2009). Prognostic importance and long-term determinants of self-rated health after initial acute myocardial infarction. *Med Care*, 47(3): 342–349. https://doi.org/10.1097/mlr.0b013e3181894270
- Gill, D. L., Hammond, C. C., Reifsteck, E. J., Jehu, C. M., Williams, R. A., Adams, M. M., et al. (2013). Physical activity and quality of life. *Journal of preventive medicine and public health*, 46(1), 28–34. https://doi.org/10.3961%2Fjpmph.2013.46.S.S28
- Gómez, L.E., Verdugo, M. A., Arias, B., & Navas, P. (2008). Evaluación de la calidad de vida en personas mayores y con discapacidad: la Escala Fumat. *Intervención Psicosocial, 17*(2), 189–199. Retrieved August 30, 2022, from http://www.copmadrid.org/webcopm/publicaciones/social/in2008v17n2a7.pdf
- Gómez, L.E., Verdugo, M. A., & Arias, B. (2007). Aplicación del Modelo de Calidad de Vida en los Servicios Sociales de Cataluña. *INTEGRA*, 10(27), 4–5.
- Hamar, B., Coberley, C. R., Pope, J. E., & Rula, E. Y. (2013). Impact of a Senior Fitness Program on Measures of Physical and Emotional Health and Functioning. *Population Health Management*, 16(6), 364–372. https://doi.org/10.1089%2Fpop.2012.0111
- ISTAT (2019). Rapporto annuale 2019. La situazione del Paese. https://www.istat.it/storage/rapporto-annuale/2019/Sintesi2019.pdf
- Jenaro, C., Verdugo, M. A., Caballo, C., Balboni, G., Lachapelle, Y., Otbrebski, W. et al., (2005). Cross-cultural study of person-centered quality of life domains and indicators: A replication. *Journal of Intellectual Disability Research*, 49, 734–739. https://doi.org/ 10.1111/j.1365-2788.2005.00742.x
- Karelina, K., & DeVries, A. C. (2011). Modeling social influences on human health. *Psychosom Med*, 73, 67–74. https://doi.org/10.1097%2FPSY.0b013e3182002116
- Keith, K. D., & Bonham, G. S. (2005). The use of quality of life data at the organization and systems level. *Journal of Intellectual Disability Research*, 49(10), 799–805. https://doi.org/10.1111/j.1365-2788.2005.00755.x
- Kim-Prieto, C., Diener, E., Tamir, M., Scollon, C., & Diener, M. (2005). Integrating the Diverse Definitions of Happiness: A Time-Sequential Framework of Subjective WellBeing. *Journal of Happiness Studies*, 6(3), 261–300. https://doi.org/10.1007/s10902-005-7226-8
- Krueger, R.A., & Casey M. A. (2015.) Focus groups: a practical guide for applied research. London: Sage.
- Laurin, D., Verreault, R., Lindsay, J., MacPherson, K., & Rockwood, K. (2001). Physical activity and risk of cognitive impairment and dementia in elderly persons. *Archives of neurology*, *58*(3), 498–504. https://doi.org/10.1001/archneur.58.3.498
- Leveille, S.G., Guralnik, J.M., Ferrucci, L., Langois, J. A. (1999). Aging Successfully until Death in Old Age: Opportunities for Increasing Active Life Expectancy. *American Journal of Epidemiology*, 149(7): 654–664. https://doi.org/10.1093/oxfordjournals.aje.a009866
- Lindsay-Smith, G., Eime, R., O'Sullivan, G., Harvey, J., & van Uffelen, J. G. Z. (2019). A mixed-methods case study exploring the impact of participation in community activity groups for older adults on physical activity health and wellbeing. *BMC Geriatr*, *19*, 243. https://doi.org/10.1186/s12877-019-1245-5
- McAuley, E., Mullen, S. P., Szabo, A. N., White, S. M., Wójcicki, T. R., Mailey E. L., et al. (2011). Self-regulatory processes and exercise adherence in older adults: executive function and self-efficacy effects. *American journal of preventive medicine*. 2 41(3): 284–290. https://doi.org/10.1016/j.amepre.2011.04.014
- Ministero della Salute (2019). Linee di indirizzo sull'attività fisica per le differenti fasce d'età e con riferimento a situazioni fisiologiche e fisiopatologiche e a sottogruppi specifici di popolazione. Retrieved August 30, 2022, from http://www.salute.gov.it/imgs/C_17_pubblicazioni_2828_allegato.pdf
- Mudrák, J., Slepi ka, P., & Šiška, P. (2011). Physical activity and life satisfaction in seniors participating in educational programs. *Acta Universitatis Carolinae Kinanthropologica*, 47(1), pp. 84–95. Retrieved August 30, 2022, from https://karolinum.cz/data/clanek/779/Kinan_1_2011_09_mudrak.pdf

- Netz, Y., Becker, J. B., & Wu, M. (2005). Physical Activity and Psychological Well-Being in Advanced Age: A Meta-Analysis of Intervention Studies. *Psychology and Aging*, 20(2), 272–284. https://doi.org/10.1037/0882-7974.20.2.272
- Park, C., Elavsky, S., & Koo, K. (2014). Factors influencing physical activity in older adults. *Journal of Exercise Rehabilitation*. 10 (1): 45–52. https://doi.org/10.12965%2Fjer.140089
- Pinto Minerva, F. (2012). La vecchiaia. Sguardi pedagogici. In M. Baldacci, F. Frabboni, F. Pinto Minerva (Eds.), *Continuare a crescere. L'anziano e l'educazione permanente*. (pp. 35–59). Milano: Franco Angeli.
- Ryff, C. D., Singer, B. H., Love, G. D., (2004). Positive health: Connecting well-being with biology. *Philosophical Transactions of the Royal Society of London B*, 359, 1383–1394.
- Rosenberg, M. (1965). Society and the adolescent self- image. Princeton: Princeton University Press.
- Schalock, R. L., Bonham, G. S., & Verdugo, M. A. (2008). The concept of quality of life as a framework for program planning, implementation, evaluation, and improvement. *Evaluation and Program Planning* 26(3): 229–235.
- Schalock, R. L., Luckasson, R. A., & Shogren, K. A. (2007). The renaming of mental retardation: Understanding the change to the term intellectual disability. *Intellectual and developmental disabilities*, *45*(2), 116–124. https://doi.org/10.1352/1934-9556(2007)45[116:tromru]2.0.co;2
- Schalock, R. L., Gardner, J. F., & Bradley, V. J. (2007). Quality of life of persons with intellectual and other developmental disabilities: Applications across individuals, organizations, communities, and systems. Washington: American Association on Intellectual and Developmental Disabilities.
- Schalock, R. L., & Verdugo, M. A. (2007). El concepto de calidad de vida en los servicios y apoyos para personas con discapacidad intelectual. *Siglo Cero*, *38*(4), 21–36.
- Schalock, R. L., & Verdugo, M. A. (2002). *Handbook on quality of life for human service practitioners*. Washington: American Association on Mental Retardation.
- Schalock, R. L., Verdugo, M. A., Bonham, G. S., Fantova, F., & Van Loon, J. 2008. Enhancing personal outcomes: organizational strategies, guidelines, and examples. *Journal of Policy and Practice in Intellectual Disabilities*, *5*(1): 18–28. https://doi.org/10.1111/j.1741-1130.2007.00135.x
- Schalock, R. L., Verdugo, M. A., Jenaro, C., Wang, M., Wehmeyer, M., Xu, J. and Lachapelle, Y. (2005). A cross-cultural study of quality of life indicators. *American Journal on Mental Retardation*, 110(4), 298–311. https://doi.org/10.1352/0895-8017(2005)110[298:csoqol]2.0.co;2
- Sedikides, C. and Gress, A. P. (2003). Portraits of the self. In M. A. Hogg, & J. Cooper (Eds.), Sage Handbook of Social Psychology (pp. 110–138). London: Sage Publications.
- Ståhl, T., Rüttenb, A., Nutbeam, D., Bauman, A., Kannas L., Abele T., et al., (2001). The importance of the social environment for physically active lifestyle. Results from an international study. *Social Science & Medicine*, *52*(1), 1–10. https://doi.org/10.1016/S0277-9536(00)00116-7
- Tramma, S. (2017). Pedagogia dell'invecchiare. Milano: Franco Angeli.
- Vaccaro, M. G., Izzo, G., Ilacqua, A., Migliaccio, S., Baldari, C., Guidetti, L., et al. (2019). Characterization of the Effects of a Six-Month Dancing as Approach for Successful Aging. International Journal of Endocrinology, 2048391, 1–7. https://doi.org/10.1155/2019/2048391
- Verdugo, M. A. (2006). Cómo mejorar la calidad de vida de las personas con discapacidad. Salamanca: Amarú.
- Verdugo, M. A., Gómez, L. E., Arias, B., & Schalock, R. L. (2009). *La Escala Integral de Calidad de Vida*. Madrid: CEPE.
- Vitulli, P., Femminella, G.D., Ciccarelli, A.L., Rengo, F., Lombardi, A., Cellurale, M., et. al. (2012). Exercise training and aging. *Giornale di Gerontologia*, 60(3): 172–181.
- WHO (2019), *Active Ageing. A Policy Framework*. Retrieved August 30, 2022, from https://apps.who.int/iris/bitstream/handle/10665/67215/WHO_NMH_NPH_02.8.pdf;jsessionid=EB3AB302251C1C20DAF23BF4651C7CCE?sequence=1