Emotions in older people and their cognitive status

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Abstract
The loneliness of our elderly and social isolation has increased in our homes. The concept of active ageing, promoted by the WHO, encourages "the process of growing older without growing old through continued physical, social and spiritual activities throughout life". Healthy ageing is a challenge. It is not only a biological process, it is determined by biological, social and social factors and Mora (2009) points out that the keys to successful ageing include achieving happiness, giving meaning to life with gratitude and being stress-free. The research focuses on the cognitive state of people through loneliness. The sample consisted of 250 people from an Elderly Centre in the Community of Madrid, the data collection was carried out in the centre itself, the AD8 test and the Este II Scale were used to assess cognitive development, evaluating social isolation. A descriptive and correlational study of the data obtained was carried out. The results show that human loneliness can affect the cognitive status of the elderly.
Keywords: Cognitive state, emotional state, loneliness, social isolation, elderly people.

Introduction

Lehr (2008) points out good humor. To prolong individual longevity through an integral education, optimistic attitude to life, avoid anguish and emotional tensions, stress. Health Education at this stage should increase life expectancy, prevent and delay cognitive and organic decline, maintain and improve autonomy, avoiding dependence. It must prevent risk factors, origin of geriatric syndromes, promoting positive attitudes, healthy lifestyle habits such as living positively, favoring the development of a good self-concept and self-esteem, enabling a change of attitudes through an integral approach of the person, global and complete vision of the person and his individual aging process. (Serrano 2016). Emotions cause to lose people motivation and effect them bad (Günçavdı,Arslan & Polat,2020). According to the WHO (2016), health promotion allows people to have greater control of their own health. It encompasses a wide range of social and environmental interventions aimed at benefiting and protecting individual health and quality of life by preventing and addressing the root causes of health problems, rather than focusing solely on treatment and cure.

Loneliness has become one of the most relevant problems today, several studies highlight the increase in loneliness in the general population, but more significantly in people in a situation of dependency. To prevent loneliness it is necessary to establish social ties, Valverde (2002) defined socialization as the process by which the individual becomes a member of the group and comes to assume the patterns of behavior of that group (norms, values, attitudes). This process begins the moment we are born and remains open throughout life. Socialization facilitates social coexistence and community development and is the process that makes communication between community members possible.

Until the 50s, the study of this social reality was not an object of interest for psychologists, and it was not until the 80s when it began to be considered a topic of empirical research with the emergence of different instruments for measuring loneliness. Currently, there are not many studies that analyze isolation and the subjective perception of loneliness, perhaps being considered one of the most silent and difficult to detect ailments.

Around 20% of Spaniards over 18 live alone. Of this percentage, the majority, 59%, say they live only of their own free will, while the remaining 41% admit that they live alone, not because they want to but because they have no other choice. That is, in reality it could be said that only 7.9% of the Spanish population over 18 years of age can be considered as truly isolated, in the sense that they live only by obligation and not by their own will (Díez and Morenos, 2016).

It seems that social networks provide company, but clearly not, because they do not replace personal contact (Díez 2016). Antonio Cano Vindel, president of the Spanish Society for the Study of Anxiety and Stress (SEAS) states that, although "today's young people relate socially, in many cases, through new technologies", this does not imply

O. Titrek et al. (eds.), *International Conference on Lifelong Education and Leadership for All (ICLEL 2023)*,
Atlantis Highlights in Social Sciences, Education and Humanities 17,
https://doi.org/10.2991/978-94-6463-380-1_38

that "communication and social activity is real. Technology not only does not seem able to stop the epidemic of loneliness, but it has also managed to alter the perception of it."The older person represents a broad group in our society. In addition, it constitutes a social group that is dynamic and changing and, over the years, has been acquiring prominence.

Today the elderly are more active, it is considered that it has been achieved thanks to the increase in life expectancy and the advances made in our society. However, the fact that life expectancy has increased does not mean that older people live longer and better. Sometimes, old age and aging can originate from a state of dependence. (Dídac, 2016). Currently, many older people find that old age is linked to the loss of autonomy and dependence. But this does not have to be so, it is essential to recognize the stage of old age as a natural process, which is part of the life cycle. It is a stage that is reached as a result of physical and mental deterioration (Santamarina, 2004). It is about guaranteeing the rights of the elderly and their independence, encouraging their participation in society, recognizing their skills and experiences, and eliminating the negative stereotypes that society has built about them (Flores-Tena, 2015, p. 70).

There are many tools to deal with dependence, working from prevention. Therefore, in this paper I will identify what resources the elderly have to combat it. Likewise, it is necessary that older people when they reach the stage of old age face it in a positive way. Following Levy et al., (2002), they argue that people who have a positive perception of the aging process live up to 7.5 years longer than people who have a negative perception of aging. From the prevention of dependency we want to give each person who is aging the greatest and best possibilities to prevent him from becoming a dependent person, or as far as possible, to be as less dependent as possible.

Aging is a process that has been transformed over the last few years, loaded with vitality and expectations (Santamarina, 2004). It is a process through which one ages, that is, it involves the passage of time by the individual (Fernández-Ballesteros, 2011). On the other hand, old age is a definitive state that is irreversible, it is a natural process of every living being (Zielinski, 2015). Following Fernández-Ballesteros (2011), it is important to consider the period of old age and aging from a bio-psycho-social perspective and not only from a biological perspective.To achieve active aging, motivation should be encouraged with programs where such participation is encouraged, healthy habits, preventing dependence, is the objective pursued. Active ageing is thus increasing the healthy life expectancy and quality of life for all ageing people, including those who are frail, physically disabled and require care (Salmerón et al., 2014).

The aging process should not be seen as a problem, but as a challenge for everyone, both for society and for the aging individual (Abellán and Esparza, 2009; Meléndez, Navarro, Oliver, and Tomás, 2009). And in this challenge, we know it is necessary to promote contact between young and old.

At the Second World Assembly on Ageing, a new concept of older persons was defined. Active ageing was one of his star themes, betting on an integrative model of ageing that, as Pérez Serrano indicates (in Pérez and De-Juanas, 2013), implies a continuous social, economic, spiritual, cultural and civic involvement of the elderly, and not only the ability to remain physically active. This integrative model encourages the participation of older people in decision-making and intergenerational relationships, among other things. In this sense, as Limón points out (in Sarrate, 2002), spaces for the elderly are living spaces to share information, experiences and training in order to enhance personal and social development in this new stage of life.

Recently in 2017, the II International Congress "Active ageing, quality of life and gender" was held. This was divided into several modules or thematic tables: research and university, participation of public institutions, participation in associations and evaluation of programs. To grow old is to change, it is to adapt to changes. Ribera (2011) points out that "talking about health in the elderly forces us to do so from prevention. However, it is an issue that has not been given the importance it really has until a few years ago."

In the Senior Centers, intergenerational activities are developed for the participation of family members. Intergenerational programs are means, strategies, opportunities and forms of creating spaces for encounter, awareness, promotion of social support and reciprocal, intentional, committed and voluntary exchange of resources, learning, ideas and values aimed at producing between the different generations affective ties, changes and individual, family and community benefits, among others, that allow the construction of fairer societies, integrated and supportive. (p.17)

Law 39/2006 on the Promotion of Personal Autonomy and Care for People in a Situation of Dependency (2006), defines in its article 2.2 the concept of dependency as:

"The permanent state of persons who, for reasons arising from age, illness or disability, and linked to the lack or loss of physical, mental, intellectual or sensory autonomy, require the care of another person or persons or important aids to perform basic activities of daily living or, in the case of people with intellectual disabilities or mental illness, other support for their personal autonomy".

Dependence generates concern in the elderly, therefore, alternatives are sought to combat it, without neglecting, our own history, experiences, situation people, which unity to these beliefs, cause fear to reach the stage of old age. This is how people start a process towards dependence (Cerquera & Quintero, 2015). According to the WHO

(2015), one of the consequences of population ageing is the increase in functional dependence, as well as disability. Physical well-being and participation in the elderly prevent loneliness (Cerri, 2015), following Monteagudo et al., (2016), state that it is possible that older people can prevent dependence through active aging programs in which quality of life is promoted. It is important that they participate in the activities, promoting social participation, there are multiple programs that make the elderly have an increasing well-being (Gómez, 2016).

Sociocultural Animation is related to the whole of the daily life of individuals, with work, civic and political activities, neighborhood relations and with their culture. Sarrate and Merino (2013, p.120) define it as an "intentional, transversal and participatory intervention methodology that promotes people, groups and communities to become aware of the reality in which they live and become protagonists of their development and that of their community, boosting their cultural and social capital in order to promote the improvement of their environment".

Following Gutierrez (2013), education also to make better people, better with themselves and with others. Aware that they live in a community much larger than themselves, that extends in time and space, and that what you do, what you do, has an impact on everything around you. Social isolation refers to the absence of satisfactory social relationships, as well as a low level of participation in the community (Santos-Olmo, 2016). This situation as well as loneliness are part of the life experience, clearly recognized in older people (Pita, 2017). Spain is one of the countries of the European Union that maintains a solid family and community network with greater strength. There is an increase in the number of elderly people living alone or people who still live with their families and feel lonely. In another sense, women who live alone are in higher proportions than men, because they live longer, 83 years (80.1 years for men and 85.8 years for women in 2015), women occupy the first place with respect to the European Union. (Report on Older Persons. IMSERSO 2021). The reasons why an elderly person lives alone are several:

-Willingness to maintain independence
-Deterioration of family relationships
-Social isolation
-Attachment to the home or environment in which they have lived for years.
-Less participation in enjoyable activities.

Therefore, 19.5% of older people live alone, one in four. This figure contains a starker reality: 25.9 per cent of older women live alone and only 10.8 per cent of men. It should be noted that in the rest of the ages (16-64 years) the proportion of loneliness is very low and there are only 1,517,635, with the characteristic that there are more men than women in a situation of loneliness (865,329 and 652,306, respectively). Loneliness is one of the main factors that generates dependency in the elderly group. Since age increases the possibility of living in solitude (Abellán et al., 2015).

Board. 1. Loneliness

	Ambos sexos					
	60-64 años	65-69 años	70-74 años	75-79 años	80-84 años	85 años o más
2020						
Personas que viven solas	383,8	392,2	455,5	396,7	378,9	508,2

Source: INE 2020.

Methodology

The hypothesis focuses on knowing if there is an interrelationship between loneliness and the appearance of cognitive impairment in elderly people. The methodology focuses on a non-experimental quantitative research of a comparative correlational nature. The AD8 instrument and the East I Scale were used to measure loneliness in the elderly. This scale consists of 34 Likert-type items with 5 answer options, whose score ranges from 1 to 5 (1=Strongly disagree, 2=Partially disagree, 3=Does not have a definite opinion or depends on the circumstances, 4=Partially agree, 5=Strongly agree). The items on the scale cover different aspects of the concept of loneliness, such as having friends, feelings of belonging to the family or love for one's spouse. The analysis of the items shows that there is a high reliability measured by Cronbach's alpha coefficient (0.9178). The items of the scale are grouped into four variables family loneliness, marital loneliness, social loneliness and existential crisis.

Table 1. Scale dimensions and items

VARIABLES	ITEMS
Family Loneliness	Item 1,2,8,9,10,11,12,13,17,18,19,20,21 and 28
Marital Solitude	Item 3,4,5,6,7
Social Loneliness	Item 15,16,18,22,23,24,25
Existential Crisis	Item 14,26,27,29,30,31,32,33,34

Through the combination of both scales, a series of variables have been taken into account to analyze and try to investigate the objective of the research. In the following table we will categorize these variables.

Table 2. Variables in the research

VARIABLE NAME	VARIABLE TYPE
Gender	Ordinal qualitative variable
Age	Discrete quantitative variable
Marital status	Nominal qualitative variable
Level of education	Ordinal qualitative variable
Employment status	Nominal qualitative variable
Cohabitation	Nominal qualitative variable
Social contacts	Discrete quantitative variable
Management of new technologies	Ordinal qualitative variable
Cognitive impairment	Ordinal qualitative variable

For data collection, the purpose of the questionnaire was explained to the people of the Senior Center and what the data collection of the AD8 instrument and the East II scale consisted of, once explained; The questionnaire was completed. The selected sample were elderly people between 60 and 90 years old, people who live as a couple, with their relatives, or alone.

The AD8 test is composed of 8 questions that evaluate the change in areas involved with a dementia syndrome, the areas considered most sensitive to predict cognitive decline. The East II scale was used to assess loneliness. For each positive response in the change item, one point is awarded, while the absence of change does not score. The higher the score, the greater the cognitive decline. Validation studies show that a score greater than two detects cases of mild dementia.

Results

It should be noted that an analysis of the reliability of the survey was carried out prior to being supplied to the sample, obtaining a reliability index according to Cronbach's alpha of 0.66.3, that is, 66.3% reliability, being therefore above 60% acceptance for educational studies For the subsequent analysis of the data obtained, the evaluation of the survey has been carried out as follows. For the analysis of the information obtained with the application of the questionnaire, a descriptive statistical analysis has been carried out. Likewise, it is intended to carry out a correlational analysis that allows us to know if there is a relationship between loneliness and cognitive impairment, as well as analyses that allow us to carry out generalizations of the results obtained. As a resource for the data analysis mentioned here, the SPSS software has been used. This is a statistical computer program that has been traditionally used in social and applied science research, and is also currently used for market research. The phase of analysis of results has begun validating that there were no lost values in the sample to be able to perform the analysis of the sample characteristics in an appropriate manner. Once the validity of the sample has been analyzed, a descriptive analysis of the sociodemographic data obtained from the sample has been carried out. The sample is composed of 150 subjects, among these, 48.6% are men compared to 51.4% women. It is therefore a

very even distribution.

Table 3. Gender of participants

		Frequency (f)	Percentage (%)	Cumulative percentage (%)
Valid	Man	97	48,6	48,6
	Woman	153	51,4	100,0
	Total	250	100,0	

Regarding the age variable, the sample presents a mean of 71 years with a standard deviation of 6.35. The minimum age represented in the sample is 62 years, and the maximum of 89, being 70 years the most common age among the people who make up our sample. Graph 1 shows the distribution of the age variable based on the gender variable. Regarding marital status, the vast majority of the sample is married, with a percentage of 71.4%, followed by widows with 14.3%, and divorced with 8.6%. Only 5.7% of our sample has remained single. At this point, it is considered interesting to analyze the variable marital status in relation to the gender of the sample.

Table 4. Marital status of the participants

		GENDER				Total	
		Man		Woman			
		N	Yüzde (%)	N	Yüzde (%)	N	Yüzde (%)
MARITAL STATUS	Single	52	5,9%	1	5,6%	2	5,7%
	Married	72	76,5%	12	66,7%	25	71,4%
	Widow(er)"	117	11,8%	3	16,7%	5	14,3%
	Divorced	9	5,9%	2	11,1%	3	8,6%
Total		250	100,0%	18	100,0%	35	100,0%

In the joint analysis, it can be seen that there is a higher percentage of widowed women. It is also worth noting the difference in the gender of divorced people, almost doubling the number of women to men.

On the other hand, 51.4% of the sample lived with their partner during the state of alarm, followed by 37.1% of people with relatives and 11.4% who lived alone. Both data, marital status and coexistence, are in relation as expressed in the following table. Of interest is the fact that there is a higher percentage of widows who live with relatives compared to those who remain alone at home. To this end, a comparative analysis has been carried out, as can be seen in Table 3. We wanted to know if there has been cognitive decline in older people.

Table 5.Sample distribution of cognitive impairment

	N	%
No deterioration cognitive	25	71,4%
With cognitive impairment	10	28,6%

It was checked if the variables with which we have worked had a normal distribution in order to be able to perform the subsequent analyses. With the application of the Kolmogorov-Smirnov normality tests to the variables, normality results have been obtained except in the age variable that significance levels higher than the 0.05

recommended in this type of studies have appeared. Once this data has been reviewed, the Q-Q normality graphs of the variable have been analyzed, prioritizing in this case the data obtained in them, where the variable is distributed along the normality line, since the Kolmogorov-Smirnov test is very sensitive to such a small sample size.Table 12 shows the data obtained by the Kolmogorov-Smirnov test.

Table 6. Test normality Kolmogorov- Smirnov

	Kolmogorov-Smirnov		
	Statistic al	Gl	Gis.
Gender	,345	35	<,001
Age	,114	35	,200*
Marital status	,415	35	<,001
Level of Studies	,339	35	<,001
Situation Labour	,526	35	<,001
Cohabitation	,281	35	<,001
Isolation	,211	35	<,001
Deterioration Cognitive	,448	35	<,001

It is observed that the correlation between loneliness and cognitive impairment is positive but weak, with a level of 0.194, therefore, it does not have great significance. That is why it is not possible to establish a great relationship between both variables.

Table 7. Correlation between loneliness and cognitive decline

		Isolation social	Deterioration cognitive
Social isolation	Correlation of Pearson	1	,194
	Sig. (bilateral)		,264
	N	35	35
Cognitive impairment	Correlation of Pearson	,194	1
	Sig. (bilateral)	,264	
	N	250	250

Regarding the correlation between the level of education and cognitive impairment, as with the previous analysis, the relationship established is very weak, being in this case negative, with a significance level of 0.124 as shown in Table 15. That is, the higher the level of studies, the lower the cognitive impairment, coinciding with the studies carried out on active aging.

Table 8. Correlation between loneliness and educational attainment

		Deterioration cognitive	Level of education
Cognitive impairment	Correlation of	1	-,124

	Pearson		
	Sig. (bilateral)		,479
	N	35	35
Level of education	Correlation of Pearson	-,124	1
	Sig. (bilateral)	,479	
	N	35	35

Another fact that we were interested in knowing was if there was a relationship between loneliness and knowledge of new technologies, for this also using the Pearson test. The correlation has been analyzed, obtaining a very low level of significance, with a negative 0.055 as shown in Table 16, which means that the more knowledge about new technologies is possessed, the lower the degree of feeling alone.

Table 9. Correlation between social isolation and knowledge of new technologies

		Social isolation	Knowledge of New technologies
Social isolation	Correlation of Pearson	1	-,055
	Sig. (bilateral)		,753
	N	35	35
Knowledge of new technologies	Correlation of Pearson	-,055	1
	Sig. (bilateral)	,753	
	N	35	35

To analyze the knowledge in new technologies, we can rely on the analysis of the variable of resources used for communication as shown in the following table, obtaining as results that, despite referring good knowledge, older people do not use advanced means of communication.

Table 10. Analysis of variable knowledge of new technologies and communicative resources used

		COMMUNICATION RESOURCES					
		Telephone		Computer		Personal contact	
		N	%	N	%	N	%
Knowledge of new technologies	Well	6	22,2	0	0,0 %	2	40,0 %
	Regular	17	63,0	3	100,0 %	2	40,0 %
	Bad boy	2	7,4	0	0,0 %	0	0,0 %
	Without knowledge	2	7,4	0	0,0 %	1	20,0 %

Regarding the significance of the differences in cognitive impairment between men and women, it cannot be

established that they exist since the significance level is higher than 0.5 in the Student's T test as shown in Table 20.

Table 11 . Student's T test on cognitive impairment variable

Signification		P of a factor	P of two Factors
Cognitive impairment	Equal variances are assumed	,268	,535
	No variances are assumed Equal	,267	,534

Discussion and Conclusion

With the analysis of the results obtained by applying the questionnaire to the sample of 250 subjects participating in activities taught by the Senior Center, it has been possible to contrast and inquire about the objective set in this research. As already advanced by the World Health Organization, there are many determinants that affect our health, being impossible to establish a causal relationship between them, but an interrelationship in the different factors.

Through the application of correlational analysis techniques, it has been possible to verify that there is a relationship between two of the determinants of health defined and proposed by the World Health Organization, among others, loneliness and cognitive impairment in the elderly. The relationship that is established is of a very weak nature, but it allows us to show that, the greater the social loneliness, the greater the risk of suffering cognitive impairment at some of its levels.

In this way the main hypothesis would be valid, starting with the analysis of the level of studies, the average age of our sample, with about 71 years, has been characterized by being born and growing up in a society where not all social strata could access high educational levels, also prioritizing in this society manual work over intellectual. That is why only 5% of the sample has completed higher education. Despite these circumstances, it is considered important to highlight that 97% of the sample has completed studies, this being a widely significant percentage. Despite participation in society, people feel a cognitive decline because of the loneliness they have. One of the factors that through this research has been shown to be related to cognitive decline and loneliness. Finally, with the realization of this research it has been possible to be even more aware that cognitive impairment is related to high loneliness.

References

Caccia, P.A., De Grandis, M.C., Pérez, G. (2020). Somatizations and perceived functional social support in the context of preventive and mandatory social isolation due to COVID-19, in Buenos Aires, Argentina. *UNEMI Psychology Journal*, 8(5), 8-18, https://doi.org/10.29076/issn.2602-8379vol5iss8.2021pp8-18p.

Cataldi, M. (2020). Social isolation in institutionalized older people in the framework of the COVID-19 coronavirus pandemic. *Margin,* 97, 1-6

Galea, S., Merchant, R. M., & Lurie, N. (2020). The mental health consequences of covid-19 and physical distancing: the need for prevention and early intervention. *JAMA Internal Medicine*, 180(6), 817-818. https://10.1001/jamainternmed.2020.1562

Flores-Tena; Reis, CS Reis. (2022). Study on the relationship between active ageing activities and the degree of satisfaction in older adults during COVID-19. Challenges

Girdhar, R., Srivastava, V., & Sethi, S. (2020). Managing mental health issues among elderly during COVID-19 pandemic. *Journal of Geriatric Care and Research*, 7(1), 29-32

Girmay, M., & Singh, G. K. (2019). Social isolation, loneliness, and mental and emotional well-being among international students in the United States. *International Journal of Translational Medical Research and*

Public Health, 3(2), 75-82. https://10.21106/ijtmrph.82

Günçavdı, G. , Arslan, Y. & Polat, S. (2020). tThe reasons of negative emotions that school administrators feel and how they manage them . *International Journal on Lifelong Education and Leadership* , 6 (1) , 36-42 . Retrieved from https://dergipark.org.tr/en/pub/ijlel/issue/55906/752871

Moreno-Tamayo, Karla, Sánchez-García, Sergio, & Doubova, Svetlana V. (2017). Factors associated with social isolation in a sample of older adults with social security. *Salud Pública de México*, *59*(2), 119-120. https://doi.org/10.21149/8078

Limón Mendizabal, R. and Ortega Navas, M.C. (2013) Active and healthy aging. In Pérez Serrano, G. & De-Juanas Oliva, A. (Coords.), *Calidad de vida en personas adultos y mayores* (pp. 197-244) UNED

World Health Organization. (2002). Active ageing: A policy framework. *Revista Española Geriátrica Gerontol,* 37(s2), 74- 105

Ortiz Mayorga, L.R. (2018). Loneliness and cognitive impairment [Final degree project, University Technique of Ambato]. Repository UTA https://repositorio.uta.edu.ec/jspui/handle/123456789/27415

Pita Díaz, R. (2017). Social isolation and loneliness in a random population sample aged 65 and over. [PhD thesis, Miguel Hernández University] http://dspace.umh.es/handle/11000/4850.

Royal decree 463/2020, of 14 March, by which declares the state of alarm for the management of the situation of sanitary crisis caused by him COVID-19, BOE, no. 67, of 14 of March of 2020.

Resolution of March 6, 2020, of the General Directorate of Public Health of the Community of Madrid, by which measures are adopted in the field of public health in relation to the activity of the centers for the elderly, in the typologies of homes and clubs and services of family and social coexistence., BOCM, no. 57, of 7 March 2020. https://www.bocm.es/boletin/CM_Orden_BOCM/2020/03/07/BOCM-20200307-1.PDF

Santos- Olmos Sánchez, A.B. (2016). Elderly people in situations of social isolation: design and effectiveness of a psychological support service. [PhD thesis, Universidad Complutense de Madrid] https://eprints.ucm.es/id/eprint/37539/

Valtorta, N., & Hanratty, B. (2012). Loneliness, isolation and the health of older adults: do we need a new research agenda? *Journal of the Royal Society of Medicine*, 105(12), 518-522. https://10.1258/jrsm.2012.120128