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Skills for successful ageing in the elderly. Education, well-being and health

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Abstract

Introduction. Lifelong learning and education are necessary for the social and cultural integration of elderly individuals. In order to ensure their participation in these programs, a new mentality is needed and these offerings must be adapted to their specific needs, expectations and interests in order to successfully attract them to the numerous training offerings of their educational centres. **Objectives.** To describe the creation and implementation of an educational program directed at individuals over the age of 55, designed to improve their interpersonal relationship skills and healthy lifestyle habits, elements that may be key determinants of their psychological well-being. **Methodology.** Experimental design with a control group. Based on a random sample of 200 individuals over the age of 55, an education program was implemented over a three-month period in Active Participation Centres of the province of Almería (Spain). The Scale of Subjective Psychological Well-being (Sánchez Cánovas, 1998) and the self-concept of Garaigordobil (2011) were used.

Results. Data analysis indicates that the program could have a positive influence, with statistically significant differences being observed between the control and experimental groups for the majority of the evaluated variables.

Conclusions and Recommendation. These data reveal the benefits of lifelong learning programs for elderly individuals, serving to improve their psychological well-being and the integration of skills that promote healthy and active ageing.

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1. Introduction

Elderly individuals make up a growing population group. According to the National Statistics Institute (2014), in 2029, life expectancy in Spain will be 84 years for men and 88.70 for women. Currently, there are 8.221.047 elderly individuals in this country, making up 17.40% of the total population (4.212.990).

Elderly adults have had very different experiences over the course of their lives, linked primarily to the 20th century, but these events (wars, reconstruction, different political and economic systems) have impacted their youth and adulthood, resulting in a very different maturity in terms of lifestyle habits. These habits give rise to a need for lifelong learning, via multi-disciplinary approaches, for these elderly individuals who have not had access to higher education institutions, to ensure their social and cultural integration in today's knowledge-based society.

In previous Grundtvig projects, we researched the need for education in European citizens over the age of 55, as well as the educational offerings existing for this group of individuals in distinct European Union countries (Padilla, López-Liria, Jiménez, Mesas & Martínez, 2007). Our main motivation is to improve the self-concept and psychological well-being and to promote the independence of elderly and disabled individuals, strengthening their social skills and health through lifelong learning.

1.1. *Social and interpersonal relationships*

The term social relationship may refer to a multitude of social interactions regulated by social rules, between two or more individuals, each having a social position and carrying out a social role. Good social relationships are a central element of social integration during any life stage and they determine the well-being of men and women. Therefore, to a large degree, the development of appropriate social relationships may determine the personal success associated with well-being and quality of life (Díaz-López, Padilla, Martínez-Martínez, Aguilar-Parra, Ruíz & López-Liria, 2013; Vicente, 2011). Adults need to have the presence of at least one confidant in their lives to serve as a fundamental resource of social support. Individuals are considered to be socially competent when they are capable of recognizing an acceptable compromise between social adaptation and their own needs.

Recently, it has been found (Fernández, Muratori & Zubieta, 2013) that social isolation is a factor affecting the development of pathologies and the increase in dependency rates. Studies have shown a directly proportional relationship between the increase in physical and mental health, linked to social support (Brito & Pavarini, 2012).

Active social participation is an important indicator of quality of life during adulthood and it positively overcomes the losses that come with ageing (physical, mental and social changes), serving as a preventive factor for depression (Díaz-López, et al., 2013; Pinazo & Sánchez, 2005).

Social participation is the cooperation of individuals or small groups in the decisions that influence their lives or communities. Participation in clubs, initiatives, volunteering, political parties, and other sorts of organizations is considered a mechanism of social integration.

1.2. *Health*

Genetics and lifelong behaviors play an important role in the ageing process, leading to successful ageing that is free of dependences. This evolutionary stage should not be considered an illness in itself, although it does make the individual more vulnerable to potential diseases, some of which are chronic.

Ageing may lead to a difficulty in recalling certain details. The clear distinction between normal ageing and dementia lies in the inability to successfully complete routine activities such as, becoming disoriented and not knowing where one lives. Dementia is one of the great concerns of the elderly, at times limiting their full development during this stage of life.

An optimal nutritional state is fundamental for everyone, but especially important for the elderly, since nutritional deficiencies may increase mortality and morbidity, worsening other chronic illnesses such as diabetes, osteoporosis, etc. (Díaz-López et al., 2013).

Psychological well-being and quality of life are associated with health; therefore, it is necessary to introduce healthy habits and attitudes. Numerous studies have shown, for example, the positive relationship between exercise and physical and psychological well-being (Aparicio, Carbonell-Baeza, & Delgado-Fernández, 2010; Gallego, Aguilar-Parra, Cangas, Lorenzo, Franco-Justo & Mañas, 2012; Rodríguez-Larrubia & Aguilar-Parra, 2011).

Physical exercise adapted to their characteristics and needs is especially important for the elderly. Of the multiple benefits that exercise offers, is the improvement of problems through the delay of the consequences of ageing; it assists in the treatment and rehabilitation of illnesses as well as in their prevention. "Gerontogimnasia" ("Gerontogym"/fitness for the elderly) is a relaxed and constant activity that is carried out in groups, improving social relationships and mood, offering a balance between body and mind (Martínez-González, 2000).

The definition of self-concept is related to the perception that individuals have of themselves based on direct experiences and the assessment of other significant individuals. This is a key construct in psychological well-being and is based on diverse physical, social and intellectual factors (Campos et al., 2003; Infante, Goñi & Villarreal, 2011).

Few studies (Goñi, Ruiz de Azúa & Goñi, 2007; Rodríguez & Fernández, 2005) have examined the relationship between self-concept and subjective psychological well-being in the elderly population, finding a directly proportionate relationship between both. According to Goñi Ruiz de Azúa & Goñi (2007), self-concept refers to the concept that an individual has of him/herself as an individual being. Along with the academic, it also includes the social and the physical, one of the four large domains of the global self-concept. In his work, Goñi presents psychometric analyses from the Personal Self-concept questionnaire (APE, based on its initials in Spanish), as well as gender and age differences based on the same. It was applied to a population of 401 subjects, 33.42% of which were male. The sample was divided into four age groups with the mean of the group being over the age of 30. Of the 401 subjects, 194 also completed Life Satisfaction questionnaire of Diener, Emmons, Larsen y Griffin (1985), in order to examine the correlations between the APE scales and the rate of life satisfaction: all of the scales, including the general one, present significant positive correlations, with the exception of that of honesty. The scale of self-fulfillment has the greatest correlation (.756).

The goal of this study is to describe the creation and implementation of an education program for individuals over the age of 55 in order to analyze whether or not program participation influenced their self-concept and subjective well-being.

Prior studies have considered the influence of physical activity, appropriate social relationships, lifelong learning and active participation in society on mental health, self-concept and subjective well-being. This led us to create the hypothesis that participation in educational activities related to mental and physical health, and the promotion of social relationships in a sample of individuals over the age of 55, will lead to an increase in satisfaction and well-being as compared to a control group that did not receive this education.

2. Method

2.1. Participants

Randomized sampling was carried out on 200 individuals over the age of 55 in the province of Almería (Spain). Finally, the complete information was considered from a total of 112 individuals (experimental group) and 72 in the control group (people who didn't take a course). There were a total of 62 men and 122 women, between the ages of 57 and 86 years. The exclusion criteria for the study included the failure to sign the informed consent and the failure to systematically attend the program (over 80% of the sessions).

2.2. Instruments

The list of adjectives for the evaluation of the self-concept in adolescents and adults (LAEA, of Garaigordobil, 2011). Consisting of 57 adjectives, the subject was asked to assess the degree to which these adjectives defined them or described their personality on a scale of 0 to 4 (none-a lot). A study conducted with a sample of 1423 subjects received a Cronbach's alpha of 0.92, and a Spearman-Brown coefficient of 0.84.

The Scale of Psychological Well-being (PWBS) of Sánchez-Cánovas (1998), seeks to determine the degree to which the subject perceives his/her own satisfaction. It consists of 65 items and four sub-scales (Subjective well-being, material well-being, labour well-being and partner relations) containing independent scales. The response is given using a Likert-like scale of 5 degrees, whereby the higher the score, the greater the psychological well-being. The classification sample made up of 1,885 subjects of the PWBS had excellent reliability and validity indices, effectively assessing the level of an individual's happiness and satisfaction in relation with his/her general state, the level of satisfaction with his/her economic income and material goods, with his/her work and with his/her partner relationship (Menacho, Ramiro & Marchena, 2014).

2.3. Procedure

The project was carried out in three phases. Prior to the program, the state of the participants was evaluated in order to subsequently verify the supposed usefulness and effectiveness of the intervention. In the second phase, the educational program was created, maintaining a participative methodology with activities such as: group dynamics (Philippis 6/6); topic introduction-motivation; group reflection; watching and commenting on videos; practical case resolution; demonstrations on how to apply that which was learned and benefits; role playing. Finally, an evaluation was conducted and participant ideas were shared in regards to program acceptance, validity and benefits.

2.4. Analysis of data

Data analysis was conducted using the SPSS version 22.0 statistics package, revealing the descriptive results from the pretest and posttest of the experimental and control groups. Subsequently, the means of the posttests were compared with those of the pretests for each group, using the Student's *t* for related samples. To determine the existence of differences between groups, the Student's *t* test was used for independent samples. Third, Cohen's *d* (1988) was used to assess the magnitude of the change produced by the intervention (effect size). Similarly, the percentage between posttest and pretest scores for both groups was calculated. Finally, a multivariate analysis was conducted to assess the influence of gender and age complemented by the effect size using the eta squared.

3. Results

The comparison of the variables in the pre-test of both groups indicates that there were no statistically significant initial differences between the control and experimental groups (Table 1).

Table 1. Student's *t*-test for independent samples of pre- and post-test differences, between control and experimental groups in the studied variables

Variable	Pre-test			Post-test		
	t	p	d	t	p	d
Physical Self-concept	-1.262	.210	-.279	2.086	.040	.437
Social Self-concept	-1.792	.076	-.365	2.460	.016	.517
Emotional Self-concept	-1.739	.085	-.358	2.552	.012	.527
Intellectual Self-concept	-1.245	.217	-.265	0.654	.515	.131
Global Self-concept	-1.741	.085	-.389	2.651	.009	.555
Subjective Well-being	-1.457	.149	-.332	1.953	.049	.423
Material Well-being	-1.145	.256	-.219	-.341	.734	-.066

Below in Table 2, the typical means and standard deviations of the study variables corresponding to the control and experimental groups are presented for each of the study phases.

Table 2. Typical pre-test, post-test and Student's t-test means and standard deviations for related samples for the post-test-pre-test differences of study variables in the experimental and control groups.

Variable	Grupo Experimental					Grupo Control				
	Pre test		Post test			Pre test		Post test		
	M (SD)	M (SD)	t	p	d	M (SD)	M (SD)	t	p	d
Physical SC	18.30 (4.94)	19.90 (5.29)	-1.963	.055	-.312	19.52 (3.72)	17.83 (4.09)	3.217	.003	.432
Social SC	51.01 (10.34)	54.75 (7.66)	-3.443	.001	-.411	54.19 (6.65)	50.44 (8.95)	2.986	.005	.475
Emotional SC	62.92 (12.44)	68.53 (7.79)	-4.522	.000	-.540	66.80 (8.90)	63.63 (10.58)	2.317	.092	.324
Intellectual SC	23.00 (6.12)	25.07 (4.60)	-3.153	.003	-.382	24.63 (6.17)	24.36 (6.08)	0.952	.348	.044
Global SC	155.57 (29.11)	168.48 (18.70)	-3.930	.000	-.527	155.16 (19.11)	156.27 (24.84)	0.885	.542	-.050
Subjective WB	102.58 (19.23)	110.19 (19.90)	-3.380	.002	-.389	108.64 (17.16)	101.97 (18.86)	3.212	.003	.369
Material WB	36.77 (8.52)	39.28 (8.44)	-1.979	.054	-.295	38.55 (7.64)	39.82 (7.82)	-2.154	.039	-.164

In the post-test, differences were observed between both groups in the majority of the evaluated variables, except in intellectual self-concept and material well-being. Individuals in the experimental group had a higher mean (therefore, a better self-concept and a higher degree of well-being) than those in the control group (except in material well-being where the latter group had a higher mean). As the effect size warns, Cohen's *d* is moderate, indicating that the difference is important (there is an increase in the mean scores of the experimental group as compared to the control group).

The analysis of the pre-test/post-test scores of the experimental group reveals significant differences in almost all of the analyzed variables, with a higher mean in the post-test, with the self-concept and well-being of the individuals participating in the program improving considerably. As for effect size, the incidence of the program is moderate for almost all of the evaluated variables, being somewhat lower in material well-being and physical self-concept in which virtually no differences were found.

When completing this same analysis for the control group scores, there were no statistically significant differences in emotional self-concept, or in intellectual or global self-concept. Differences were found in regards to the other variables, but in the majority of these, the effect size was low.

Finally, a multi-variate analysis was conducted to assess the influence of variables such as age and gender on the effects of the program. The inferential MANOVA analysis led us to conclude that there are no statistically significant differences based on age [$p = .563$, $F(18.00) = 0.915$, Wilks' lambda = .641; $\eta^2 = .138$], or gender [$p = .335$, $F(6.00) = 1.191$, Wilks' lambda = .826; $\eta^2 = .174$], or the gender-age interaction [$p = .596$, $F(18.00) = 0.886$, Wilks' lambda = .488; $\eta^2 = .140$].

4. Discussion (Conclusions and Recommendations)

Data analysis indicates that statistically significant differences existed between the control and experimental groups for most of the evaluated variables of self-concept and subjective well-being, with the means being greater in the group receiving the educational program, except in the case of material well-being in which the control group had the higher mean score.

The training offered by the program, through the different learning models has allowed the adults to feel better about themselves, as previously observed in similar studies which affirmed that educational action through programs that orient and promote healthy habits for active ageing have positive repercussions on individuals' satisfaction with life and well-being (Fernández- Ballesteros, Camprara & García, 2004; Pérez & De-Juanas, 2013). These programs should be based on the real needs of the elderly individuals (Barandiana, Medrano & Cortés, 2001) in order to promote an overall development, thus the modules of this educational program focus on topics that concern this population and

are based on a study of their needs (Padilla, Santiuste, Durand, Amarante, López-Liria & Martínez, 2009). Healthy habits such as exercising have positive repercussions on our health, self-concept and therefore, our general well-being (Goñi & Infante, 2010; Li, Harmer, Chaumeton, Duncan & Duncan, 2002 in Infante, Goñi & Vallerroel, 2011).

Based on the data obtained, as in previous studies (Cardenal & Fierro, 2001; Meléndez, Navarro, Oliver & Tomás, 2009), it may be concluded that gender and age do not influence the results of the program.

The data and conclusions generated from this study may be of great interest for public administrations and society in general, given that they suggest that an educational program that promotes appropriate interpersonal relationships, education in healthy habits and illness prevention, may be determinant in improving the self-concept and subjective psychological well-being of the elderly.

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