

## SOCIAL SUPPORT AND GENERATIONAL DIVERSITY: THE POTENTIAL OF THE LSNS-6

### APOIO SOCIAL E DIVERSIDADE GERACIONAL: O POTENCIAL DA LSNS-6

### APOYO SOCIAL Y DIVERSIDAD GENERACIONAL: EL POTENCIAL DE LA LSNS-6

Susana VILLAS-BOAS\*, Albertina LIMA DE OLIVEIRA\*, Natália RAMOS\*\*  
& Inmaculada MONTERO\*\*

\*Universidade de Coimbra, \*\*Universidade Aberta de Lisboa,

\*\*\*Universidad de Granada

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**ABSTRACT:** This article aims to deepen the knowledge of the social support of a local community population through a quantitative study in which the authors sought to know how social support varies depending on age subgroups, and how it is related to key socio-demographic variables. The sample comprised 385 subjects from the parish of Bonfim in the city of Porto, divided into three age groups: youth and young adults (n=165), middle-aged adults (n=110) and elderly adults (n=110). The statistical analyses allowed us to conclude that age is in itself a risk factor, but it is also significantly associated with the following characteristics: being a woman, having low levels of education, low income, living alone or institutionalized, being a widow, being divorced/separated, being unemployed or retired. The knowledge and information resulting from this study is an important contribution to the organization of social intervention strategies, namely through Intergenerational Programs that could be seen as a planning tool to expand and strengthen binding social networks, contributing to the well-being, quality of life and social integration not only of the elderly, but also of different generations and groups identified as being potentially at risk. The innovative aspect of this study was the validation of the abbreviated version of the Lubben Social Network Scale (LSNS-6) - originally developed for the elderly group - for all age groups.

CORRESPONDING AUTHOR'S ADDRESS: Susana VILLAS-BOAS. FPCE-UC, Rua do Colégio Novo, 3000-115 Coimbra, Portugal.  
Tel.: +351 239 851 450 Email: [suvboas@gmail.com](mailto:suvboas@gmail.com).

<p><b>PALAVRAS-CHAVE:</b> apoio social rede social programas intergeracionais LSNS-6</p>	<p><b>RESUMO:</b> Neste artigo, procurámos aprofundar o conhecimento do apoio social da população de uma comunidade local através de um estudo quantitativo em que se procurou saber de que forma o apoio social varia em função de subgrupos etários e como se encontra relacionado com variáveis sociodemográficas chave. A amostra envolveu 385 pessoas da freguesia do Bonfim, da cidade do Porto, distribuídos por três grupos etários: jovens e adultos jovens (n=165), adultos de meia-idade (n=110) e idosos (n=110). O teste de hipóteses permitiu-nos concluir que a idade é, por si, um fator de risco social, mas também que o mesmo se encontra associado às seguintes características: ser mulher, ter baixos níveis de escolaridade, baixos rendimentos, estar desempregado/a ou reformado/a. A informação e conhecimento emergentes deste estudo permite organizar estratégias de intervenção social, nomeadamente através da planificação de Programas Intergeracionais, enquanto ferramenta para alargar e solidificar redes sociais vinculantes, contribuindo para o bem-estar, a qualidade de vida e a integração social não só dos adultos idosos mas também das diferentes gerações e dos grupos de risco potencial. O aspeto inovador deste estudo consistiu na validação e utilização da Escala Breve de Redes Sociais de Lubben (LSNS-6) - originalmente construída para o grupo dos adultos idosos - a todos os grupos etários.</p>
<p><b>PALABRAS CLAVE:</b> apoyo social red social programas intergeneracionales LSNS-6</p>	<p><b>RESUMEN:</b> Este artículo tiene por objetivo profundizar en el conocimiento del apoyo social de una comunidad local a través de un estudio cuantitativo en el que los autores buscan conocer cómo el apoyo social varía dependiendo de subgrupos de edad, y cómo se relaciona con variables socio-demográficas clave. La muestra comprendía 385 individuos pertenecientes a la freguesia de Bonfim de la ciudad de Oporto, divididos en tres grupos de edad: jóvenes y adultos jóvenes (n=165), adultos de mediana edad (n=110) y mayores (n=110). El análisis estadístico nos permitió concluir que la edad es en sí misma un factor de riesgo, pero también se asocia de manera significativa con las siguientes características: con el hecho de ser mujer, de tener un nivel educativo bajo, bajos ingresos, vivir solo, ser viuda, estar separado o divorciado, estar desempleado o jubilado. El conocimiento y la información resultantes de este estudio suponen una importante contribución a la organización de las estrategias de intervención social, especialmente a través de Programas Intergeneracionales que pueden verse como instrumento de planificación para ampliar y fortalecer las relaciones en las redes sociales, contribuyendo al bienestar, calidad de vida e integración social no sólo de los mayores, sino también de diferentes generaciones y grupos identificados como potencialmente en riesgo. El aspecto innovador de este estudio consistió en la validación de la Escala Breve de Redes Sociales de Lubben (LSNS-6) - desarrollada en su origen para el grupo de mayores - para todos los grupos de edad.</p>

## 1. Introduction

Demographic ageing is a social reality of the contemporary societies. Although happening at different rhythms, it is a universal and irreversible phenomenon which requires, on the one hand, public policy changes and new ways of socio-educational action (Lóngas, 2016) and, on the other hand, the taking into account of other factors that can extend the functional skills, the autonomy, the independence and the quality of life in the last phase of every individual's life cycle (Oliveira Lima & Silva, 2016), such as social networks and social support.

The terms social network and social support are multidimensional constructs that refer to social and support relations and to their complex characteristics and dimensions, being its definition not at all simple (Ramos, 2004; Berkman & Glass, 2000). Studying the trends underlying the concept of social networking, Guzmán, Huenchuan and Montes de Oca (2003) come to define the social network "as a symbolic and cultural practice that includes a set of interpersonal relations that connect the individual to its cultural environment and allows it to maintain or improve its

material, physical and emotional well-being, at the same time contributing to avoid real or imagined damages resulting from difficulties, crises or conflicts that affect the subject" (p. 43). This definition addresses the new sociological paradigm, which Martins (2010) refers as urgently in need of establishment in complex contemporary societies - a paradigm that could recognize "the indisputable presence of small dynamic systems, called *social networks*, which function as new regulating instruments for conflict, tensions and agreements between individuals and minority groups" (p. 402). In this article, it is not in our interest to enter the discussion concerning the paradigmatic perspectives of social networks, although we recognize its great value, but rather to focus on the social support that these networks provide.

We understand *social support* as being interpersonal and social transactions which involve assistance, affection, trust, encouragement, empathy, solidarity and assertiveness (Khan & Antonucci, 1980; Ramos, 2004, 2005a, 2005b) and that it is through social networks that the flow of resources, actions, solidarity, support and information are exchanged and circulate among individuals, groups and generations (Jong, Mooienaar,

Osagie & Phielix, 2016; Ramos, 2008, 2013; Santos, 2009).

The social network is built by the individual, over a lifetime, and its scope will depend on demographic factors, cultural factors and personality factors. Several studies have shown that, as age increases, so does the size of the network decrease (Antonucci & Akiyama, 1987; Cukrowicz, Franzese, Thorp, Cheavens & Lynch, 2008; Portero & Oliva, 2007; Rosa, Benício, Alves & Lebrão, 2007), due to the loss of family and friends, the onset of illness and entry into retirement. Literature has shown the positive effects of social support in all stages of life, especially in the later stages of the life cycle. Guzman et al. (2003) have put together several studies that demonstrated that people with more social support present better health conditions (physical and psychological) and better quality of life. On the other hand, literature has also shown that low rates of social support are related to the emergence of diseases, isolation, loneliness, exclusion, the deterioration of health condition and greater social risks (Antonucci, 1990; Ramos, 2004; Esgalhado, Reis, Pereira & Afonso, 2010; Mohamad, Alavi, Mohamad, M., Mohamad, N.S. & Sallem, 2016), as well as infant and elderly mortality (Ramos, 2005a; Mazzella et al., 2010). Other studies also prove that high levels of social support are related to the well-being of the general population, namely the older generation (Rubinstein, Lubben & Mintzer, 1994; Mohamad et al., 2016) and with the increase of satisfaction with life in the elderly (Bishop, Martin & Poon, 2006). And that the lack of social support is a negative indicator of quality of life and well-being (Ramos, 2004, 2008, 2013; White, Philogene, Fine & Shina, 2009) and increases the risk of exclusion and institutionalization (Bowling, Farquhar & Browne, 1991; Cummings, 2002; Esgalhado et al., 2010). The various investigations mentioned thus make the paramount importance of social support for all individuals unquestionable.

The most common form of social support is provided by the family network (Perez & Montero, 2016), but although the family continues to play a key role and is the primary source of support, it may be at risk or hampered. Indeed, the changes in the family structures of the last hundred years have hampered the family's ability and desire to provide the necessary social support to its members, especially the elderly and the younger (Ramos, 2005b, 2008, 2013). Therefore, one can understand the importance of building, extending and solidifying binding social networks that complement the social support given by the family network, contributing to the well-being, quality of

life and social integration not only of the elderly but also of those of different generations.

A useful means to achieve this goal are the intergenerational programs (which we will hereinafter call IP) that bring together people of different generations into activities that allow them to interact, stimulate, educate, support themselves and, in general, reciprocally take care of each other and which Hatton-Yeo and Ohsako define as "vehicles for the purposeful and ongoing exchange of resources and learning among older and younger generations" (2000, p. 3). It is through these programs that intergenerational education is put into practice, understood as

a pedagogical process that brings together people from different generations to perform activities and tasks that respond to their needs and interests, in a dynamic of participation, cooperation, interaction, exchange and intergenerational dialogue, developed in an egalitarian relationship, of tolerance and mutual respect. Its main purpose is to facilitate and ensure that people of different generations learn, develop and share knowledge, skills, attitudes and values and transform themselves in the relationship with one another. (Villas-Boas, Oliveira, Ramos & Montero, 2016, p. 133).

Literature has pointed out several benefits of IP. Citing just a few examples related to social support and social networks, we can mention the development of mutually supportive relationships between the participants that will allow them to provide and receive care at different times of their lives (MacCallum et al., 2006, 2010; Ramos, 2005b, 2008), the reintegration in the family and in community life (MacCallum et al., 2006, 2010; Bressler, Henkin & Adler, 2005), the reduction of isolation and social exclusion (Power & Maluccio, 1999; Ramos, 2004, 2005a), the reconstruction and construction of social networks, social integration and positive effects on the social capital of the people involved (Granville, 2002; Souza & Grundy, 2007; Souza, 2011), etc.

Therefore, social support networks are built in these programs, in other words, relational networks that are advantageous for individuals and their communities. In these communities, and above all, emotional support is transacted (transmission of affection, empathy, love, concern for others, etc.) as well as cognitive support (transmission of information, expertise, advice, suggestions). But instrumental support is also transacted (the search for work, doing tasks, time, transportation, etc.) and materials (money, food items, cooked food, clothing, etc.). However, in order to ensure the transaction of this support between

people involved in the IP, planning and implementation with time, knowledge and care is fundamental (Villas-Boas, Oliveira, Ramos & Montero, 2015).

We start by testing the abbreviated version of the *Lubben Social Network Scale* (LSNS-6), as an instrument capable of assessing the lack of social support and the risk of social isolation of all generations, and not just those of people of an advanced age. This scale was specifically built to be used with the group of *older adults*, and although there are studies in which LSNS or LSNS-6 are used with people of other generations (e.g. Emler, 2006; Fernández-Ballesteros, Moya, Iñiguez, Zamarrón, 2004; Guerrete & Smedema, 2011; Honeycutt, Nasser, Banner, Mapp & Dupont, 2008), we have not identified any instrument validation study for its use with other age groups. Next, we deepened our knowledge with regard to the population's social support by testing several hypotheses, concerning social support in accordance with the age group and of different variables - information and knowledge which we consider to be fundamental for the planning of IP, as a social intervention strategy.

## 2. Methodology

### 2.1. Participants

In this study, 385 residents of the parish of Bonfim in Porto, aged 15 and over, participated in three age groups: *youth and young adults* (42.9 %), *middle-aged adults* (28.6 %), and *elderly adults* (28.6 %). About 96.1 % of the sample is of Portuguese nationality<sup>2</sup>, 57.1 % of the people being female and 42.9 % male. The level of education that is most represented is the completed primary school (27.3 %), followed by secondary education/high school (19.2 %), post-secondary levels (17.1 %), degree (15.4 %), higher secondary education (10.4 %), less than 4 years of schooling (6.2 %) and, finally, the masters/PhD (4.2 %). As regards the socio-economic level<sup>3</sup>, the monthly income of more than a half of the sample (54.5 %) is less than the national average income 26.8 % have an average income and 5.5 % a high income. Note that 13.2 % of the sample under study did not answer this question. With respect to the employment situation, 37.4 % are working, 33.8 % are retired, 19 % are unemployed, and 9 % are students.

### 2.2. Instruments

In our work we have used two of the five sections of questions of the Questionnaire on the Needs, Interests and Potential for Development of Inter-generational Programs (QNIPDPI). From section

I - Socio-demographic questions, we have used those relating to age, gender, education level, socio-economic level and employment situation. From section IV - Quality of Life, Health and for Social Support we have used the abbreviated version of the *Lubben Social Network Scale* (LSNS-6).

LSNS-6 is the short version of the instrument *The Lubben Social Network Scale* (LSNS), developed in the late 1980s by Lubben (1988) specifically for the group of *elderly adults*. This instrument determines the social isolation of people and provides information on the type of social relationships, the size of the network and the familiarity with the members of the supporting network. The LSNS-6 consists of 6 items which are divided into two sub-scales, three of which correspond to the *Family* sub-scale (which assesses family relations) and the remaining three are part of the *Friends* sub-scale (which assesses the relationships of friendship). The answer to each question is on a Likert scale that ranges from "no-one" and "9 or more people". The overall score of the instrument is obtained by adding the scores of 6 items, ranging from 0 to 30 points (Lubben, Blozik, Gilman, Liffe & Kruse, 2006), the *Likert scale* being scored from 0 to 5. Lubben et al. (2006) consider a score of 12 as the cut-off point of the sum of the LSNS-6 and a score of 6 for the *Family* and *Friends* sub-scales; scores lower than the cut-off point of the LSNS-6 and its sub-scales indicate risk of social isolation. When applied to *elderly adults*, this scale demonstrated good psychometric qualities in both the original study - internal consistency of 0.83 (Lubben et al., 2006) - and in the study for the validation of the Portuguese version, the internal consistency of which is 0.80 (Ribeiro et al., 2012).

### 2.3. Procedure

**Data collection:** Data were collected between March and May 2015 in schools, institutions and organisations within the parish of Bonfim, covering only parish residents. Questionnaires were administered individually in three different modes: in-person, assisted by the interviewer, or administered by the interviewer. The latter format was used especially with *elderly adults* and people with poor literacy skills. The response rate was 98 %.

**Ethics:** During the personal contact and on the first page of the questionnaire, the participants were informed about the study's objectives, data confidentiality, the voluntary nature of the participation, and were asked to give honest answers. Dr. James Lubben was asked to give his permission to use the instrument<sup>4</sup>.

**Data processing:** According to the objectives of our study, in this section we present the results of the statistical analyses that focused on the *total sample* (n=385), and three age sub-samples, namely: *youth and young adults* aged between the ages of 15 and 44 (n=165), *middle-aged adults*, between the ages of 45 and 64 (n=110), and *elderly adults* aged 65 and over (n=110). We tested hypotheses regarding social support, by age group, and different variables, such as gender, socio-economic level and employment situation, using, for that purpose, the *t-test* and *ANOVA*, according to the number of groups involved. We also sought to obtain the pattern of correlations between the LSNS-6 and the *Family* and *Friends* sub-scales and schooling. Statistical analyses were performed using the SPSS software, version 22. In all analyses, a significance level of 0.05 was considered.

### 3. Results

#### 3.1. Validation of the LSNS-6 scale and of the Family and Friends sub-scales for various generations

##### 3.1.1. Analysis of the dimensional structure of the scale

After confirming the requirements for this type of test (KMO = 0.73; Bartlett's test:  $p < 0.001$ ; MSA > 0.5), and according to the Kaiser criterion, the PCA resulted in two factors that explain 75.2 % of the total variation - identical to those found in the study by Lubben et al. (2006) and in the Portuguese version by Ribeiro et al. (2012). The first component, corresponding to the *Family* sub-scale, explains 53.9 % of the total variance, and the second one, relating to the *Friends* sub-scale, explains 21.2 % of the total variance. The adequacy of the PCA for all age groups was verified, always resulting in a two-factor structure. In all age samples, the first component (*Family*) is the one that explains a higher percentage of the total variance, with percentages ranging from 51 % to 56 %; the explanatory potential of the second component (*Friends*) was of 25.5 % in the *elderly adults* sample, much higher than the other samples, whose total explained variance ranged from 19 % to 20 % (Table 1).

**Table 1: Rotated component matrix of the LSNS-6 for the total sample and age sub-groups**

Item LSNS-6	COMPONENTS	
	Family	Friends
<b>Global sample (n=379)</b>		
1. Family: number of elements	<b>0,786</b>	0,168
2. Family: asking for help	<b>0,896</b>	0,186
3. Family: discussing personal issues	<b>0,874</b>	0,185
4. Friends: number of elements	0,022	<b>0,799</b>
5. Friends: asking for help	0,287	<b>0,865</b>
6. Friends: discussing personal issues	0,306	<b>0,818</b>
Eigenvalues	3,23	1,27
% of Variance	53,9	21,2
<b>Subsample 15-44 years (n=160)</b>		
1. Family: number of elements	<b>0,707</b>	0,115
2. Family: asking for help	<b>0,886</b>	0,211
3. Family: discussing personal issues	<b>0,848</b>	0,25
4. Friends: number of elements	0,027	<b>0,820</b>
5. Friends: asking for help	0,301	<b>0,868</b>
6. Friends: discussing personal issues	0,366	<b>0,802</b>
Eigenvalues	3,26	1,15
% of Variance	54,4	19,1
<b>Subsample 45-64 years (n=109)</b>		
1. Family: number os elements	<b>0,834</b>	0,143
2. Family: asking for help	<b>0,876</b>	0,195
3. Family: discussing personal issues	<b>0,850</b>	0,323
4. Friends: number of elements	0,163	<b>0,755</b>
5. Friends: asking for help	0,220	<b>0,881</b>
6. Friends: discussing personal issues	0,229	<b>0,852</b>
Eigenvalues	3,35	1,19
% of Variance	55,8	19,9



Item LSNS-6	COMPONENTS	
	Family	Friends
<b>Subsample 65 plus (n=110)</b>		
1. Family: number of elements	<b>0,828</b>	0,217
2. Family: asking for help	<b>0,921</b>	0,154
3. Family: discussing personal issues	<b>0,897</b>	0,044
4. Friends: number of elements	-0,069	<b>0,790</b>
5. Friends: asking for help	0,270	<b>0,877</b>
6. Friends: discussing personal issues	0,270	<b>0,822</b>
Eigenvalues	3,1	1,53
% of Variance	51,6	25,6

### 3.1.2. Reliability analysis

As shown in Table 2, the *Cronbach alpha* was 0.824 for the LSNS-6 scale, 0.845 for the *Family sub-scale*, and 0.807 for the *Friends sub-scale*, very close to the values found in the research by Lubben et al. (0.83) and by Ribeiro et al. (0.80). Considering the different age sub-groups, the values found also come close to those found for the total sample, with the total scale showing a good internal consistency, the same applying to the sub-scales in all sub-groups under analysis (particularly so given that it contains a very small number of items), which is a good indicator of the adequacy of this instrument for all age groups.

**Table 2: Internal consistency of the LSNS-6 scale for the total sample and age sub-groups**

Samples	Alpha of Cronbach		
	LSNS-6	LSNS-3 Family	LSNS-3 Friends
Global Sample	0,824	0,845	0,807
Young adults and adults (15-44 years)	0,825	0,795	0,812
Middle-aged adults (45-64 years)	0,839	0,856	0,816
Older adults (65 plus)	0,799	0,879	0,796

Table 3 shows the descriptive statistics of the LSNS-6 scale items for the total sample, the items with the highest mean scores being those that refer to the size of either the *Family* ( $M=3.42$ ) or *Friends* ( $M=3.6$ ). The lowest mean scores relate to the number of people with whom the respondents talk about personal issues, such as *Family* ( $M=2.35$ ), or *Friends* ( $M=2.1$ ). As to the standard deviations of items, they are all greater than 1, showing a good variation in the answers to the scale's items. Asymmetry indices are between 0.3 and -0.84; kurtosis indices stand between -0.67 and -0.19, and the analysis of the item-total correlation of the total sample (by applying the corrected correlation coefficient) shows scores between 0.420 and 0.684, indicating that they all contribute to assess the construct under analysis.

**Table 3: Descriptive statistics of the LSNS-6 scale items**

Item LSNS-6	M/SD	Skewness (SE)	Kurtosis (SE)	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1. Family: number of elements	3,41 (1,36)	-0,56 (0,12)	-0,36 (0,25)	0,55	0,80
2. Family: asking for help	2,73 (1,38)	-0,11 (0,12)	-0,67 (0,25)	0,64	0,78
3. Family: discussing personal issues	2,35 (1,32)	0,17 (0,12)	-0,44 (0,25)	0,62	0,79
4. Friends: number of elements	3,6 (1,49)	-0,84 (0,12)	-0,19 (0,25)	0,42	0,83
5. Friends: asking for help	2,43 (1,42)	-0,08 (0,12)	-0,64 (0,25)	0,68	0,77
6. Friends: discussing personal issues	2,1 (1,41)	0,29 (0,12)	-0,58 (0,25)	0,65	0,78

### 3.2. Results of the population's social support

In order to classify the elderly adults in relation to their social networks, in particular social risk, the original authors of the LSNS-6 scale stated that 12 is the cut-off point, and below this score social isolation is said to exist (Lubben et al., 2006). The current study shows that 22 % (n=85) of the total sample, 14 % (n=23) of *youth and young adults*, 26 % (n=29) of *middle-aged adults* and 30 % (n=33) of the *elderly adults* are in this situation.

If we look at the scores of the LSNS-6 scale and of the sub-scales according to age group (Table 1), it can be seen that *youth and young adults* have a higher social support mean score at 17.6 (SD=5.41), followed by the group of *middle-aged adults* with a mean score of 15.9 (SD= 6.36) and by the group of *elderly adults*, which has the lowest

social support mean score, 15.5 (SD=6.63). These differences are statistically significant ( $F_{(2)}=4.61$ ;  $p=0.01$ ). The results in the *Family* and *Friends* sub-scales are very similar: *youth and young adults* show a higher social support mean score - 8.9 (SD=3.15) and 8.6 (SD=3.14), respectively. This is followed by the *middle-aged adults* with a family social support mean score of 8.2 (SD=3.65) and of 7.7 (SD=3.75) for friends; correspondingly, the lowest social support mean score rests with the *elderly adults* - 7.8 (SD=3.93) and 7.6 (SD=4.20). With regard to *Family* and *Friends*, the difference between the age groups is statistically significant [ $F_{(2)}=3.50$ ;  $p=0.031$  and  $F_{(2)}=3.12$ ;  $p=0.045$ ], respectively. It can be concluded on the basis of these figures that as age increases so does social support decrease. (Table 4)

Table 4: Results for social support according to the different age groups					
	N	M	SD	Df	F (sig.)
<b>LSNS-6</b>					
Young adults and adults (15-44 years)	165	17,6	5,41	2	4,61 (p=0,010)
Middle-aged adults (45-64 years)	110	15,9	6,36		
Older adults (65 plus)	110	15,5	6,63		
<b>Subscale LSNS-3 Family</b>					
Young adults and adults (15-44 years)	165	8,9	3,15	2	3,5 (p=0,031)
Middle-aged adults (45-64 years)	110	8,2	3,65		
Older adults (65 plus)	110	7,8	3,93		
<b>Subscale LSNS-3 Friends</b>					
Young adults and adults (15-44 years)	165	8,6	3,14	2	3,12 (p=0,045)
Middle-aged adults (45-64 years)	110	7,7	3,75		
Older adults (65 plus)	110	7,6	4,2		

The results of the comparison of social support according to the gender of participants show that the social support is greater in men ( $M=17.2$ ;  $SD=6.07$ ) compared to women ( $M=16.0$ ;  $SD=6.10$ ), but the difference is hardly significant for the statistics ( $t_{(383)}=1.92$ ;  $p=0.056$ ). As for the sub-scales, there are no statistically significant differences regarding *Family* between the sexes ( $t_{(383)}=0.28$ ;  $p=0.78$ ). On the other hand, in the sub-scale *Friends* these differences are highly significant ( $t_{(383)}=2.94$ ;  $p=0.003$ ) especially for men. A comparison between social support according to gender

and the three age samples under consideration reveals no significant differences between the sexes on the total scale for none of the samples. The only exception in which women show greater social support ( $M=8.6$ ;  $SD=3.0$ ) than men ( $M=7.8$ ;  $SD=4.1$ ) is in the *Family* sub-scale, although not significant ( $t_{(108)}=-1.14$ ;  $p=0.25$ ).

Considering the education level and bearing in mind that the sample presents considerable variability in this respect and that the sizes of sub-samples varied considerably, we have calculated the Spearman's  $\rho$  and have noted that, for

the total sample, the higher the education level, the greater the social support, whether considering the 6 items ( $\rho=.274$ ,  $p<.001$ ) or analyzing the *Family* ( $\rho=.201$ ,  $p<.001$ ) and *Friends* ( $\rho=.260$ ,  $p<.001$ ) sub-scales. In the three age sub-groups, it has been found that the relation between these variables is highly significant in the *youth and young adults* group ( $\rho_{(164)}=.233$ ,  $p=0.003$ ) and the *middle-aged adults* group ( $\rho_{(110)}=.293$ ;  $p=0.002$ ), and significant in the *elderly adults* group ( $\rho_{(110)}=.0183$ ,  $p=0.05$ ). Moreover, social support and education level are significantly related

in the *Friends* sub-scale in the case of the *youth and young adults* group ( $\rho_{(164)}=.0298$ ,  $p=0.001$ ), as well as in the *middle-aged adults* group ( $\rho_{(110)}=.0199$ ;  $p=0.037$ ) and *elderly adults* group ( $\rho_{(110)}=.0212$ ;  $p=0.026$ ). In respect of the *Family* sub-scale, the correlation between social support and education level is not significant in the *youth and young adults* group ( $\rho_{(164)}=.0103$ ,  $p=0.191$ ) and in the *elderly adults* group ( $\rho_{(110)}=.090$ ,  $p=0.352$ ), but it is significant in the *middle-aged adults* group ( $\rho_{(110)}=.0276$ ,  $p=0.004$ ) (Table 5).

**Table 5: Correlations between social support and education level of the total sample and of the three age sub-groups**

	LSNS-6 Scale Total	LSNS-3 Subscale Family	LSNS-3 Subscale Friends
<b>Global sample (n=384)</b>			
rho of Spearman	,274**	,201**	,260**
Sig.	,000	,000	,000
<b>Young adults and adults (n=164)</b>			
rho of Spearman	,233**	,103	,298**
Sig.	,003	,191	,000
<b>Middle-aged adults (n=110)</b>			
rho of Spearman	,293**	,276**	,199*
Sig.	,002	,004	,037
<b>Older adults (n=110)</b>			
rho of Spearman	,183	,090	,212*
Sig.	,055	,352	,026
**The correlation is significant at $p < 0,01$ (two-tailed).			
* The correlation is significant at $p < 0,05$ (two-tailed).			

As regards the socio-economic level variable, we note that in the total sample the people with a higher income show a higher social support mean score, 19.0 (SD=4.35), followed by those with an average income, 17.6 (SD=6.03), while those with a lower income show the lowest social support mean score, 15.3 (SD=6.36). These results are statistically significant ( $F_{(2)}=7.14$ ;  $p<0.001$ ). The results in the *Family* and *Friends* sub-scales are identical, those with a higher income having greater social support and those with lower incomes having less social support. These differences are also significant for the *Family* sub-scale ( $F_{(2)}=5.59$ ;  $p<0.004$ ) and *Friends* sub-scale ( $F_{(2)}=5.04$ ;  $p<0.007$ ). The analysis of the different age groups shows that in

all groups the people with higher incomes have greater social support. However, in both the *youth and young adults* and *middle-aged adults* groups the differences between individuals from different socio-economic backgrounds are not statistically significant, neither in the LSNS-6 Scale nor in its sub-scales. Nevertheless, the *elderly adults* group shows statistically significant differences between people with a high income and those with a low income ( $F_{(2)}=4.50$ ;  $p<0.013$ ), whereas these differences are not significant in the *Family* sub-scale ( $F_{(2)}=1.48$ ;  $p<0.231$ ), but are in fact significant in the *Friends* sub-scale ( $F_{(2)}=4.82$ ;  $p<0.010$ ).

As regards the employment situation, for the total sample, the people with a higher social



support mean score are the students, 19.1 (SD=4.85), followed by employed people ( $M=18.8$ ;  $SD=5.86$ ), retired people ( $M=15.2$ ;  $SD=6.34$ ) and unemployed people ( $M=15.0$ ;  $SD=5.87$ ), the differences being statistically significant ( $F_{(3)}=8.46$ ,  $p<0.001$ ). In the *Family sub-scale* and *Friends sub-scale*, the results are similar, the students being the group with the highest social support scores and the unemployed showing the lowest scores. The differences in both sub-scales, *Family* ( $F_{(3)}=5.66$ ;  $p<0.001$ ) and *Friends* ( $F_{(3)}=6.24$ ,  $p<0.001$ ) are significant. In the *youth and young adults* group, the students show a higher social support mean score ( $M=19.1$ ;  $SD=4.85$ ), followed by employed people ( $M=18.1$ ;  $SD=5.41$ ); again, the differences are statistically significant ( $F_{(3)}=4.38$ ,  $p<0.005$ ), both sub-scales showing similar results. With regard to the *middle-aged adults* group, the higher social support mean score rests with the employed people ( $M=17.2$ ;  $SD=6.49$ ), followed by the unemployed ( $M=15.3$ ;  $SD=6.12$ ) and, finally, by retired people ( $M=13.5$ ;  $SD=5.77$ ). The differences in this age group are not statistically significant in either the LSNS-6 scale ( $F_{(3)}=2.87$ ,  $p<0.061$ ) or the two sub-scales. Only retired people were considered in the *elderly adults* group, as the number of employed respondents (2) and unemployed respondents (3) is less than 5. Thus, retired elderly show a social support mean score of 15.5 ( $SD=6.42$ ) in the LSNS-6, 7.8 ( $SD=3.92$ ) in the *Family* sub-scale and 7.6 ( $SD=4.05$ ) in the *Friends* sub-scale.

#### 4. Discussion

Since the LSNS-6 scale was designed specifically to be used on the elderly population, it was necessary to validate the scale so that it could be used with other age groups. The LSNS-6 and its sub-scales LSNS-3 *Family* and LSNS-3 *Friends* have demonstrated good psychometric qualities not only for the total sample, comprising 385 individuals, but also for the three age sub-samples. It has proved to be a valid instrument, suitable to be used in comparative studies between different generations, and in the framework of intergenerational practices.

Knowing that the social network is built by the individual, over a lifetime, and that its scope will depend on socio-demographic, cultural, economic and personality factors, we have considered some aspects concerning the variation of results of the LSNS-6 and of the sub-scales regarding some socio-demographic variables, by age group. As far as age is concerned, we have noted that people of all ages are at risk of social isolation, which demonstrates the need to create strategies with a view to increasing social networks and social support for them. As regards gender, we have found

that women are more at risk of social isolation than men. In our study, men from all age groups present a higher social support mean score than women, similar to the results found by Pinto, Gracia, Bocchi e Carvalhaes (2006), Stringhini et al. (2012) and Ribeiro et al. (2012), even though these authors dealt only with samples of elderly people. We have also found that men are supported more than women, especially by *Friends*, a result similar to that found by Ribeiro et al. (2012), the only exception in which women have a higher social support mean score being in the sample of middle-aged adult women, in terms of family social support. These data seem to emphasize the idea that as women assume a prominent role within the family (in the support, organisation, caring for the health of their close relatives and in their children's education, etc.), on the one hand they increase the family social support and, on the other hand, become more secluded in relation to social contact outside the family compared to men (Pinto et al. 2006). As far as education level is concerned, we have noted that better-educated people have a higher social support mean score, the results of which are identical to those found by Pinto et al. (2006).

Several studies on the elderly population have confirmed that the economic conditions and the economic status contribute to the extent of the social network (Rosa et al., 2007; Honeycutt et al., 2008). The conclusion of our research are along the same lines, and we also found that people with higher incomes have a higher social support mean score across all age groups, meaning that the low income factor increases the risk of social isolation.

Finally, we have noted that the fact that there is no "compulsory" occupation, such as working or studying, increases the risk of social isolation. Our analysis has shown that students and employed people have a greater social support than the unemployed and retired people in all age samples, both in the LSNS-6 scale and in the *Family* and *Friends* sub-scales.

#### 5. Conclusion

While we have seen that age is in itself a risk factor, we have also realised from the analysis by age group that, regardless of age, people have characteristics that influence their social support, such as: being a woman, having low levels of education, low income, and being unemployed and retired. We believe that these characteristics should be taken into account when planning and selecting the participants of intergenerational programs, in the knowledge that a heterogeneous group – one that includes people with a strong social support

and people at social risk – will add to the expansion and strengthening of binding social networks, contributing to the well-being, quality of life and social integration not only of *elderly adults*, but also of different generations.

The innovative aspect of this study was that we proved that the LSNS-6 can be used to plan and develop Intergenerational Programs (IP). Therefore, because it can be quickly and easily used, we suggest that it be applied at three distinct moments of the Intergenerational programs. As a first step, the LSNS-6 should be applied when selecting the participants, or if these have already been established at the start of the IP. This first application will serve as a pre-test for a later comparison, at the post-test level, that is, in the final assessment phase of the program (second moment), and even in follow-up cases. Since we agree that the evaluation is a *sine qua non* for a good Intergenerational Program, hence why we need to evaluate the results in the short, medium

and long term (Sánchez, 2007), we suggest that the LSNS-6 be applied in a third moment, a few months after the program has ended, to measure the impact of the IP on the social network and on the social support of its participants in the medium and long term.

Due to space constraints, we were unable to demonstrate all the capabilities of the LSNS-6, more specific analyses being needed on the three items that form the LSNS-3 *Family* and LSNS-3 *Friends*. Such an analysis would allow us to question if the size of the network would foresee relationships of help and familiarity; if help would be asked from people with whom they have contact and are close to, or only from people they are close to; would it compare the relationships of familiarity between the different generations? And would it explain the differences regarding the aforesaid questions in relation to the *Family* e *Friends* subscales? These and other questions raised herein will certainly be food for further thought.

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## Notes

- <sup>1</sup> This concept is associated with the feeling of belonging to a community, of concern for the people who are part of it and the conviction that these people, in turn, care about others. Mutual trust, the sharing of values and norms, cooperation and networks are all indicators of the social capital of a community.
- <sup>2</sup> 1.3 % are Spanish; 0.5 % are French; 0.5 % are Belgian and 0.3 % are from Mozambique, Angola, Guinea, Italy, Brazil, respectively, in a total of 14 people.
- <sup>3</sup> The average monthly wage in Portugal, in 2013, was about 963€ - GEE/MEE (2013) - Statistical Bulletin of November 2013. Available at <http://www.gee.min-economia.pt> [16/01/2016].
- <sup>4</sup> On the Boston College website at <http://www.bc.edu/bc-web/about.html>

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## AUTHOR'S ADDRESS

**Susana Villas-Boas.** Universidade de Coimbra. FPCE-UC, Rua do Colégio Novo, 3000-115 Coimbra, Portugal. Tel.: +351 239 851 450 Email: [suvboas@gmail.com](mailto:suvboas@gmail.com).

**Albertina Lima de Oliveira.** Universidade de Coimbra FPCE-UC, Rua do Colégio Novo, 3000-115 Coimbra, Portugal. Tel.: +351 239 851 450 Email: [aolima@fpce.uc.pt](mailto:aolima@fpce.uc.pt).

**Natália Ramos.** Universidade Aberta, Rua da Escola Politécnica 141-147, 1269-001 Lisboa, Portugal. Tel.: +351 21 391 6300. Email: [natalia@uab.pt](mailto:natalia@uab.pt)

**Inmaculada Montero.** Departamento de Pedagogia da Universidade de Granada. FCE-UG, Campus Universitario Cartuja, s/n, 18011 Granada, Espanha. Telephone: + 34 958 249633. E-mail: [imontero@ugr.es](mailto:imontero@ugr.es)

**ACADEMIC PROFILE**

**Susana Villas-Boas.** Bolseira de doutoramento da Fundação para a Ciência e Tecnologia, professora convidada da Faculdade de Psicologia e de Ciências da Educação da Universidade de Coimbra, desde 2014. Investigadora do Centro de Estudos das Migrações e das Relações Interculturais (CEMRI) da Universidade Aberta de Lisboa e do Centro de Estudos Interdisciplinares do Século XX (CEIS20) da Universidade de Coimbra.

**Albertina Lima de Oliveira.** Ph.D em Ciências da Educação especialidade em Educação Permanente e formação de adultos pela Universidade de Coimbra, professora auxiliar da Faculdade de Psicologia e Ciências da Educação da Universidade de Coimbra e investigadora do Centro de Estudos Interdisciplinares do Século XX da mesma Universidade (CEIS20).

**Natália Ramos.** Ph.D em Psicologia pela Universidade René Decartes, Paris, professora associada da Universidade Aberta de Lisboa, Diretora do Centro de Estudos das Migrações e das Relações Interculturais da Universidade Aberta - CEMRI-UAb e investigadora e coordenadora do grupo Saúde, Cultura e Desenvolvimento do mesmo centro.

**Inmaculada Montero.** Ph.D em Pedagogia pela Universidade de Granada, Espanha, e professora doutora contratada colaboradora da Faculdade de Ciências da Educação, do Departamento de Pedagogia da Universidade de Granada.

