REVISTA PSICOLOGÍA DE LA SALUD

Vol. 11. Núm. 1. 2023. Artículo 1
DOI: 10.21134/pssa.v11i1.304

QUALITY OF LIFE IN AGING PROCESS: WORK-RELATED PSYCHOSOCIAL CONDITIONS AND SOCIAL SUPPORT

Tania Gaspar
Lusíada University of Lisbon/CLISSIS/COMEGI; University of Lisbon/FML/ISAMB; University of Lisbon/FMH/Aventura Social, Portugal, Lisbon.

Diego Gomez-Baya
University of Lisbon/FMH/Aventura Social, Portugal, Lisbon

Isabel Torres
Lusíada University - North/CLISSIS, Portugal, Porto

Ana Cerqueira
Lusíada University of Lisbon/CLISSIS/COMEGI; Lisbon/FMH/Aventura Social, Portugal, Lisbon.

Manuela Faia Correia
Lusíada University of Lisbon/CLISSIS/COMEGI, Portugal, Lisbon

Margarida Gaspar de Matos
University of Lisbon/FML/ISAMB; University of Lisbon/FMH/Aventura Social, Portugal, Lisbon.

Author Note: The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.
This work is financed by National Funds through the Foundation for Science and Technology (FCT), under the Project UIC SOC/04624/2019
Correspondence concerning this article should be addressed to Tania Gaspar.
tania.gaspar@edu.ulusiada.pt

Resumen

Marco teórico: El envejecimiento ha sido una fuente creciente de mayores oportunidades generadas por la longevidad, pero también una fuente creciente de preocupación, particularmente con respecto a la salud mental y el bienestar de las personas mayores. Como tal, es muy importante tener una mejor comprensión de la relación entre los factores psicosociales relacionados con el lugar de trabajo y la calidad de vida, no solo entre la población activa, sino también entre los jubilados. El objetivo principal de este estudio es comprender y caracterizar mejor la relación entre la calidad de vida, las condiciones psicosociales relacionadas con el trabajo y el apoyo social para adultos tanto trabajadores como jubilados. Método: Los participantes fueron 1.330, el 62,2% mujeres, con edades comprendidas entre los 55 y los 75 años. El 47% de los encuestados estaba trabajando y el 46% estaba jubilado. Se probaron tres modelos de ecuaciones estructurales, utilizando la muestra total y por situación laboral (trabajador y jubilado). Resultados: Los resultados mostraron que el manejo del estrés (con mayor efecto en los jubilados) y el apoyo social (con mayor efecto en los trabajadores) influyen positivamente en el factor CV. Mejores condiciones psicosociales relacionadas con el trabajo y un mayor apoyo social fueron predictores de un mejor calidad de vida. Conclusiones: Nuestro estudio nos permitió concluir que la CV está influenciada por la situación laboral, el apoyo social y las condiciones psicosociales relacionadas con el trabajo. Este es un mensaje poderoso para los formuladores de políticas en vista del crecimiento de las poblaciones mayores.

Palabras clave: Condiciones psicosociales relacionadas con el trabajo; apoyo social; calidad de vida; estado laboral; necesidades de intervención

Abstract

Theoretical Framework: Aging has been a growing source of increased opportunities raised by longevity, but also a growing source of concern, particularly with regard to the mental health and the well-being of elderly people. As such, it is highly relevant to have a better understanding of the relationship between workplace related psychosocial factors and quality of life, not only among working population, but also among retired individuals. The main objective of this study is to better understand and characterize the relation between quality of life (QoL), work-related psychosocial conditions, and social support for both working and retired adults. Methods: Participants were 1.330, 62.2% of which female, with ages ranging between 55 and 75 years old. 47% of the respondents were working and 46 % were retired. Three structural equation models were tested, using the total sample and by labor situation (working and retired). Results: The results showed that the stress management (with a greater effect in retired participants) and the social support (with a greater effect in working participants) have a positive influence on the QoL factor. Better work-related psychosocial conditions and higher social support were predictors of higher/better QoL. Conclusions: Our study allowed us to conclude that QoL is influenced by working situation, social support and work-related psychosocial conditions. This is a powerful message to policy makers in view of the growth of older populations.

Keywords: Work related psychosocial conditions, social support, quality of life, working status, intervention needs

Introduction

Aging has been a growing source of increased opportunities raised by longevity, but also a growing source of concern, particularly with regard to the mental health and the well-being of elderly people. This is due to various challenges associated with the increase in the average life expectancy, since these increase in longevity raises concerns about how to maintain the best quality of life (QoL) possible during the aging process and this factor constitutes an area of extreme importance with regard to public policies (Azar et al., 2018; Mari et al., 2016; Wang, 2016). In fact, this question seems particularly relevant when an overall trend is to extend the retirement age and Portugal is no exception.

Work is never neutral to health (Dejours, 2011) and may contribute either to its promotion or deterioration. Work can have immediate and also "deferred" consequences (Eisapareh et al., 2020; Nilsen et al., 2021; van der Noordt, 2021; Puchol et al., 2013; Quiñones et Velásquez, 2019; Thébaud-Mony et al., 2015), and the working conditions can contribute to the "induced aging" (Teiger, 1995). As such, it is highly relevant to have a better understanding of the relationship between workplace related psychosocial factors and quality of life, not only among working population, but also among retired individuals. As emphasized by Shultz and Wang (2011), we need to know more about continuity and change in psychological health, before during and after retirement.

The regular surveys conducted by the Eurofound (2015) are particularly emblematic with regard to the risks to which workers are exposed, especially the psychosocial, such as stress. The intensification of workload, the increase in the emotional demands and the labor insecurity, are strain factors that have a strong impact on the stress of the working population. Less known is how such factors affect people in the long run. This quest triggered us to study also its effects on health and well-being of retired people. Thus, this study is framed in the conceptualization of retirement as a late career development stage and aims at understanding work behavior in retirement (Shultz & Wang, 2011).

Quality of life is related to the constructs of life satisfaction and subjective well-being and it represents an individual's subjective perception of the extent to which his or her most important needs, goals, and expectations have been satisfied (Frisch, 1998). The present study uses the term 'quality of life' and is conceptualized by the WHOQOL Group (1998) that defines quality of life as an individual's perception of their position in life in their specific culture and value context in and in relation to individual's goals, expectations, norms and needs. Quality of life is a complex and multidimensional construct that included individual´s physical health, psychological health, beliefs, social relationships and relationship with the environment.

There is evidence in the literature that points to the benefits of social integration with social support appearing as a factor that influences the functioning and health of the elderly (Farriol-Baroni et al., 2021; Liu et al., 2020; Stephens et al., 2011). Social support can be defined as the perceived availability and satisfaction of support, affection, and instrumental assistance from significant actors from different contexts, including family, friends, neighbors, and colleagues (LaRocca & Scogin, 2015), but also satisfaction and accesses to social activities (Ribeiro, 1999). Several studies focusing the relation between quality of life and social support in older adults suggest a positive relation across contexts and the perceptions of available social support significantly predicted quality of life (Gaspar et al., 2017; Low et al., 2008). Thus, less friends and wicker perceived social support predicted less positive perception of quality of life in older population (Zaninotto et al., 2009).

QoL may be influenced by aging issues, especially with regard to declines related to physical health, functional capacity and progressive loss of significant interpersonal roles and relationships (Friedman et al., 2017).

Regarding the evaluation of QoL, some authors consider that one should emphasis certain individual's aspects related to the elderly life, such as the transition to retirement, integration into community activities, changes in family relationships and friendship, intimacy, among others (Halvorsrud & Kalfoss, 2007). Therefore, it is fundamental to reflect on these issues, namely "retirement age, means of subsistence, quality of life and place of the elderly in society" (Marques et al. 2014, p.74).

Retirement is characterized by the chronological age and the withdrawal (more or less progressive) of the working life (Byles et al., 2013). This has

two main negative consequences: (1), the level of satisfaction with life is affected and, consequently, their QoL because by leaving the labor market means that they lack a major source of social support (i.e., coworkers, workplace) (2), entry into retirement can be associated with worthlessness, particularly when the individual perceives it as a lack of recognition for the work and accumulated experience (Dejours, 2000; Kossen & Pedersen, 2008; Lee et al., 2018). Thus, individuals who are retired, and particularly those who are recently in this situation, may be invaded by negative feelings, such as decreased self-esteem, anxiety and depression, which will be reflected in their well-being and QoL. In addition, retirement may increase the risk of chronic diseases and difficulties in carrying out daily activities, tending to be associated with worse physical and mental health outcomes (Behncke, 2012; Lee et al., 2018).

Nevertheless, retirement can also be experienced in a positive way, constituting an opportunity for performing other social roles, optimizing leisure time and increased civic participation, factors that are positively related to the well- being and QoL (Davies & Cartwright, 2011; Hershey & Henkens, 2013). The biological aging, and the progressive deterioration associated with it, is not necessarily a synonym of a decrease in the level of elderly social participation and well-being (Bousquet et al., 2015) nor of loss of contribution to society, once those individuals can continue to participate actively in a variety of ways, maintain some professional activity, develop volunteer activities, engage in leisure activities, support the family, especially with the grandchildren, etc. (Amado et al., 2016; World Health Organization [WHO], 2015). Despite all the challenges characteristic of this development phase, the elderly can and should continue to be active members and to participate at the family, social and community levels (WHO, 2002). The literature has shown that men are more likely to find work alternatives in leisure activities, while women are more limited to the family sphere, perpetuating their role in this area (Davezies, 1998).

An organization that focuses on promoting the quality of life of professionals and health in the workplace (*Healthy Workplace*) is associated with a better satisfaction with work, less psychosocial risks at work, and consequently better results, higher performance and satisfaction. The healthiest organizations have, on average, more positive results (Bradley et al., 2019; Burton, 2010). If the needs of the professionals are not met, they can act as risk factors for health. Conversely, when organizations meet these needs, they lead to organizational well-being and health. These needs may be of security, sense of belonging, satisfaction with work, social justice, self-esteem, self-efficacy and autonomy (BNQ, 2018; Clarke & Hill, 2012).

Human resource management practices should improve employees' abilities and opportunities within the organizational framework, establishing such work conditions that improve quality of life, especially in older adults in order to prepare the transition to retirement (Blekesaune & Solem, 2005).

This research aimed to analyze and to better understand and characterize the relation between quality of life, work-related psychosocial conditions and social support for both working and retired adults, in order to identify working and retired adults' different risk patterns and highlighted different and specific intervention needs.

Method

Participants

The sample consisted of 1.330 participants with ages between 55 to 75 years old, average age was 60 years. With regard to gender, 62% were female and 38 % male. Of the respondents, 47% maintained an occupation and 46 % were retired. Participants were recruited in order to achieve approximately half of the sample with working participants and half of the sample retired. The inclusion criterion was having between 55 and 75 years old (10 years before and after retirement age), and present health ability's (motor, cognitive and behavioral) to self-report the information. Was used a non-probabilistic sampling technique, specifically a convenience sampling.

Instruments

The survey was composed by some sociodemographic related questions, and by questionnaires related to (1) quality of life, (2) social support, and (3) psychosocial factors at work.

(1) Quality of Life (WHOQOL-BREF)

The quality of life was measured using the Portuguese version of the WHOQOL- BREF (World

Health Organization Quality of Life - Brief) questionnaire (Canavarro et al., 2007). The original version is WHOQOL Group (World Health Organization Quality of Life Group, 1994). It is a generic, multidimensional and multicultural measure to assessment subjective quality of life. The instrument consists of 26 items and includes four domains/ facets of quality of life: Physical, Psychological, Social Affairs and Environmental. This measure allows the calculation of a global index of the overall quality of life, a scale from 0 to 100, corresponding a higher final score to a better perception of quality of life.

The participants in our study gave their reactions to the statements on 5-point Likert type scale response scales ranging from 1 (very bad/ very unsatisfied) to 5 (Extremely good/extremely satisfied). Cronbach's alpha shows acceptable values, whether analyzing the four domains (.90) or each individual domain, ranging from .86 (Environmental) and .95 (Psychological) in the Portuguese version of the WHOQOL- BREF (World Health Organization Quality of Life - Brief) questionnaire (Canavarro et al., 2007).

(2) Satisfaction with the Social Support Scale (ESSS)

The satisfaction with the existing social support was measured using the Satisfaction with the Social Support Scale (ESSS), which was developed and validated by Ribeiro (1999).

This measure consists of 15 sentences of self-completion. The participants indicate their degree of accordance with the sentence, in a 5-point Likert type scale: 1 (strongly disagree) to 5 (strongly agree).

The ESSS has four dimensions or factors: Satisfaction with friends/acquaintances; Intimacy; Satisfaction with family and social activities. The scale also allows obtaining a global score (ESSS). The highest scores in each dimension represent a perception of greater satisfaction with the social support. The internal consistency (Cronbach's alpha) of the total scale is .85.

(3) Copenhagen Psychosocial Questionnaire (COPSOQ II)

The instrument that measured psychosocial factors at work (COPSOQ II) was developed by Kristensen et al. (2005). In this study the Portuguese version was used (Silva et al., 2011), but the scale of violence in the work was removed because it is a very sensitive issue and in an ethical perspective was not considered a fundamental variable for the present study.

The COPSOQ II follows a multidimensional concept and is intended to cover the general needs involved in the scope of the concept of 'stress at work'. The short version includes the psychosocial dimensions with epidemiological evidence related to health. The instrument evaluates exposure indicators (psychosocial risks) and indicators of its effect (health, satisfaction and stress).

As this instrument measures work-related psychosocial factors and the study included working and retired participants, was included the following information: "The following questions are related to psychosocial environment at work. If you are retired, please answer reporting to your last working year. Choose the answer that best fits the question". In the questionnaire, the questions related to stress dimension presented the following instruction "The following five questions are about your health and well-being. Please do not try to discriminate the symptoms that are caused by the work and those that are due to other causes. We want you to describe how you generally feel".

In the present study only 22 items from the short version with 41 items were used, organized in six dimensions, namely: workload (4 items; higher value represents perception of higher workload), autonomy (3 items; higher value represents perception of less autonomy), role clarity (3 items; higher value represents perception of less role clarity), Leadership support (4 items; higher value represents perception of higher Leadership support), confidence and justice (4 items; higher value represents perception of less confidence and justice) and stress management (4 items; higher value represents perception of higher stress management).

All the items are assessed on a Likert type scale of 5 points: 1- never / hardly ever; 2- Rarely; 3- Sometimes; 4- Often; 5- Always; or 1- Nothing/ almost nothing; 2- A little; 3- Moderately; 4- Very; 5- Extremely. Each item can be quoted from 1 to 5 points, in the direct sense of the response marked. This scale does not measure a single construct, but several psychosocial and variable health,

stress and satisfaction risks. Thus, the averages of the items of each factor must be calculated and their interpretation assumes different meanings depending on the factor / subscale in question. The internal consistency (Cronbach's alpha) subscales of COPSOQ are between .60 and .90 (with the exception of 2 subscales).

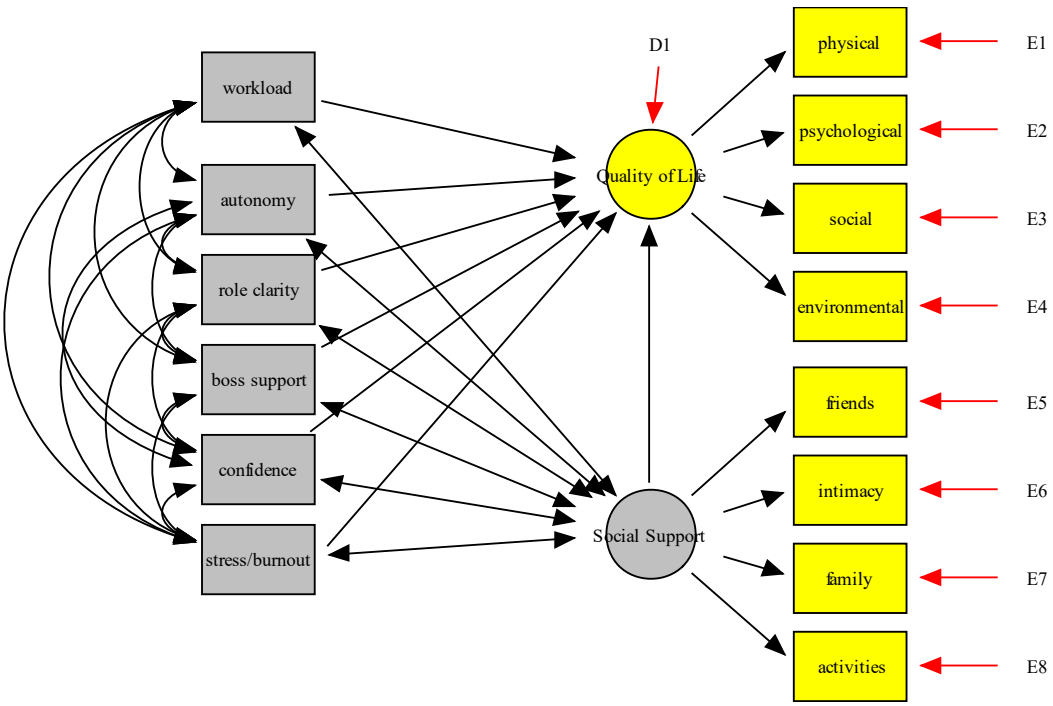
Procedures

The research was carried out by recruiting directly at national level. Several organizations were contacted, such as unions, business companies, municipalities, day care centers, senior universities, NGOs working with people within the age range of the study, to collaborate on data collection. Data collection was carried out with the 19 institutions that agreed to cooperate and with people who agreed to complete the questionnaire. In most of the cases was used the paper-pencil (62%), but the respondents could also fill the questionnaire electronically on a website (38%). 1352 were received questionnaires but 22 persons filled the questionnaire with too many missing values. The questionnaire was self-completion, anonymous and confidential. The project was approved by the ethics committee of ARSLVT/ Health Ministry pro. 023/CES/INV/2014.

Data analysis design

First, descriptive statistics in study variables (i.e., mean and standard deviation) were examined, and t-tests were conducted to analyze differences by labor situation (i.e., working vs. retired adults). Second, bivariate zero-order Pearson correlations were performed by labor situation in order to study the associations between work-related psychosocial conditions, social support and quality of life, including overall scores and separate dimensions. Third, stepwise regression analyses were carried out in the total sample and by labor situation. In these analyses, overall quality of life was used as the criteria variable, and three steps were explored: a) demographics' effects (i.e., age, gender, civil state, parenthood, academic attainment and residence), b) work-related psychosocial conditions' effects (i.e., workload, autonomy, role clarity, leadership support, confidence, and stress management), and c) social support dimensions' effects (i.e., friends, intimacy, family, and activities). R^2, change in F and standardized coefficients were reported in each step. These analyses were developed using the statistical package SPSS 21.0. Fourth, three structural equation models were tested, also in the total sample and by labor situation, in which the following effects and associations

Figure 1. *Structural equation model of the direct effect of work-related psychosocial condition and social support factor on quality of life factor and the indirect effect of the relationship mediation of relationship between work-related psychosocial condition and on QoL by social support factor*



were included: a) the effects by work-related psychosocial conditions on quality of life factor, which was composed of its four indicators; b) the effect by social support factor, composed of its four indicators, on quality of life factor; c) the interrelations between work-related psychosocial conditions and social support factor; and d) the interrelations among work-related psychosocial conditions. Figure 1 presents the general model tested. Standardized coefficients were examined and overall model fit, by reporting Satorra-Bentler χ2, χ2/df, CFI, RMSEA and 90% CI RMSEA, the three models. R^2 was calculated for the explanation of quality of life factor in the total sample, in the subsample of working participants and in the subsample of retired participants. Thus, multigroup structural equation model was conducted, and the associations among variables in each subsample were compared by calculating χ^2 for each constraint. These analyses were performed using EQS 6.3.

Results

Descriptive statistics and differences by labor situation

Table 1 shows descriptive statistics in the total sample and by labor situation. Regarding work-related psychosocial conditions, greater mean scores were observed in stress management and workload, while the lowest ones were found in role clarity and confidence. Good scores in quality of life were observed, with greater averages on psychological and social quality of life, and the lowest one in the environmental dimension.

Concerning social support, high means were observed, especially in family dimension, with a lower mean in the dimension of activities. Some differences by labor situation were detected, so that more workload and stress were reported by working participants, as well as more physical, psychological and social quality of life. Moreover, more support by intimacy was observed in working participants, while greater family support was reported by retired participants.

Correlations and regression analyses by labor situation

Table 2 presents zero-order correlations among work-related psychosocial conditions, social support and quality of life, comparing associations in the working participants with retired participants. Results showed positive interrelations among the respective indicators of work-related psychosocial conditions, social support and quality of life. In general, more positive work-related psychosocial conditions were associated with greater social support and greater quality of life.

Moreover, high social support was associated with high quality of life. Some differences were found by labor situation. In retired participants, workload was negatively associated with autonomy, psychological and social quality of life, and intimacy support, and positively associated with role clarity, while no significant associations were observed in working people. In the latter, physical quality of life was inversely related to workload, while not correlated in retired people. Also in working people, lack of autonomy was negatively correlated with social and environmental quality of

Table 1. *Descriptive statistics of study variables and t-tests by labor situation*

Variables	Total *M(SD)*	Working *M(SD)*	Retired M(SD)	*t-tests*
Workload	2.78(.71)	2.87(.68)	2.67(.72)	4.46***
Autonomy	2.41(.94)	2.36(.87)	2.47(1.02)	-1.82
Role clarity	2.25(.82)	2.27(.80)	2.22(.83)	.97
Leadership support	2.51(1.06)	2.53(1.10)	2.49(1.01)	.66
Confidence	2.30(.86)	2.29(.87)	2.31(.85)	-.42
Stress management	3.20(.79)	3.14(.79)	3.25(.79)	-2.35*
General QoL	3.66(.69)	3.73(.67)	3.58(.71)	3.74***
PhysicalQoL	3.86(.68)	3.95(.65)	3.76(.70)	4.59***
PsychologicalQoL	3.89(.59)	3.92(.58)	3.85(.61)	1.98*
Social QoL	3.86(.63)	3.93(.61)	3.78(.63)	4.14***
EnvironmentalQoL	3.47(.58)	3.46(.59)	3.49(.57)	-.74
Social Support Total	3.51(.57)	3.51(.56)	3.50(.58)	.21
Social Support: friends	3.60(.65)	3.58(.63)	3.61(.66)	-.75
Social Support: intimacy	3.57(.82)	3.63(.82)	3.50(.81)	2.60**
Social Support: family	3.83(.85)	3.78(.82)	3.88(.87)	-2.08*
Social Support: activities	2.92(.89)	2.91(.87)	2.92(.90)	-.18

Note. *** $p < .001$, ** $p < .01$, * $p < .05$.

Table 2. *Zero-order correlations between work-related psychosocial condition, dimensions of social support and dimensions of quality of life, in working vs. retired participants*

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.Workload	1	-.16**	.12**	.24***	.22***	-.30***	-.02	-.07	-.13**	-.16***	-.03	-.23***	-.21***	-.20***	-.20***	-.04
2.Auto-nomy	-.03	1	.43***	.20***	.13***	-.04	-.12**	-.13**	-.21***	-.06	-.07	-.11*	-.03	-.14**	-.10*	-.03
3.Role clarity	.01	.31***	1	.62***	.50***	-.12**	-.18***	-.22***	-.23***	-.14**	-.18***	-.22***	-.19***	-.27***	-.14**	-.08
4.Lea-derships	.11*	.15***	.62***	1	.65***	-.17***	-.10*	-.17***	-.16***	-.19***	-.19***	-.22***	-.14**	-.21***	-.19***	-.09
support 5.Confi-dence	.16***	.17***	.55***	.63***	1	-.22***	-.09*	-.13**	-.18***	-.19***	-.17***	-.19***	-.13**	-.24***	-.15**	-.05
6.Stress manage-ment	-.32***	-.11*	-.13***	-.10*	-.20***	1	.44***	.52***	.53***	.40***	.44***	.42***	.33***	.35***	.27***	.26***
7.General QoL	.05	-.19***	-.24***	-.12**	-.15***	.38***	1	.69***	.57***	.41***	.56***	.28***	.25***	.31***	.15***	.16***
8.Physical QoL	-.11*	-.28***	-.22***	-.05	-.19***	.45***	.64***	1	.66***	.52***	.67***	.38***	.34***	.33***	.20***	.23***
9.Psycholo-gical QoL	-.03	-.29***	-.31***	-.21***	-.29***	.47***	.57***	.68***	1	.52***	.57***	.46***	.38***	.44***	.30***	.24***
10.Social QoL	-.06	-.20***	-.25***	-.19***	-.29***	.29***	.36***	.47***	.58***	1	.50***	.56***	.54***	.48***	.38***	.22***
11.Envi-ronmental QoL	-.07	-.19***	-.33***	-.25***	-.27***	.37***	.62***	.64***	.56***	.34***	1	.34***	.28***	.31***	.21***	.25***
12.Social Support	-.09*	-.18***	-.24***	-.24***	-.23***	.33***	.37***	.42***	.48***	.52***	.39***	1	.81***	.84***	.68***	.59***
Total 13.Social Support:	-.12**	-.17***	-.19***	-.20***	-.19***	.17***	.24***	.30***	.36***	.45***	.24***	.82***	1	.56***	.42***	.32***
friends 14.Social Support:	.02	-.18***	-.20***	-.21***	-.22***	.29***	.42***	.43***	.50***	.52***	.39***	.82***	.57***	1	.48***	.35***
intimacy 15.Social Support:	-.15**	-.05	-.15***	-.13**	-.19***	.26***	.18***	.26***	.32***	.36***	.23***	.64***	.41***	.39***	1	.10*
family 16.Social Support:	-.05	-.09*	-.13**	-.09*	-.05	.23***	.22***	.23***	.18***	.19***	.30***	.60***	.29***	.33***	.16***	1
activities																

Note. Below the diagonal: working; upper the diagonal: retired. *** $p < .001$, ** $p < .01$, * $p < .05$.

life, and friends' and activities' support. Furthermore, family support and lack of autonomy presented a negative correlation only in retired participants. Finally, activities' support was negatively related to lack of role clarity and lack of leadership support only in working participants, while physical quality of life was negatively correlated with lack of leadership support in retired participants.

Table 3 shows the results of stepwise regression analyses to explain scores in overall quality of life. In the first step, more academic attainment and living at own house/apartment were related to more quality of life in both retired and working participants, while age showed a positive effect only in working participants. In the second step, workload, autonomy, role clarity and stress affected quality of life in working people, while only role clarity and stress remained significant for retired ones.

The explained variance of demographics and work-related psychosocial conditions was 31% in the total sample. In the final step, support by intimacy presented a positive effect on overall quality of life, especially in working participants. R^2 reached a significant value of .37 in working subsample, and a significant value of .34 in retired subsample.

Structural equation models

Table 4 described the standardized solutions for the paths included in the structural equation models tested, examining data in the total sample and by labor situation. The three models tested

Table 3. *Stepwise regression analyses to examine overall quality of life on the basis of demographics, work-related psychosocial conditions and social support, in the total sample and by labor situation*

	Total	Working	Retired
Step 1	R2= .17	R2= .15	R2= .17
	ΔF = 24.56***	ΔF =12.16***	ΔF = 11.48***
Age	.05	.10*	.01
Gender	.05	.06	.03
Civil state	-.04	-.01	-.07
Parenthood	.04	.04	.05
Academic attainment	.35***	.34***	.32***
Residence	-.11**	-.10*	-.13*
Step 2	R2= .31	R2= .31	R2= .31
	ΔF = 25.13***	ΔF = 15.92***	ΔF = 11.11***
Age	.01	.09*	-.02
Gender	.01	.02	-.03
Civil state	-.06	-.05	-.08
Parenthood	.06	.05	.09
Academic attainment	.23***	.24***	.18**
Residence	-.10**	-.11*	-.11*
Workload	.10**	.15**	.04
Autonomy	-.06	-.09*	-.03
Role clarity	-.16***	-.14*	-.17**
Leadership support	.03	.05	.01
Confidence	-.02	-.05	.04
Stress management	.34***	.36***	.35***
Step 3	R2= .35	R2= .37	R2= .34
	ΔF = 11.29***	ΔF = 9.17***	ΔF = 2.68*
Age	.01	.11**	-.02
Gender	.01	.02	-.02
Civil state	-.05	-.04	-.06
Parenthood	.07*	.04	.11*
Academic attainment	.22***	.22***	.18**
Residence	-.09**	-.08	-.10
Workload	.09**	.11*	.05
Autonomy	-.04	-.07	-.03
Role clarity	-.14**	-.14*	-.14*
Leadership support	.05	.07	.01
Confidence	-.01	-.03	.04
Stress management	.28***	.28***	.30***
Social Support: friends	-.01	-.04	.03
Social Support: intimacy	.21***	.28***	.13*
Social Support: family	.01	-.01	.02
Social Support: activities	.03	.03	.01

Note. VD: Overall Quality of Life. *** p< .001, ** p< .01, * p< .05.

showed good overall fit, reaching an explained variance for quality of life factor around 60%. Some differences in the paths were observed between working and retired subsample. Autonomy, role clarity, leadership support and confidence presented effects on quality of life factor only in working participants, while workload presented an effect only in retired ones. Moreover, in all participants, stress management (with greater effect in retired participants) and social support (with greater effect in working participants) showed positive influence on quality of life factor. Better work-related psychosocial conditions and higher social support were related to an increased quality of life. Concerning multigroup analyses, χ^2 tests showed that confidence only had a significant effect in quality of life in working participants, while stress management was more strongly associated with quality of life in retired ones. Thus, confidence problems were related to lower quality of life in working participants, and better stress management was specially associated with more positive quality of life after retirement.

Regarding interrelations between social support factor and work-related psychosocial conditions, a negative association was observed with workload only in retired participants. In general, social support was positively associated with better work-related psychosocial conditions in all

Table 4. *Standardized coefficients of the paths included in the structural equation models of the relationships between work-related psychosocial condition, social support factor and quality of life factor, in the total sample and by labor situation*

		Effects		Effects' comparison	
Paths	Total	Working	Retired	Constraint χ^2	*p*
Workload->Quality of Life	.09*	.04	.12*	.80	.371
Autonomy->Quality of Life	-.12*	-.12*	-.09	.28	.599
Role Clarity->Quality of Life	-.10*	-.16*	-.07	.81	.369
Leadership Support->Quality of Life	.07	.15*	-.01	1.91	.167
Confidence->Quality of Life	-.08	-.16*	.02	4.42	**.035**
Stress management->Quality of Life	.38*	.32*	.46*	8.68	**.003**
Social Support->Quality of Life	.47*	.50*	.42*	.29	.590
Workload<->Social Support	-.14*	-.06	-.23*	3.73	.053
Autonomy<-> Social Support	-.20*	-.23*	-.15*	.75	.388
Role Clarity<-> Social Support	-.26*	-.27*	-.27*	1.70	.192
Leadership Support<-> Social Support	-.26*	-.29*	-.23*	1.98	.159
Confidence<-> Social Support	-.26*	-.29*	-.21*	.09	.764
Stress management< -> Social Support	.40*	.35*	.47*	.02	.890
Workload<-> Autonomy	-.11*	-.07	-.14*	4.46	**.035**
Workload<-> Role Clarity	.07	-.02	.16*	7.80	**.005**
Workload<->Leadership Support	.17*	.12*	.24*	.07	.794
Workload<-> Confidence	.16*	.12*	.21*	.01	.980
Workload<-> Stress management	-.27*	-.27*	-.25*	.91	.341
Autonomy<-> Role Clarity	.38*	.32*	.45*	7.44	**.006**
Autonomy<->Leadership Support	.18*	.18*	.18*	.07	.792
Autonomy<-> Confidence	.16*	.17*	.14*	.26	.608
Autonomy<-> Stress management	-.11*	-.10*	-.12*	.41	.522
Role Clarity<->Leadership Support	.62*	.65*	.58*	6.23	**.013**
Role Clarity<-> Confidence	.52*	.54*	.50*	1.84	.175
Role Clarity<-> Stress management	-.15*	-.14*	-.16*	.78	.379
Confidence<->Leadership Support	.67*	.69*	.65*	.01	.983
Confidence<-> Stress management	-.18*	-.18*	-.18*	.33	.569
Leadership Support<-> Stress management	-.16*	-.13*	-.18*	.11	.742

Note. Model fit. Total: $\chi^2(53, N = 1195) = 125.82$, $p < .001$, $\chi^2/df = 2.37$, CFI = .977, RMSEA = .04, 90% CI RMSEA = .03 - .05, $R^2 = .60$. Working: $\chi^2(53, N = 601) = 117.24$, $p < .001$, $\chi^2/df = 2.21$, CFI = .963, RMSEA = .05, 90% CI RMSEA = .04 - .07, $R^2 = .62$. Retired: $\chi^2(53, N = 594) = 101.64$, $p < .001$, $\chi^2/df = 1.92$, CFI = .969, RMSEA = .05, 90% CI RMSEA = .04 - .07, $R^2 = .59$. * $p < .05$.

participants. The strongest association was found with stress indicator, especially in retired participants. Furthermore, although most work-related psychosocial conditions were significantly interrelated in the total sample, results pointed out that workload was associated with autonomy and role clarity only in retired participants.

Finally, regarding interrelations among work-related psychosocial conditions, some differences were observed in the multigroup analysis, as accounted the χ^2 tests. More workload was associated with less autonomy and more role clarity only in retired participants. Moreover, more autonomy was associated with greater role clarity, especially in retired participants. Furthermore, especially in working participants, it was observed that role clarity was positively interrelated with leadership support.

Discussion

This study aimed to better understand and characterize the relation between quality of life, work-related psychosocial conditions perception and social support for both working and retired adults, in order to identify working and retired adults' different risk patterns and highlighted different and specific intervention needs.

In general, more positive work-related psychosocial conditions were associated with greater social support and higher/better quality of life. Moreover, high social support was associated with high quality of life. In this sense, it has been possible to observe a growing concern with the implementation of strategies that seek to promote the quality of life of the individuals and that aim to ensure an active life in aging process (European Commission, 2015; Gaspar et al., 2017; Illario et al., 2016).

Good scores in quality of life were observed, with greater averages on psychological and social quality of life, and the lowest one in the environmental dimension. Similar results were also found in other studies (e.g. WHOQOL Group, 1994; Gaspar et al., 2017).

Concerning social support, high means were observed, especially in family dimension, with a lower mean in the dimension of activities. Some differences by labor situation were detected, so that more workload and stress were reported by working participants, as well as more physical, psychological and social quality of life. Moreover, more support by intimacy was observed in working participants, while greater family support was reported by retired participants. With age, there can be an increased risk of death of loved ones, friends and greater vulnerability to loneliness, social isolation and weakening of social support networks (WHO, 2002), which translates into a decrease in the relationships of intimacy. Throughout the aging process, the tendency is to move from extended family life to after the widowhood, a life alone, which contributes to situations of solitude and/or isolation (Aboim, 2003).

In all participants, stress management (with greater effect in retired participants) and social support (with greater effect in working participants) showed positive influence on the quality of life factor. Better work-related psychosocial conditions and higher social support were related to an increased quality of life. When individuals leave the job market, there is a loss of contact with coworkers and with the work context, which in turn can help strengthen other relationships, such as family and friends (Van den Bogaard et al., 2014).

Autonomy, role clarity, leadership support and confidence presented effects on quality of life factor only in working participants, while workload presented an effect only in retired ones. There are certain stereotypes associated with older workers who tend to relate age with lower ability to work, to learn and to grow. Thus, there is a tendency to associate these workers with the idea that they are waiting for retirement, that they are more resistant to the use of new technologies, less apt for learning, slower in information processing, more inflexible, less motivated, among others aspects (Gaillard & Desmette, 2010; Malinen & Johnston, 2013; Torres, 2006; Truxillo et al., 2012). Nevertheless, there are also age-positive associations, as older workers tend to be perceived as more stable (Truxillo et al., 2012), more experienced, more trustworthy and as committing fewer mistakes in the performance of their duties when compared to younger workers (Gaillard & Desmette, 2010). Thus, some of the negative assumptions about age can be a stressor for elderly workers, as they reflect on the level of work-related factors and can condition many aspects of their working life (Kulik et al., , 2016; Rabl, 2010; Torres, 2006). The experience of these types of environments may lead to less interest in the tasks (Smith et al., 2007), to

a more negative evaluation of the job experience (Adams et al., 2006) and may even lead individuals to experience a significant reduction in the confidence in their own abilities (Kock et al., 2008).

In line with Self-determination theory approach, work environments characterized by psychological needs satisfaction, i.e., autonomy, competence and relatedness, are expected to foster intrinsic motivation (Gagné & Deci, 2005), as well as health and well-being (Gómez-Baya & Lucia-Casademunt, 2018). Thus, positive organizational psychology postulates that workplace may constitute an excellent place for promoting well-being at adulthood and preparing for subsequent life transitions (Donaldson & Ko, 2010; Salanova et al., 2016). Human resource management practices should improve employees' abilities and opportunities within the organizational framework, establishing such work conditions that improve quality of life, especially in older adults in order to prepare the transition to retirement (Blekesaune & Solem, 2005).

Despite the contributions described, some limitations must be acknowledged. Due to the cross-sectional design used, only associations between study variables can be concluded. As a future research line, a longitudinal study is recommended to examine the relationships between work-related antecedents and quality of life outcomes in adults after a follow-up from working to retirement. Moreover, only self-reports have been administered, providing subjective information. The assessment may be completed with objective information on, e.g., health problems or disabilities collected by professionals. Future research should also control other relevant variables to explain adult quality of life, such as personality, work motivation and self-regulation.

Conclusions

In conclusion, social support was positively associated with better work-related psychosocial conditions in all participants. Regarding interrelations between social support factor and work-related psychosocial conditions, a negative association was observed with workload only in retired participants. The strongest association was found for the stress indicator, especially in retired participants. Finally, although most work-related psychosocial conditions were significantly interrelated in the total sample, results pointed out that workload was associated with autonomy and role clarity only in retired participants. The stigmas that often accompany individuals as they approach retirement age and the breakdowns in social relationships that inevitably happen are two of the variables that mark the aging process, and which should be considered and analyzed (Cabral & Ferreira, 2014).

The main limitation of this work is that its sample is a convenience one, originate from urban areas and therefore is does not representative of country population.

For future work it would be also interesting to develop a longitudinal study assessing both pre-retirement and retirement phases and including qualitative methods, by using focus groups with employers, pre-retired employs and retired people, as well as addressing health and social professionals that work with retired people, in order to identify their perception and attitudes.

That information could contribute to the promotion and prevention concerning health in workplace and could prevent its impact in the long run with the retired population. The results of this study have important implications in managing the work psychosocial conditions and the age factor in the workplace. Moreover, it highlights different patterns of determinants of quality of life among retired and non-retired persons, pointing out respectively a manageable stress and a positively perceived social support as very relevant features.

This is an important message for public policies that should cherish stress management techniques and a friendly manageable stress environment in the case of non-retired workers, and the possibility of keeping and promoting social support and supportive environments among the retired.

References

Aboim, S. (2003). Evolução das estruturas domésticas [Evolution of domestic structures]. *Sociologia, Problemas e Práticas*, *43*, 13-30.

Adams, G., Garcia, D. M., Purdie-Vaughns, V., & Steele, C. M. (2006). The detrimental effects of a suggestion of sexism in an instruction situation. *Journal of Experimental Social Psychology*, *42*, 602–

615. http://doi.org/10.1016/j.jesp.2005.10.004

Amado, C. A. F., São José, J. M. S. & Santos, S. P. (2016). Measuring active ageing: A data envelopment analysis approach. *European Journal of Operational Research*, *255*(1), 1-17. http://doi.org/10.1016/j.ejor.2016.04.048

Azar, A., Staudinger, U. M., Slachevsky, A., Madero-Cabib, I., & Calvo, E. (2019). From snapshots to movies: The association between retirement sequences and aging trajectories in limitations to perform activities of daily living. *Journal of Aging and Health*, *31*(2), 293-321. http://doi.org/10.1177/0898264318782096

Behncke, S. (2012). Does retirement trigger ill health? *Health economics*, *21*(3), 282-300. http://doi.org/10.1002/hec.1712

Blekesaune, M., & Solem, P. E. (2005). Working conditions and early retirement: A prospective study of retirement behavior. *Research on Aging*, *27*(1), 3-30. https://doi.org/10.1177/0164027504271438

BNQ. (2018). *Psychological health and safety in the workplace: prevention, promotion, and guidance to staged implementation*. Bureau de normalization du Québec.

Bousquet, J., Kuh, D., Bewick, M., Standberg, T., Farrell, J., Pengelly, R., Joel, M. E., Rodriguez Mañas, Mercier, L. J., Bringer,J., Camuzat, T., Bourret, R., Bedbrook, A., Kowalski, M. L., Samolinski, B., Bonini, S., Brayne, C., Michel, J. P., Venne, J. ... Zins -Show, M. (2015). Operational definition of active and healthy ageing (AHA): a conceptual framework. *The journal of nutrition, health & aging*, *19*(9), 955-960. http://doi.org/10.1007/s12603-015-0589-6

Bradley, L., McDonald, P., & Cox, S. (2019). The critical role of co-worker involvement: An extended measure of the workplace environment to support work–life balance. *Journal of Management & Organization*, 1-22. http://doi:10.1017/jmo.2019.65

Burton, J. (2010). *WHO healthy Workplaces Framework and Model: Background and Supporting Literature and Practice*. World Health Organization.

Byles, J., Tavener, M., Robinson, I., Parkinson, L., Smith, P. W., Stevenson, D., Leigh, L & Curryer, C. (2013). Transforming retirement: New definitions of life after work. *Journal of women & aging*, *25*(1), 24-44. http://doi.org/10.1080/08952841.2012.717855

Cabral, M. V. & Ferreira, P. M. (2014). *Envelhecimento ativo em Portugal. Trabalho, reforma, lazer e redes sociais* [Active aging in Portugal. Work, retirement, leisure and social networks]. Lisboa: Fundação Francisco Manuel dos Santos.

Canavarro, M. C., Simões, M. R., Vaz Serra, A., Pereira, M., Rijo, D., Quartilho, M. J., Gameiro, S., Paredes, T, & Carona, C. (2007). WHOQOL-BREF: Instrumento de Avaliação da Qualidade de Vida da Organização Mundial de Saúde [World Health Organization Quality of Life Assessment Instrument]. In, M. Simões, C. Machado, M. Gonçalves, & L. Almeida (Eds.) *Avaliação psicológica. Instrumentos validados para a população Portuguesa*, vol. III (pp. 77-100). Quarteto Editora.

Clarke, M. A., & Hill, S. R. (2012). Promoting employee wellbeing and quality service outcomes: The role of HRM practices. *Journal of Management & Organization*, *18*(5), 702-713. http://doi.org/10.1017/S1833367200000626

Davezies, P. H. (1998). De la récupération psychique [Psychic recovery]. *Santé et Travail*, *25*, 35-37.

Davies, E., & Cartwright, S. (2011). Psychological and psychosocial predictors of attitudes to working past normal retirement age. *Employee Relations*, *33*(3), 249-268. http://doi.org/10.1108/01425451111121768

Dejours, C. (2000). *Travail, usure mental [Work, mental wear]*. Bayard Éditions.

Dejours, C. (2011). Psicopatologia do trabalho – Psicodinâmica do Trabalho [Work psychopathology – Work psychodynamics. *Laboreal*, *7*(1), 13-16. http://laboreal.up.pt/revista/artigo.php?id=37t45nSU5471124227847824511

Donaldson, S. I., & Ko, I. (2010). Positive organizational psychology, behavior, and scholarship: A review of the emerging literature and evidence base. *The Journal of Positive Psychology*, *5*(3), 177-

191. https://doi.org/10.1080/17439761003790930

Eisapareh, K., Nazari, M., Kaveh, M. H., & Ghahremani, L. (2020). The relationship between job stress and health literacy with the quality of work life among Iranian industrial workers: The moderating role of social support. Current Psychology, 1-9. http://doi.org/10.1007/s12144-020-00782-5

Eurofound (2015). *Sexto Inquérito Europeu sobre as Condições de Trabalho*. Retrieved from https://www.eurofound.europa.eu/pt/data/european-working-conditions-survey

European Commission. (2015). *The 2015 Ageing Report - Economic and budgetary projections for the 28 EU Member States (2016-2070)*. Publications Office of the European Union.

Farriol-Baroni, V., González-García, L., Luque-García, A., Postigo-Zegarra, S., & Pérez-Ruiz, S. (2021). Influence of Social Support and Subjective Well-Being on the Perceived Overall Health of the Elderly. *International Journal of Environmental Research and Public Health*, *18*(10), 5438. https://doi.org/10.3390/ijerph18105438

Friedman, E. M., Ruini, C., Foy, R., Jaros, L., Sampson, H., & Ryff, C. D. (2017). Lighten UP! A community-based group intervention to promote psychological well-being in older adults. *Aging & mental health*, *21*(2), 199-205. http://doi.org/10.1080/13607863.2015.1093605

Frisch, M. B. (1998). Quality of life therapy and assessment in health care. *Clinical Psychology: Science and Practice*, *5*(1), 19–40. https://doi.org/10.1111/j.1468-2850.1998.tb00132.x

Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational behavior*, *26*(4), 331-362. https://doi.org/10.1002/job.322

Gaillard, M. & Desmette, D. (2010). (In)validating Stereotypes About Older Workers Influences Their Intentions to Retire Early and to Learn and Develop. *Basic and Applied Social Psychology*, *32*(1), 86-98. http://doi.org/10.1080/01973530903435763

Gaspar, T., Cabrita, T., Rebelo, A. & Matos M. (2017). Psychological and Social Factors That Influence Quality of Life: Gender, Age and Professional Status Differences. *Psychology Research*, *7*,(9), 489-498. http://doi.org/10.17265/2159-5542/2017.09.003

Gómez-Baya, D., & Lucia-Casademunt, A. M. (2018). A self-determination theory approach to health and well-being in the workplace: Results from the sixth European working conditions survey in Spain. *Journal of Applied Social Psychology*, *48*(5), 269-283. https://doi.org/10.1111/jasp.12511

Halvorsrud, L. & Kalfoss, M. (2007). The conceptualization and measurement of quality of life in older adults: a review of empirical studies published during 1994-2006. *European Journal of Ageing*, *4*, 229-246. http://doi.org/10.1007/s10433-007-0063-3

Hershey, D. A., & Henkens, K. (2013). Impact of different types of retirement transitions on perceived satisfaction with life. *The Gerontologist*, *54*(2), 232-244. http://doi.org/10.1093/geront/gnt006

Illario, M., Vollenbroek-Hutten, M. M., Molloy, D. W., Menditto, E., Iaccarino, G., & Eklund, P. (2016). Active and healthy ageing and independent living 2016. *Journal of aging research*, *2016*. http://doi.org/10.1155/2016/8062079

Koch S.C., Müller, S. M., Sieverding, & M. (2008). Women and computers: Effects of stereotype threat on attribution of failure. *Computers & Education*, *51*, 1795–1803. https://doi.org/10.1016/j.compedu.2008.05.007

Kossen, C., & Pedersen, C. (2008). Older workers in Australia: The myths, the realities and the battle over workforce 'flexibility'. *Journal of Management & Organization*, *14*(1), 73-84. http://doi.org/10.1017/S1833367200003485

Kristensen, T. S., Hannerz, H., Hogh, A., & Borg, V. (2005). The Copenhagen Psychosocial Questionnaire - a tool for the assessment and improvement of the psychosocial work environment. *Scandinavian journal of work environment and health*, *31*(6), 438-449.

Kulik, C., Perera, S. & Cregan, C. (2016). Engage me: The mature-age worker and stereoty-

pe threat. *The Academy of Management Journal*, *59*(6), 1-57. http://doi.org/10.5465/amj.2015.0564

LaRocca, M. A., & Scogin, F. R. (2015). The Effect of Social Support on Quality of Life in Older Adults Receiving Cognitive Behavioral Therapy. *Clinical gerontologist*, *38*(2), 131–148.

Lee, Y., Chi, I., & Palinkas, L. A. (2018). Retirement, leisure activity engagement, and cognition among older adults in the United States. *Journal of Aging and Health*, *31*(7), 1-23. http://doi.org/10.1177/0898264318767030

Liu, D., Xi, J., Hall, B. J., Fu, M., Zhang, B., Guo, J., & Feng, X. (2020). Attitudes toward aging, social support and depression among older adults: Difference by urban and rural areas in China. *Journal of Affective Disorders*, *274*, 85-92. http://doi.org/10.1016/j.jad.2020.05.052

Low, G., Molzahn, A. E., & Kalfoss, M. (2008). Quality of life of older adults in Canada and Norway: Examining the Iowa model. *Western Journal of Nursing Research*, *30*(4), 458–476. http://doi.org/10.1177/0193945907305675

Malinen, S. & Johnston, L. (2013). Workplace ageism: discovering hidden bias. *Experimental Aging Research*, *39*, 445-465. http://doi.org/10.1080/0361073X.2013.808111

Mari, F. R., Alves, G. G., Aerts, D. R. G. S. & Camara, S. (2016). O processo de envelhecimento e a saúde: o que pensam as pessoas de meia-idade sobre o tema [The aging process and health: what middle-aged people think about the topic]. *Revista Brasileira de Geriatria e Gerontologia*, *19*(1), 35-44. http://doi.org/10.1590/1809-9823.2016.14122

Marques, E. M. B. G., Sánchez, C. S. & Vicario, B. P. (2014). Perception of the quality of life of a group of older people. *Revista de Enfermagem Referência*, *4*(1), 73-81.

Nilsen, C., Darin-Mattsson, A., Hyde, M., & Wastesson, J. W. (2021). Life-course trajectories of working conditions and successful ageing. *Scandinavian journal of public health*, 14034948211013279. http://doi.org/10.1177/14034948211013279

Puchol, A. S., del Río, B. M., de Limia Ramírez, K. R., Gil, G. B., & Zaragoza, F. A. M. (2013). Factores de riesgo psicosocial laboral y burnout en función de la categoría profesional [Psychosocial risk factors at work and burnout depending on the occupational category]. *Revista de Psicología de la Salud*, *1*(1), 74-93. https://doi.org/10.21134/pssa.v1i1.885

Quiñones, M., & Porras, N. (2019). Riesgos psicosociales intra y extra laborales en una empresa de seguridad privada de Bogotá [Intra psychosocial risks and extra labor in a Bogota private security company]. *Revista de psicología de la salud*, *7*(1), 152-181.

Rabl, T. (2010). "Age, discrimination, and achievement motives", *Personnel Review*, *39*(4), 448 – 467. http://doi.org/10.1108/00483481011045416

Ribeiro, J. L. P. (1999). Escala de satisfação com o suporte social (ESSS) [Social support satisfaction scale]. *Análise Psicológica*, *3*(17), 547-558.

Salanova, M., Llorens, S., & Martínez, I. M. (2016). Aportaciones desde la Psicología Organizacional Positiva para desarrollar organizaciones saludables y resilientes. [Contributions from Positive Organizational Psychology to develop healthy and resilient organizations]. *Papeles Del Psicólogo*, *37*, 177–184. http://www.papelesdelpsicologo.es/pdf/2773.pdf

Shultz K., Wang M. (2011). Psychological perspectives on the changing nature of retirement. *American Psychologist*, *66*, 170–179. http://doi.org/10.1037/a0022411

Silva, C., Amaral, V., Pereira, A., Bem-haja, P., Pereira, A., Rodrigues, V., Cotrim, V., Silvério, T., & Nossa, P. (2011). *Copenhagen Psychosocial Questionnaire. Portugal e Países Africanos de Língua Oficial Portuguesa* [Copenhagen Psychosocial Questionnaire. Portugal and Portuguese-speaking African Countries]. Departamento de Educação, Universidade de Aveiro.

Smith J. L., Sansone, C., & White, P. H (2007). The stereotyped task engagement process: The role of interest and achievement motivation. *Journal of Educational Psychology*, *99*(1), 99–114. http://doi.org/10.1037/0022-0663.99.1.99

Stephens, C., Alpass, F., Towers, A., & Stevenson, B. (2011). The effects of types of social networ-

ks, perceived social support, and loneliness on the health of older people: Accounting for the social context. *Journal of Aging and Health*, *23*(6), 887-911. http://doi.org/10.1177/0898264311400189

Teiger, C. (1995). Penser les relations âge/travail au cours du temps [Thinking about age / work relationships over time]. In Jean-Claude Marquié, Dominique Paumès e Serge Volkoff (Eds.), *Le travail au fil de l'âge* (pp. 15-72). Octares Éditions.

Thébaud-Mony, A., Davezies, Ph., Vogel, L. & Volkoff, S. (2015). *Les risques du travail. Pour ne pas perdre sa vie à la gagner [The risks of work. So that you do not waste your life earning it]*. La Découverte.

Torres, I. (2006). Mudanças organizacionais, saúde e bem-estar na banca portuguesa. Idade e sentidos do trabalho numa nova relação salarial (resumo) [Organizational changes, health and well-being in Portuguese banking. Age and meanings of work in a new wage relationship (summary)]. *Laboreal*, *2*(2), 62-65. http://laboreal.up.pt/revista/artigo.php?id=48u56oTV658223389652425952

Truxillo, D. M., McCune, E. A. & Bertolino, M. (2012). Perceptions of older versus younger workers in terms of big five facets, proactive personality, cognitive ability and job performance. *Journal of Applied Social Psychology*, *42*(11), 2607-2639. http://doi.org/10.1111/j.1559-1816.2012.00954.x

Van den Bogaard, L., Henkens, K., & Kalmijn, M. (2014). So now what? Effects of retirement on civic engagement. *Ageing & Society*, *34*(7), 1170-1192. http://doi.org/10.1017/S0144686X13000019

van der Noordt, M. (2021). Trends in working life expectancy, working conditions and health in an ageing population. Network for Studies on Pensions, Aging and Retirement (Netspar). ISBN: 978-94-6419-153-0

Wang, X. (2016). Subjective well-being associated with size of social network and social support of elderly. *Journal of Health Psychology*, *21*(6), 1037-1042. http://doi.org/10.1177/1359105314544136

WHOQOL Group (1994). Development of the WHOQOL: Rationale and current status. *International Journal of Mental Health*, *23*(3), 24-56. https://doi.org/10.1080/00207411.1994.11449286

WHOQOL Group (1998). The World Health Organization Quality of Life Assessment (WHOQOL): development and general psychometric properties. *Social Science and Medicine*, *46*, 1569-85.

World Health Organization (WHO). (2002). *Active ageing. A policy framework*. . https://apps.who.int/iris/handle/10665/67215

World Health Organization (WHO). (2015). *World report on ageing and health*. https://apps.who.int/iris/handle/10665/186463.

Zaninotto, P., Falaschetti, E., & Sacker, A. (2009). Age trajectories of quality of life among older adults: Results from the English longitudinal study of ageing. *Quality Of Life Research: An International Journal Of Quality Of Life Aspects Of Treatment, Care & Rehabilitation*, *18*(10), 1301–1309.