



**The moderating role of age in the relationship between  
perceived overqualification, employability, job insecurity  
and global psychological needs satisfaction**

Journal:	<i>Management Research, The Journal of the Iberoamerican Academy of Management</i>
Manuscript ID	MRJIAM-01-2022-1261.R1
Manuscript Type:	Research Paper
Keywords:	perceived employability, perceived job insecurity, perceived overqualification, global psychological needs satisfaction, age groups moderation

SCHOLARONE™  
Manuscripts

1  
2  
3 **The moderating role of age in the relationship between perceived**  
4 **overqualification, employability, job insecurity and global psychological**  
5 **needs satisfaction**  
6  
7  
8  
9

10  
11  
12  
13  
14 **O papel moderador da idade na relação entre a sobrequalificação**  
15 **percebida, a empregabilidade percebida, a insegurança no emprego**  
16 **percebida e a satisfação das necessidades psicológicas globais**  
17  
18  
19  
20  
21  
22  
23

24 **El papel moderador de la edad en la relación entre la sobrecualificación**  
25 **percibida, la empleabilidad, la precariedad laboral y la satisfacción de las**  
26 **necesidades psicológicas globales**  
27  
28  
29  
30  
31  
32  
33  
34

35 **Abstract**  
36  
37

38 **Purpose** - This study examines the relationship between perceived overqualification,  
39 perceived employability, perceived job insecurity and global psychological needs  
40 satisfaction, considering the moderating role of age groups.  
41  
42  
43  
44

45 **Design/methodology/approach** - A cross-sectional survey design with a sample of 350  
46 individuals was used in this study.  
47  
48  
49

50 **Findings** - Perceived overqualification, perceived employability and perceived job insecurity  
51 were, in general, significantly related to global psychological needs satisfaction. However,  
52 these relationships differ among age groups. Namely, for younger individuals, a negative link  
53  
54  
55  
56  
57  
58  
59  
60

1  
2  
3 between perceived overqualification and global psychological needs satisfaction was  
4  
5 observed, and for middle-aged individuals, perceived employability was positively related to  
6  
7 global psychological needs satisfaction, while perceived job insecurity and perceived  
8  
9 overqualification were both negatively related to global psychological needs satisfaction.  
10  
11 Finally, for older individuals, perceived job insecurity and perceived overqualification were  
12  
13 both negatively related to global psychological needs satisfaction. **Originality** - By  
14  
15 addressing the moderating role of age, this study is original and has practical implications for  
16  
17 age diversity management.  
18  
19  
20  
21

22  
23 **Keywords:** perceived employability; perceived job insecurity; perceived overqualification;  
24  
25 global psychological needs satisfaction; age groups moderation  
26  
27

## 28 **Resumo**

29  
30  
31 **Objetivo** - Este estudo tem como objetivo estudar a relação entre a sobrequalificação, a  
32  
33 empregabilidade, a insegurança no trabalho percebidas e satisfação das necessidades  
34  
35 psicológicas globais, considerando o papel moderador dos grupos etários.  
36  
37

38  
39 **Design/metodologia/abordagem** - Foi utilizado neste estudo um desenho de pesquisa  
40  
41 transversal com uma amostra de 350 indivíduos.  
42  
43

44  
45 **Resultados** - A sobrequalificação percebida, a empregabilidade percebida e a insegurança  
46  
47 no trabalho percebida estão, em geral, significativamente relacionadas com a satisfação das  
48  
49 necessidades psicológicas globais. No entanto, essas relações diferem entre as faixas etárias.  
50  
51 Ou seja, para os indivíduos mais jovens, foi observada uma relação negativa entre a percepção  
52  
53 de sobrequalificação e a satisfação das necessidades psicológicas globais, e para os  
54  
55  
56  
57  
58  
59  
60

1  
2  
3 indivíduos de meia-idade, a empregabilidade percebida está positivamente relacionada à  
4  
5 satisfação das necessidades psicológicas globais, enquanto a insegurança no trabalho  
6  
7 percebida e a sobrequalificação percebida estão negativamente relacionadas à satisfação das  
8  
9 necessidades psicológicas globais. Finalmente, para os indivíduos mais velhos, a insegurança  
10  
11 no trabalho percebida e a sobrequalificação percebida estão negativamente relacionadas à  
12  
13 satisfação das necessidades psicológicas globais.  
14  
15

16  
17  
18 **Originalidade** - Ao abordar o papel moderador da idade, este estudo é original e tem  
19  
20 implicações práticas para a gestão da diversidade em função do grupo etário.  
21  
22

23  
24 **Palavras-chave:** empregabilidade percebida; insegurança no trabalho percebida;  
25  
26 sobrequalificação percebida; satisfação das necessidades psicológicas globais; moderação  
27  
28 por idade  
29  
30

### 31 **Resumen**

32  
33 **Objetivo** - Este estudio examina la relación entre la sobrecualificación percibida, la  
34  
35 empleabilidad percibida, la inseguridad laboral percibida y la satisfacción de las necesidades  
36  
37 psicológicas globales, considerando el papel moderador de los grupos de edad.  
38  
39  
40

41  
42 **Diseño/metodología/enfoque** - En este estudio se utilizó un diseño de encuesta transversal  
43  
44 con una muestra de 350 individuos.  
45  
46

47  
48 **Resultados** - La sobrecualificación percibida, la empleabilidad percibida y la inseguridad  
49  
50 laboral percibida estaban, en general, significativamente relacionadas con la satisfacción de  
51  
52 las necesidades psicológicas globales. Sin embargo, estas relaciones difieren entre los grupos  
53  
54 de edad. En concreto, para los individuos más jóvenes, se observó una relación negativa entre  
55  
56  
57  
58  
59  
60

1  
2  
3 la sobrecualificación percibida y la satisfacción de las necesidades psicológicas globales, y  
4  
5 para los individuos de mediana edad, la empleabilidad percibida se relacionó positivamente  
6  
7 con la satisfacción de las necesidades psicológicas globales, mientras que la inseguridad  
8  
9 laboral percibida y la sobrecualificación percibida se relacionaron negativamente con la  
10  
11 satisfacción de las necesidades psicológicas globales. Finalmente, para los individuos de  
12  
13 mayor edad, la inseguridad laboral percibida y la sobrecualificación percibida se relacionaron  
14  
15 negativamente con la satisfacción de las necesidades psicológicas globales.  
16  
17

18  
19  
20 **Originalidad** - Al abordar el papel moderador de la edad, este estudio es original y tiene  
21  
22 implicaciones prácticas para la gestión de la diversidad de edad en el contexto de las políticas  
23  
24 de RRHH de las organizaciones.  
25  
26

27  
28 **Palabras clave:** empleabilidad percibida; inseguridad laboral percibida; sobrecualificación  
29  
30 percibida; satisfacción de necesidades psicológicas globales; moderación por edad.  
31  
32

### 33 **1. Introduction**

34  
35  
36 Human resources (HR) professionals contribute to helping the organization  
37  
38 successfully meet its goals (Alfes et al., 2019). Moreover, the changing world, (Millar et al.  
39  
40 2018) implies new challenges to Human Resources Management (HRM), namely how to  
41  
42 deal with and manage employees in a competitive world where both organizations and  
43  
44 individuals work to fulfil their goals. Moreover, HRM needs to deal with individuals whose  
45  
46 jobs and working conditions are different, which call for studies focusing on how external or  
47  
48 environmental circumstances impact individuals (Kaabomeir *et al.*, 2022), and how these  
49  
50 external or environmental circumstances are perceived by individuals (Coxen *et al.*, 2021).  
51  
52

53  
54 This framework is highly based on employees' perception of employability, job insecurity  
55  
56  
57  
58  
59  
60

1  
2  
3 and overqualification, that, to the best of our knowledge, up to date, no studies have analyzed  
4 these constructs together, i.e., included in the same conceptual model. Workers'  
5 employability is related to the development of skills and knowledge that increase employees'  
6 value both in the internal as in the external labour market (Rueda *et al.*, 2004; Van der Heijde  
7 and Van der Heijden, 2006). Perceived workers' job insecurity concerns the anticipation of  
8 losing his or her employment involuntarily (Sverke *et al.*, 2002). Overqualification is the  
9 term used to refer to the subjective individuals' approach of having higher education, skills  
10 and experience than what is required to perform his or her job (Maynard, Joseph and  
11 Maynard, 2006).

12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24 Thus, the present study aims to analyze its relationship with the employees' global  
25 psychological needs satisfaction. To guide our theoretical arguments concerning the  
26 relationship between the afore-mentioned constructs and employees' global psychological  
27 needs satisfaction we rely on self-determination theory (SDT; Deci and Ryan, 2000). More  
28 precisely, SDT claims that individuals are motivated and experience well-being when the  
29 basic psychological needs are satisfied (Van den Broeck *et al.*, 2016). The satisfaction of  
30 these basic psychological needs is dependent upon social-contextual factors, such as  
31 perceived overqualification, perceived employability and perceived job insecurity (Chong *et*  
32 *al.*, 2020).

33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45 Additionally, considering the ageing workforce worldwide, age diversity  
46 management has become a significant challenge in HRM (Drabe *et al.*, 2015; Sousa *et al.*,  
47 2019). To successfully handle an age-diverse workforce, it is essential to understand that  
48 each age group has different psychological needs and consequently may react differently to  
49 the HR practices and programs (Sousa *et al.*, 2019). Therefore, we seek to investigate an  
50 unexplored moderating role of age groups (e.g., De Lange *et al.*, 2006; Drabe *et al.*, 2015)

1  
2  
3 on the relationship between perceived overqualification, perceived employability and  
4  
5 perceived job insecurity with employees' global psychological needs satisfaction.  
6

7 We used a quantitative approach with a sample comprising 350 participants to reach  
8  
9 our research goal. To test our hypothesis, we employed structural equation modeling (SEM),  
10  
11 specifically, we performed a multiple group analysis.  
12  
13

14 This study may have contributions to literature and future investigations. First, to the  
15  
16 best of our knowledge, up to date, no studies have analyzed the relationship between  
17  
18 perceived employability, perceived job insecurity, perceived overqualification, and  
19  
20 employees' global psychological needs satisfaction. As such, the present study contributes to  
21  
22 the HRM, Organizational Behavior (OB) and Diversity Management literature since it will  
23  
24 allow gathering empirical evidence to the theoretical predictions of SDT (Deci & Ryan,  
25  
26 2000), which predict social-contextual variables as influencing the degree of employees'  
27  
28 global psychological needs satisfaction.  
29  
30  
31

32 Secondly, although previous studies have already verified the role of age as a  
33  
34 moderating variable on the relationship between contextual variables and workers' results,  
35  
36 such as employees' well-being (e.g., De Lange *et al.*, 2006), the moderating role of age on  
37  
38 the relationship between perceived employability, perceived job insecurity, perceived  
39  
40 overqualification and employees' global psychological needs satisfaction has not yet been  
41  
42 verified. Thus, the current research will allow analyzing if this moderating effect occurs.  
43  
44  
45

46 Moreover, the analysis of the moderating role of the relationship mentioned above  
47  
48 may have practical implications for age management in the organizational setting. As Sousa  
49  
50 and colleagues (2019) noted, the universality of HRM practices is being challenged  
51  
52 nowadays since empirical evidence has shown that work-related motives and attitudes vary  
53  
54  
55  
56  
57  
58  
59  
60

1  
2  
3 according to age groups. As such, scholars and practitioners should contribute to developing  
4 age diversity practices and policies in the organizational context.  
5  
6

7 This study is divided into five sections: Theoretical foundation and hypotheses  
8 development, Method, Results, and, lastly, Discussion, focusing on the research implications,  
9 limitations, and future research paths.  
10  
11  
12  
13

## 14 15 **2. Theoretical foundation and hypotheses development**

### 16 17 **2.1. *Employees' global psychological needs satisfaction***

18  
19 Concerning the literature around the concept of human needs, it is possible to find  
20 several theories on the subject. However, while some theoretical models focus on biological  
21 or physiological needs (e.g., Hull, 1943), other theories address the psychological needs (e.g.,  
22 Baumeister and Leary, 1995; McClelland *et al.*, 1953).  
23  
24  
25  
26  
27  
28

29 The self-determination theory (SDT; Deci and Ryan, 2000), in which the present  
30 study was based, concerns individuals' psychological needs. Among several other existing  
31 theories about psychological needs, this theoretical background was chosen since this theory  
32 already demonstrates applicability in the work context (Deci *et al.*, 2017; Van den Broeck *et*  
33 *al.*, 2016). Moreover, the theoretical predictions of SDT concerning the effect of contextual  
34 variables on psychological needs and human motivation offers a useful framework to explore  
35 any relationships among the constructs under study (Deci *et al.*, 2017).  
36  
37  
38  
39  
40  
41  
42  
43  
44

45 Drawing on SDT, three basic psychological needs essential to promoting higher  
46 levels of individuals' well-being and sustainable motivation can be detached, namely,  
47 relatedness, autonomy, and competency (Van den Broeck *et al.*, 2016). The need for  
48 autonomy is defined as individuals' need to behave with a full sense of ownership of their  
49 behaviour (Chambel *et al.*, 2015; Van den Broeck *et al.*, 2016). Concerning the need for  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60



1  
2  
3 competence, it refers to the individuals' need to feel a sense of mastery over the context and  
4 to develop new skills (Van den Broeck *et al.*, 2016). The need for relatedness represents the  
5 need to feel connected and to develop bonds with other people (Van den Broeck *et al.*, 2016).  
6  
7 Taken together, all of these three basic psychological needs contribute to the individuals'  
8 global level of psychological needs satisfaction (Sánchez-Oliva *et al.*, 2017). More precisely,  
9  
10 a recent study conducted by Gillet, Morin, Huart, Colombat, and Fouquereau (2020) showed  
11 that basic psychological needs satisfaction could be analyzed considering two types of latent  
12 variables, namely: the first, refers to the assessment of the global level of basic psychological  
13 needs satisfaction (i.e., G-factor), and the second, concerns the specific level of satisfaction  
14 of each of the three basic psychological needs (i.e., S-factors). In fact, depending upon the  
15 research goals, in the literature, it is possible to find studies focused on the global level of  
16 basic psychological needs satisfaction (e.g., Chong, Beenen, Gagné, and Dunlop, 2020) while  
17 others focus the analysis on the specific level of satisfaction of each of the three basic  
18 psychological needs (e.g., Clément, Fernet, Morin, and Austin, 2020). Moreover, empirical  
19 studies showed that the specific level of satisfaction of each basic psychological need tends  
20 to be highly correlated (Gillet *et al.*, 2020). For instance, when an organization support the  
21 employees need for autonomy generally the same organization also showed to be concerned  
22 in providing a favourable context to the satisfaction of the employees' basic psychological  
23 need of relatedness and competence (Deci *et al.*, 2017).  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46

47 In the following sections, we will elaborate on why perceived employability,  
48 perceived job insecurity, and perceived overqualification could be significantly related to the  
49 individuals' global psychological needs satisfaction.  
50  
51  
52  
53

## 54 2.2. Perceived employability and employees' global psychological needs satisfaction

55  
56  
57  
58  
59  
60

1  
2  
3 The concept of employability concerns “*the continuous fulfilling, acquiring or*  
4 *creating of work through the optimal use of competencies*” (Van der Heijde and Van der  
5 Heijden, 2006, p. 453) or to the actions designed to develop skills and apply favourable  
6 knowledge, to obtain a place in the labour market (Rueda *et al.*, 2004). De Cuyper and De  
7 Witte (2011) advanced with the following distinction: internal employability refers to  
8 employment opportunities with the current employer (the internal labour market), while  
9 external employability refers to work opportunities with another employer (the external  
10 labour market).  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20

21 Beyond the above-mentioned definitions, some authors see employability as a  
22 dispositional approach based on the employee's skills, activities or attitudes that will increase  
23 their employability (Baruch, 2001; Fugate and Kinicki, 2008). As such, employability is seen  
24 as a personal resource, with general positive consequences for individuals and their career.  
25 Employability may be likely to increase the individual's sense of control over his career by  
26 preventing him from being stuck in his job and is significantly related to employees' positive  
27 emotions, which expresses a positive affective state of enthusiasm and activeness (De Cuyper  
28 *et al.*, 2012; Fugate and Kinicki, 2008; Sousa *et al.*, 2021). Fugate and Kinicki (2008) tested  
29 the influence of employability on positive emotions related to organizational change such as  
30 confidence, security, and pleasure. The results showed that employability positively  
31 influences positive emotions related to organizational change.  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46

47 Building on previous studies (e.g., De Cuyper *et al.*, 2012), we rely on a subjective  
48 approach regarding employability by analyzing the employees' perceptions of their  
49 employability. As such, perceived employability concerns employees' perceptions of  
50 employment opportunities, i.e., the individuals' beliefs about their future employment  
51 chances in the labour market (Van de Broeck *et al.*, 2014).  
52  
53  
54  
55  
56  
57  
58  
59  
60

1  
2  
3 Aligned with what Martini, Cavenago and Marafioti (2019) noted, employability can  
4 be intended both from an individual and an organizational perspective. On the individual  
5 side, individuals are responsible for continuously seeking to acquire knowledge, skills, and  
6 abilities valued by employers in the labour market to become more employable in the labour  
7 market. On the other hand, organizations are also responsible for the development of  
8 individuals' employability by providing continuous opportunities for employees to  
9 strengthen and develop their social and technical skills. Training voluntarily offered by  
10 organizations may promote individuals' perception of employability (Chambel and Sobral,  
11 2011). The study of Marescaux *et al.* (2013) suggests why training opportunities may  
12 positively contribute to the satisfaction of the three basic psychological needs. First, training  
13 opportunities increase individuals' feelings of internal control, which may contribute to the  
14 satisfaction of autonomy needs. Second, training signals to employees they are being valued  
15 and considered by the organization, and that the organization may be engaged in developing  
16 a long-term relationship with employees, which may contribute to increasing the satisfaction  
17 of individuals' relatedness needs. Also, training encloses the opportunity for collaboration  
18 with other people, such as other trainees and the trainers, and therefore, it may constitute an  
19 opportunity to satisfy the relatedness need. Third, when individuals perceive the training as  
20 providing an opportunity to acquire new knowledge and skills, this perception may contribute  
21 to individuals having their need for competence satisfied. Therefore, training opportunities  
22 as promoting the perception of employability can be related to employees' global  
23 psychological needs satisfaction. In addition, according to Van den Broeck *et al.* (2014),  
24 perceived employability can be conceptualized as being a "resource" for workers, having in  
25 mind that workers' perceptions as being "employable" can be related to their perceptions of  
26 competence, interpersonal relationships, and autonomy at work. In fact, building on the SDT,  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

1  
2  
3 when the organization supports employees' intrinsic values (e.g., personal growth) and  
4 provide opportunities for workers to strengthen and develop their skills, as well as, contribute  
5 to the workers' development of positive relationships among their peers, all of these  
6 supportive actions from the organization likely contribute to the workers' perception of  
7 employability. As such, a higher perception of employability can be related to higher  
8 employees' global psychological need satisfaction (Martini *et al.*, 2019; Van den Broeck *et*  
9 *al.*, 2014).

10  
11  
12  
13  
14  
15  
16  
17  
18  
19 Considering the literature review, the following hypothesis was formulated:

20  
21  
22  
23 *Hypothesis 1:* Perceived employability is positively related to employees' global  
24 psychological need satisfaction.

### 25 26 27 28 **2.3. Perceived job insecurity and employees' global psychological needs satisfaction**

29  
30  
31 Recently, Hur (2019) conducted a systematic review and meta-analysis of the  
32 relationship between job security and work attitudes, and he observed associations between  
33 job security and individuals' attitudes at the workplace (i.e., job satisfaction and  
34 organizational commitment). However, up to date, to the best of our knowledge, there is no  
35 empirical evidence regarding the relationship between job insecurity and employees' global  
36 psychological need satisfaction.

37  
38  
39  
40  
41  
42  
43  
44  
45 Generally, job security refers to a legal employment contract between an employee  
46 and an organization that gives the assurance of continued employment or long term  
47 employment (Hur, 2019). On the other hand, job insecurity concerns the individuals'  
48 perception of not being able to maintain a job that is being threatened (Greenhalgh and  
49 Rosenblatt, 1984). As such, job insecurity refers to the anticipation of one subjective  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

1  
2  
3 experience of lost his/her employment involuntarily (Sverke *et al.*, 2002). Job insecurity can  
4  
5 take on a subjective nature, as workers may perceive the same situation in different ways due  
6  
7 to their personality or position in the labour market.  
8  
9

10 Unemployment (i.e., being unemployed or out of the labour market) have several  
11  
12 negative consequences beyond the loss of monetary income (Selenko *et al.*, 2020). A job is  
13  
14 a source of social integration, participation and recognition (Selenko *et al.*, 2020). As such,  
15  
16 unemployment is also likely to affect the psychosocial needs of individuals (Gnambs *et al.*,  
17  
18 2015). In fact, several studies highlighted the negative repercussions of unemployment on  
19  
20 the individuals' health and subjective well-being (e.g., Briody *et al.*, 2020; Gander *et al.*,  
21  
22 2019), which may be caused not only due to the economic loss but to the psychological  
23  
24 consequences of being unemployed. Briody *et al.* (2020) results suggested that, when facing  
25  
26 unemployment, individuals tend to report lower levels of health and mental well-being.  
27  
28 Chambel, Lopes and Batista (2016) studied the effects of temporary agency work contract  
29  
30 transitions on well-being and the results showed that, when employees move from a  
31  
32 temporary job to an unemployment situation, their levels of satisfaction with life decreases.  
33  
34  
35  
36

37 Bearing in mind the negative repercussions of unemployment, it is likely to expect  
38  
39 the individuals' perception of job insecurity will be detrimental to their global psychological  
40  
41 needs satisfaction as well. Thus, the following hypothesis was formulated:  
42  
43  
44

45 *Hypothesis 2: Perceived job insecurity is negatively related to employees' global*  
46  
47 *psychological need satisfaction.*  
48  
49

#### 50 51 **2.4. Perceived overqualification and employees' global psychological needs satisfaction** 52 53 54 55 56 57 58 59 60

1  
2  
3 The term overqualification applies to workers whose education is higher than what is  
4 required to perform his/her job – i.e., objective overqualification (Khan and Morrow, 1991).  
5  
6 However, like the concepts of employability and job insecurity, overqualification can also be  
7  
8 conceptualized as having a subjective nature when the focus of analysis concerns the  
9  
10 individuals' subjective experience of being overqualified for the present job (Lee *et al.*, 2020).  
11  
12 In this vein, according to Maynard, Joseph, and Maynard (2006), overqualification refers to  
13  
14 individuals' perceptions of having more education, skills and experiences than the required  
15  
16 for that specific job. The present study focuses on subjective overqualification since it has  
17  
18 been shown to provide a meaningful prediction of employees' results such as job attitudes  
19  
20 and behaviours (Lee *et al.*, 2020). Moreover, recently Erdogan and colleagues (2018), with  
21  
22 a two-wave study design, also showed that perceived overqualification harms subjective  
23  
24 well-being (i.e., positive affect and life satisfaction). As such, by analyzing subjective  
25  
26 overqualification we also expect to observe significant relationships with employees' global  
27  
28 psychological needs satisfaction.  
29  
30  
31  
32  
33  
34

35 Harari *et al.* (2017) noted that overqualified employees tend to have the capability of  
36  
37 reaching a superior performance; however, they may have lower work motivation. Probably,  
38  
39 this lack of motivation is due to the lower satisfaction of the global psychological needs at  
40  
41 work. In fact, according to the self-determination theory, workers' motivation and the  
42  
43 satisfaction of basic psychological needs are two related concepts (Deci *et al.*, 2017). More  
44  
45 specifically, the higher the satisfaction of the employees' global psychological needs, the  
46  
47 higher their levels of intrinsic motivation, which is associated with increased workers' well-  
48  
49 being (Deci *et al.* 2017).  
50  
51  
52  
53

54 Additionally, the perception of overqualification may affect the employees' global  
55  
56 psychological needs satisfaction since it may cause dissatisfaction, lower personal fulfilment,  
57  
58  
59  
60

1  
2  
3 intention to leave the organization and less cooperation of the employee towards the  
4 organization, resulting from the restrictions or deprivation that the individual feels regarding  
5 the possibility of developing and using their skills at work (Silva, 2016).  
6  
7

8  
9  
10 Considering the literature review, the following hypothesis was formulated:  
11

12  
13 *Hypothesis 3:* Perceived overqualification is negatively related to employees' global  
14 psychological need satisfaction.  
15  
16

### 17 18 19 **2.5. The moderating role of individuals' age groups** 20

21 Based on the life span development theories, namely the life span theory of control  
22 and socioemotional selectivity theory (Carstensen, 2006; Heckhausen and Schulz, 1995), we  
23 further expect age groups to have a moderating effect on the association between perceived  
24 employability, perceived job insecurity, and perceived overqualification with employees'  
25 global psychological needs satisfaction. According to these theories, the younger the  
26 individual more likely he/she is to have an open-ended future time perspective and to value  
27 extrinsic factors of motivation, such as perceived external prestige and social status at work  
28 (Klimchak *et al.*, 2019). By feeling less constrained by time, younger adults are also more  
29 likely to perceive a sense of control over the environment, since they are likely to feel as  
30 having more time and freedom to change directions in major life domains (Klimchak *et al.*,  
31 2019). For instance, younger adults are more likely to change employers or attain a new  
32 educational degree.  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47

48 In contrast, older adults, as the closer they are to retirement, less likely to invest their  
49 resources in learning and developing new work-related skills, which they may not have time  
50 to employ at the workplace (Cavanagh *et al.*, 2019). In other words, when compared to  
51 younger adults, older adults are more likely to have a limited time-frame perspective and to  
52  
53  
54  
55  
56  
57

1  
2  
3 feel more conscious of their mortality (Cavanagh *et al.*, 2019). However, at the same time,  
4  
5 older workers typically are the first category of workers to be seen as having an outdated job  
6  
7 function, which may contribute to an increased feeling of job insecurity (Grah *et al.*, 2019).  
8  
9

10 In fact, although the empirical evidence regarding the moderating effect of age on the  
11  
12 relationship between contextual variables and workers' results remains scarce (Cavanagh *et*  
13  
14 *al.*, 2019; Sousa *et al.*, 2019), there is some empirical evidence to supporting this hypothesis.  
15  
16 For instance, Boumans *et al.* (2011) investigated the influence of age on the relationship  
17  
18 between work characteristics and workers' work motivation and job satisfaction. The authors  
19  
20 found the relationship between career opportunities and motivation as being much stronger  
21  
22 for younger employees than for older employees.  
23  
24  
25

26 Considering the literature review, the following hypothesis was formulated:

27  
28 *Hypothesis 4:* The association between employment characteristics and employees' global  
29  
30 psychological needs satisfaction is moderated by age groups, such that:

31  
32  
33 *Hypothesis 4a:* The association between perceived employability and employees' global  
34  
35 psychological needs satisfaction will be stronger in the younger-aged group as compared to  
36  
37 the other age groups – i.e., middle-age and older age group.  
38  
39

40  
41 *Hypothesis 4b:* The association between perceived job insecurity and employees' global  
42  
43 psychological needs satisfaction will be weaker in the younger-aged group as compared to  
44  
45 the other age groups – i.e., middle-age and older age group.  
46

47  
48 *Hypothesis 4c:* The association between perceived overqualification and employees' global  
49  
50 psychological needs satisfaction will be stronger in the younger-aged group as compared to  
51  
52 the other age groups – i.e., middle-age and older age group.  
53

### 54 **3. Method**

55  
56  
57  
58  
59  
60



### 3.1. *Participants and procedure*

Data were collected through an online questionnaire during January and February of 2019. The sampling procedure used was a non-probabilistic sample with a convenience sampling approach. More precisely, we presented this study to a private and international company operating in the electric energy sector in Portugal. After accepting entering in this study, the company received an e-mail containing the link to the online survey, and the company forwarded the e-mail to their workers. A total of 480 employees were invited to participate. The anonymity of the answers was assured. The participants were informed of the opportunity to receive feedback on the overall results and that the company would have access to the final report and not to the data itself.

We obtained 350 answers (response rate 72.92 percent), namely: 105 answers from participants under the age of 35, 100 answers from participants aged between 35 and 49 years old, and 145 answers from participants aged 50 or higher.

The sample characteristics were in line with the population characteristics: In 2019, most employees of this electric energy company (45.5 percent) were aged 50 or more; most (63.5 percent) had job tenure of over 10 years, and most had bachelor's degree (30.5 percent) or master degree (16.7 percent).

A description of the sample in total and across groups is reported in Table 1.

INSERT TABLE 1 AROUND HERE

### 3.2. *Measures*

*Perceived employability.* Perceived employability was assessed through a three-item scale developed by De Witte's (1992), which had already been used in a previous study, in Portugal

(Espada and Chambel, 2013). An item example includes: “I could easily find another job if I wanted to”. The participants answered the questionnaire items using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Cronbach’s alpha was .77.

*Perceived job insecurity.* Perceived job insecurity was assessed through a four-item scale developed by De Witte’s (2000), which had already been used in a previous study in Portugal (Giunchi *et al.*, 2016). An item example includes: “I feel insecure about the future of my job”. The participants answered the questionnaire items using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Cronbach’s alpha was .88.

*Perceived overqualification.* Perceived overqualification was assessed through a nine-item scale developed by Maynard *et al.* (2006), which was already validated to the Portuguese language by Neto and Borges-Andrade (2018). An item example includes: “My job requires less education than I have”. The participants answered the questionnaire items using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Cronbach’s alpha was .88.

*Employees’ global psychological needs satisfaction.* Employees’ global psychological needs satisfaction was assessed with a multifaceted instrument, which is a Portuguese translation of the Basic Psychological Needs at Work Scale (BPNWS: Brien *et al.*, 2012) conducted by Sánchez-Oliva *et al.* (2017). Autonomy, competence and relatedness need consisted of three factors measured each by four items (respectively, item examples include “My work allows me to make decisions”, “I have the ability to do my work well”, and “When I’m with the people from my work environment, I feel understood”). The participants answered the questionnaire items using a 6-point Likert scale, ranging from 1 (strongly disagree) to 6

(strongly agree). To examine the psychometric properties of the measure, we performed a confirmatory factor analysis (CFA), where global psychological needs satisfaction was considered an overarching second-order factor and autonomy, competence and relatedness need dimensions were considered as first-order latent factors. Each first-order latent factor was assessed through four items. This model showed an acceptable fit to the data [ $\chi^2(47) = 143.29, p < .01, CFI = .95; IFI = .95; RMSEA = .08$ ]. The internal consistency and reliability coefficients among participants in the present sample were .83, .79, and .88, for autonomy, competence and relatedness need, respectively.

*Age groups.* Following De Lange *et al.* (2006) and Drabe *et al.* (2015) age sub-group analyses utilize the following age cut-offs: young workers (under age 35), middle-aged workers (35 to 49 years of age) and old workers (aged 50 or older).

*Control variables.* We controlled educational level (from 1 = “9th grade” to 4 = “master’s degree or higher”) and job tenure (from 1 = “under 1 year” to 5 = “over 10 years”).

## **4. Results**

### **4.1. Measurement models**

Following established recommendations (Hu and Bentler, 1999), evaluation of the overall goodness of fit of the models was based on the combination of several fit indices. Models were compared based on chi-square difference tests, and on other fit indices: the incremental fit index (IFI), the Bentler comparative fit index (CFI), and the root mean square error of approximation (RMSEA). For IFI and CFI, values above 0.90 represent a good model fit, and RMSEA values equal to or below 0.08 indicate a good model fit (Kline, 2015).

To test our measurement model, we followed the same procedure of Conway et al. (2016) and we carried out the analysis using AMOS (version 26.0). Following the recommendations of Law and Wang (1999) and the work of Wang *et al.* (2020), our theoretical model, i.e., the full measurement model, covered four factors (i.e., perceived employability, perceived job insecurity, perceived overqualification, and global psychological needs satisfaction). Perceived employability was measured with three items. Perceived job insecurity was measured with four items. Perceived Overqualification was measured with nine items. Global psychological needs satisfaction was measured through the averages of all the items measuring the constructs of autonomy, competence and relatedness need. Thus, the construct of global psychological needs satisfaction was measured by three indicators of the construct – i.e., autonomy, competence and relatedness need. This model obtained a suitable fit [ $\chi^2 (137) = 326.87, p < .01$ ; CFI = .94; IFI = .94; RMSEA = .06]. We compared this model with the single-factor model, i.e., Harman's single factor test, in which all items were loaded on a single latent variable, which obtained a poor fit [ $\chi^2 (143) = 1663.95, p < .01$ ; CFI = .51; IFI = .52; RMSEA = .18], and a significantly lower fit compared to our theoretical model [ $\Delta\chi^2 (6) = 1337.08, p < .01$ ].

Furthermore, the convergent and discriminant validity of measures was estimated by following Fornell and Larcker (1981) recommendations (Table 2). Overall, composite reliability (CR) was greater than .70 and the average variance extracted (AVE) was greater than .50 and lower than CR. Furthermore, AVE was greater than the maximum shared squared variance (MSV). Thus, the convergent and discriminant validity of measures seems to be reached in this study.

INSERT TABLE 2 AROUND HERE

#### 4.2. Descriptive analysis

Table 3 shows the means, and standard deviations (SD) obtained separately for each age group. For the analyses, IBM SPSS 26 was used, and the One-way ANOVA and Post Hoc LSD tests were applied. As is possible to observe, significant differences were found among the age groups, namely: younger workers showed a higher level of employability perception and job insecurity perception [ $F(2, 350) = 29.16, p < .01$ ;  $F(2, 350) = 8.16, p < .01$ ; respectively]. In addition, older workers demonstrated a lower perception of overqualification, but a higher level of global psychological needs satisfaction, when compared to the other two age groups [ $F(2, 350) = 7.83, p < .01$ ;  $F(2, 350) = 7.44, p < .01$ ; respectively].

INSERT TABLE 3 AROUND HERE

Concerning the correlation matrix, the correlations are generally consistent with the theorized pattern of relationships and the correlations among the variables also demonstrated no multicollinearity problem ( $r < 0.80$ ; Keith, 2015) (see Table 4).

INSERT TABLE 4 AROUND HERE

#### 4.3. Structural models

To test our hypotheses, we performed a multiple group analysis using AMOS (version 26.0). This analysis was performed according to the instructions of Byrne (2010) and already used in previous studies (e.g., Akkermans *et al.*, 2013; Carvalho *et al.*, 2018). The multi-group structural model, which includes the three groups analysed [ $\chi^2(510) = 823.57, p < .01$ ;

CFI = .90; IFI = .91; RMSEA = .04], showed a good fit to the data. All the structural paths in standardized coefficients are presented in Figure 1.

INSERT FIGURE 1 AROUND HERE

Hypothesis 1 predicted that the perceived employability would be positively related to the employees' global psychological needs satisfaction. However, only for the middle-aged group, this relationship was found as being positive and significant ( $\beta = .26, p < .05$ ). Thus, hypothesis 1 was only partially supported by the data.

Regarding the relationship between perceived job insecurity and global psychological needs satisfaction (i.e., hypothesis 2), as expected, perceived job insecurity was negatively and significantly related to global psychological needs satisfaction both for the middle-aged group ( $\beta = -.33, p < .01$ ) and for the older aged group ( $\beta = -.40, p < .01$ ). However, this relationship was not significant for the younger aged group ( $\beta = .00, n.s.$ ), which thereby partially supported hypothesis 2.

Concerning the relationship between perceived overqualification and global psychological needs satisfaction (i.e., hypothesis 3), a negative and significant relationship was observed for the younger aged group ( $\beta = -.45, p < .01$ ), for the middle-aged group ( $\beta = -.49, p < .01$ ), and for the older aged group ( $\beta = -.25, p < .01$ ). As such, hypothesis 3 was supported by the data.

The control variables contributed significantly toward explaining variance. We found significant relationships between educational level and perceived employability (middle aged group:  $\beta = .35, p < .05$ ; older aged group:  $\beta = .34, p < .01$ ), perceived overqualification (middle aged group:  $\beta = .26, p < .05$ ; older aged group:  $\beta = .21, p < .05$ ) and global psychological needs satisfaction (younger aged group:  $\beta = .21, p < .05$ ). Concerning job tenure, this variable showed a significant relationship with perceived job insecurity (younger

1  
2  
3 aged group:  $\beta = -.45, p < .01$ ) and global psychological needs satisfaction (older aged group:  
4  
5  $\beta = .19, p < .05$ ).

6  
7 Finally, to test our moderation hypothesis (H4), Z-scores were calculated. According  
8  
9 to Table 5, we found significant differences among the three age groups. Generally, these  
10  
11 results seem to confirm the moderating role of age on the relationship between perceived  
12  
13 employability and global psychological needs satisfaction, between perceived job insecurity  
14  
15 and global psychological needs satisfaction, and between perceived overqualification and  
16  
17 global psychological needs satisfaction. However, contrary to the expected, the association  
18  
19 between perceived employability and employees' global psychological needs satisfaction  
20  
21 was not stronger in the younger-aged group as compared to the other two age groups  
22  
23 analyzed. Additionally, the association between perceived overqualification and employees'  
24  
25 global psychological needs satisfaction was not stronger in the younger-aged group as  
26  
27 compared to the middle-aged group. Thus, our H4 was only partially supported by the data.  
28  
29  
30  
31  
32

33  
34 INSERT TABLE 5 AROUND HERE

## 35 36 **5. Discussion**

37  
38 The main purpose of the present research was to test a model positing that perceived  
39  
40 employability, job insecurity, and overqualification would be significantly related to  
41  
42 employees' global psychological needs satisfaction. Additionally, we posited an unexplored  
43  
44 moderating role of age groups on the above-mentioned relationships.  
45  
46

47  
48 As Van den Broeck *et al.* (2014) noted, nowadays, perceived employability is a  
49  
50 crucial "resource" for employees, and given its relevance on the labour market, it is likely  
51  
52 to expect the workers' perception of employability to have a significant contribution to the  
53  
54 global psychological needs satisfaction. In fact, the present study showed a positive and  
55  
56  
57

1  
2  
3 significant relationship between perceived employability and global psychological needs  
4 satisfaction for middle-aged workers. However, contrary to our predictions, this  
5  
6 relationship was not observed for the two other studied age groups– i.e., younger aged and  
7  
8 older aged groups. As an alternative explanation, we could advance the sample  
9  
10 characteristics of the current research. More precisely, regarding Table 1, it is possible to  
11  
12 observe the younger individuals are the ones who presented a higher educational level,  
13  
14 which seems to be in line with the job function they had – 75.2% of the younger individuals  
15  
16 worked as a higher technician, while for the middle-aged group and the older age group this  
17  
18 percentage was 57.0% and 38.6%, respectively. Thus, the younger individuals of the  
19  
20 present study were likely to have a higher person-job fit, and as such, to this group of  
21  
22 individuals, perceived employability can be less relevant to explain their global  
23  
24 psychological needs satisfaction. Additionally, concerning the older age group, as  
25  
26 previously noted, older adults, especially the ones closer to retirement, can be less likely to  
27  
28 invest their resources in learning and developing new work-related skills (Cavanagh *et al.*,  
29  
30 2019), and therefore to those individuals perceived employability can be also less relevant  
31  
32 to explain their global psychological needs satisfaction. Future studies should replicate this  
33  
34 study to analyze if this pattern of results is maintained.  
35  
36  
37  
38  
39  
40  
41

42       Regarding the relationship between perceived job insecurity and employees' global  
43  
44 psychological needs satisfaction, we found a negative link both to the middle age group and  
45  
46 the older age group. However, to the younger age group, contrary to our hypothesis, this  
47  
48 relationship was not significant. In line with what others authors have mentioned,  
49  
50 employment holds the key to the individual's social integration and recognition (De Witte,  
51  
52 2005). As such, the perceived threat of job loss, i.e., perceived job insecurity, is likely to  
53  
54 have an impact on meeting the global psychological needs of individuals and this  
55  
56  
57  
58  
59  
60



1  
2  
3 relationship was found to be significant for the middle-age group and older age group. In  
4  
5 line with the mentioned before, younger individuals are more likely to perceive a sense of  
6  
7 control over the environment (Klimchak *et al.*, 2019), and as such perceived job insecurity  
8  
9 can be less relevant to explain their global psychological needs satisfaction. Moreover, as  
10  
11 younger the individual more likely he/she is to be in a career stage of “exploration”  
12  
13 (Catarino, 2018). As such, bearing in mind this career “exploration” stage, perceived job  
14  
15 insecurity can be something already expected by those individuals, as they are still  
16  
17 exploring and developing work-related skills (Catarino, 2018). By doing so, job insecurity  
18  
19 is a factor taken into consideration, and as such, it may not have a significant effect on the  
20  
21 global psychological needs satisfaction of younger individuals. As contingent work is  
22  
23 connoted with higher job insecurity (Lopes *et al.*, 2019), in the future would be interesting  
24  
25 to analyze the link between job insecurity and global psychological needs satisfaction with  
26  
27 a sample of younger individuals, comparing those who have a temporary or a permanent  
28  
29 employment contract.  
30  
31  
32  
33  
34

35 In line with the relative deprivation theory (Walker and Pettigrew, 1984),  
36  
37 employees’ perception of being overqualified for the present job seems to have a  
38  
39 detrimental effect on the global psychological needs satisfaction since the current study  
40  
41 showed a negative relationship between the two variables for the three age groups analyzed.  
42  
43 However, contrary to what was expected, this relationship was weaker for the older age  
44  
45 group. Drawing on the life span development theories (Carstensen, 2006) a possible  
46  
47 explanation to this result can be advanced. More precisely, as previously noted, the younger  
48  
49 the individual more likely he/she is to assign more value to extrinsic factors of motivation,  
50  
51 such as perceived external prestige and social status at work (Klimchak *et al.*, 2019), while  
52  
53 older adults seem to be more likely to assign more value positive emotional experiences  
54  
55  
56  
57  
58  
59  
60

1  
2  
3 and social interactions, i.e., intrinsic factors of motivation (Cavanagh *et al.*, 2019). Given  
4 the higher probability of assigning more value to extrinsic factors of motivation, work in a  
5 job function below the individual's expectation of what he/she believes to deserve (i.e.,  
6 perceived overqualification), can be more detrimental for the youngest age groups of  
7 individuals – i.e., younger age and middle age group – by having the strongest impact on  
8 their global psychological needs satisfaction as compared to the oldest age group. Future  
9 studies should replicate this study to see if this pattern of results is maintained.

### 19 5.1. *Limitations and Future Research Direction*

21 Although this research has important strengths, certain limitations should be taken  
22 into consideration when interpreting the results of this study. **First, this study has a cross-**  
23 **sectional design and, therefore, causality cannot be established. Future studies with**  
24 **longitudinal designs are welcomed to overcome this constraint. Yet, as Spector (2019)**  
25 **noted, «there seems to be a universal condemnation of the cross-sectional design and at the**  
26 **same time acceptance of the superiority of the longitudinal design in allowing conclusions**  
27 **about temporal precedence and even causality. Often overlooked is that the cross-sectional**  
28 **design can tell us much that is of value and that the longitudinal design is not necessarily**  
29 **superior in providing evidence for causation» (pp. 125).** Second, this research relies on  
30 self-report measures raising common method bias concerns and therefore we followed the  
31 methodological recommendations of Podsakoff *et al.* (2003). However, Spector (2006)  
32 argued that common method bias in surveys appears frequently to be more of an “urban  
33 legend”. **Third**, concerning the study of chronological age through age groups does not  
34 mean all the individuals belonging to the same age group are homogeneous (Carstensen,  
35 2006). We should be aware that two types of individual differences could always emerge:  
36 interindividual differences (i.e., differences between individuals) and intraindividual

1  
2  
3 differences (i.e., individual change during his/her life span) (Kanfer and Ackerman, 2004).

4  
5 Thus, future studies should use other analytic approaches such as latent profile analysis to  
6  
7 better capture these individual differences (see, Spurk *et al.*, 2020).  
8  
9

## 10 11 5.2. Theoretical and Practical Implications 12

13  
14 This study presents a set of theoretical and practical implications. Regarding the  
15  
16 theoretical implications, we contribute to the HRM and OB literature on predictors of  
17  
18 individuals' global psychological needs satisfaction. By analyzing age's moderating role in  
19  
20 the relationship between employment characteristics and psychological needs satisfaction,  
21  
22 we contribute to the literature on age diversity management, because our empirical findings  
23  
24 provide concrete recommendations for age diversity management. Our results suggested the  
25  
26 moderating role of age on the relationship between perceived employability, perceived job  
27  
28 insecurity, and perceived overqualification and global psychological needs satisfaction. The  
29  
30 results show that studying and understanding these relations specificities in each age group  
31  
32 highly contribute to a, still, limited research field.  
33  
34  
35  
36

37  
38 Regarding the practical and managerial implications, the present study's findings  
39  
40 seem to highlight that perceived employability, perceived job insecurity, and perceived  
41  
42 overqualification, may have a specific contribution to the individuals' global psychological  
43  
44 needs satisfaction when different age groups are considered. Given these findings, HRM  
45  
46 scholars and practitioners must develop practices and policies addressing individuals'  
47  
48 global psychological needs according to the age diversity existent in the organizations.  
49  
50 Relying on the findings of the current study we suggest some practical implementations of  
51  
52 the HR management field.  
53  
54  
55  
56  
57  
58  
59  
60

1  
2  
3 First, bearing in mind the positive relationship between perceived employability and  
4 global psychological needs satisfaction, the organizations must stress to the employees their  
5 willingness to invest in the workforce skills development regardless of the individuals' age  
6 (Sousa et al., 2019). However, to address employees' age diversity, organizations should  
7 focus on offering opportunities for the development of both soft and technical skills. For  
8 instance, given younger adults seem to be more orientated to external sources of control  
9 and motivation, and older adults seem to be more likely to value internal feelings like the  
10 sense of meaning (Klimchak et al., 2019), organizations should offer the possibility of  
11 employees develop soft skills like mentoring and leadership competencies (more directed to  
12 older adults) and technical skills, such as learning a new language or offer the opportunity  
13 to enrol in short-term technical courses to develop the aptitude to work with specific  
14 software (more directed to younger adults).

15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31 Second, the negative relationship between perceived job insecurity and global  
32 psychological needs satisfaction also seems to call for the need to set HR managing  
33 practices to overcome this detrimental effect. More precisely, it is important organizations  
34 ensure effective communication channels with employees by keeping workers updated and  
35 informed regarding important decisions having an impact on daily workers' life at the  
36 workplace. This organizational policy should contribute to increasing employee security  
37 regarding their future in the organization. Moreover, since the negative relationship  
38 between perceived job insecurity and global psychological needs satisfaction was found as  
39 being stronger for the older age group, it is important to organizations make use of the  
40 existing experience, knowledge, and skills of older workers, who have a longer tenure in  
41 the organization, by promoting initiatives such as creating the figure of "buddy" to help the  
42 integration of younger individuals (Grah et al., 2019). These policies should contribute to  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

1  
2  
3 demonstrate that older workers are a valuable asset in the organization and, therefore,  
4  
5 should lead to decreasing the older age group perception of the threat of job loss (Grah et  
6  
7 al., 2019).  
8

9  
10 Finally, regarding the negative relationship between perceived overqualification and  
11  
12 global psychological needs satisfaction, it is also crucial for organizations being aware of  
13  
14 the consequences of a poor person-job fit (Erdogan et al., 2020). To overcome this  
15  
16 detrimental effect of perceived overqualification on employees' global psychological needs  
17  
18 satisfaction it would be relevant to perform job function analysis to specific organizational  
19  
20 areas where this misfit person-job is considered as being more likely to occur.  
21  
22  
23  
24  
25

## 26 **6. References**

- 27  
28 Alfes, K., Shantz, A. D., Bailey, C., Conway, E., Monks, K., and Fu, N. (2019), "Perceived  
29  
30 human resource system strength and employee reactions toward change: Revisiting  
31  
32 human resource's remit as change agent", *Human Resource Management*, Vol. 58  
33  
34 No.3, pp. 239- 252. doi: 10.1002/hrm.21948  
35  
36  
37 Baruch, Y. (2001), "Employability: A substitute for loyalty?", *Human Resource*  
38  
39 *Development International*, Vol. 4. No. 4, pp. 543-566. doi:  
40  
41 10.1080/13678860010024518  
42  
43  
44 Baumeister, R. F., and Leary, M. R. (1995), "The need to belong: Desire for interpersonal  
45  
46 attachments as a fundamental human motivation", *Psychological Bulletin*, Vol. 117  
47  
48 No.3, pp. 497-529. doi: 10.1037/0033-2909.117.3.497  
49  
50  
51 Boumans, N. P. G., De Jong, A. H. J., and Janssen, S. M. (2011), "Age-differences in work  
52  
53 motivation and job satisfaction: The influence of age on the relationships between  
54  
55 work characteristics and workers' outcomes", *The International Journal of Aging &*  
56  
57  
58  
59  
60

- 1  
2  
3 *Human Development*, Vol. 73, pp. 331-350. doi: 10.2190/AG.73.4.d
- 4  
5 Brien, M., Forest, J., Mageau, G. A., Boudrias, J. S., Desrumaux, P., Brunet, L., and Morin,  
6  
7 E. M. (2012), "The basic psychological needs at work scale: measurement  
8  
9 invariance between Canada and France", *Applied Psychology: Health and*  
10  
11 *Well-Being*, Vol. 4 No. 2, pp.167-187. doi: 10.1111/j.1758-0854.2012.01067.x
- 12  
13 Briody, J., Doyle, O., and Kelleher, C. (2020), "The effect of local unemployment on  
14  
15 health: A longitudinal study of Irish mothers 2001-2011", *Economics & Human*  
16  
17 *Biology*, Vol. 37. doi: 10.1016/j.ehb.2020.100859
- 18  
19 Carstensen, L. L. (2006), "The influence of a sense of time on human development",  
20  
21 *Science*, Vol. 312, pp. 1913-1915. doi: 10.1126/science.1127488
- 22  
23 Catarino, R. D. G. (2018), "A motivação nas diferentes fases de carreira" (Master's thesis,  
24  
25 ISPA-Instituto Universitário, Lisboa). Retrieved from  
26  
27 <http://repositorio.ispa.pt/bitstream/10400.12/6712/1/22643.pdf>
- 28  
29  
30  
31  
32 Cavanagh, T. M., Kraiger, K., and Henry, K. L. (2019), "Age-related changes on the effects  
33  
34 of job characteristics on job satisfaction: A longitudinal analysis", *The*  
35  
36 *International Journal of Aging and Human Development*, Vol. 91 No. 1, pp. 60-84.  
37  
38 doi: 10.1177/0091415019837996
- 39  
40  
41  
42 Chambel, M. J., Castanheira, F., Oliveira-Cruz, F., and Lopes, S. (2015), "Work context  
43  
44 support and Portuguese soldiers' well-being: The mediating role of autonomous  
45  
46 motivation", *Military Psychology*, Vol. 27 No. 5, pp. 297-310. doi:  
47  
48 10.1037/mil0000087
- 49  
50  
51 Chambel, M. J., Lopes, S., and Batista, J. (2016), "The effects of temporary agency work  
52  
53 contract transitions on well-being", *International Archives of Occupational and*  
54  
55  
56  
57  
58  
59  
60

1  
2  
3 *Environmental Health*, Vol. 89 No. 8, pp. 1215-1228. doi: 10.1007/s00420-016-  
4  
5 1158-y  
6

7 Chambel, M. J., and Sobral, F. (2011), "Training is an investment with return in temporary  
8  
9 workers: A social exchange perspective", *Career Development International*, Vol.  
10  
11 16 No. 2, pp. 161-177. doi: 10.1108/13620431111115613  
12  
13

14 Chong, J. X., Beenen, G., Gagné, M., and Dunlop, P. D. (2020), "Satisfying newcomers'  
15  
16 needs: The role of socialization tactics and supervisor autonomy support", *Journal*  
17  
18 *of Business and Psychology*, Vol. 36 No.2, pp. 1-17.  
19  
20

21 Conway, E., Fu, N., Monks, K., Alfes, K., and Bailey, C. (2016), "Demands or resources?  
22  
23 The relationship between HR practices, employee engagement, and emotional  
24  
25 exhaustion within a hybrid model of employment relations", *Human Resource*  
26  
27 *Management*, Vol. 55 No.5, pp. 901-917. doi: 10.1002/hrm.21691  
28  
29

30  
31 Coxen, L., Van Der Vaart, L., Van den Broeck, A., and Rothmann, S. (2021), "Basic  
32  
33 psychological needs in the work context: A systematic literature review of diary  
34  
35 studies", *Frontiers in Psychology*, Vol. 12. doi :10.3389/fpsyg.2021.698526  
36  
37

38 Clément, L., Fernet, C., Morin, A. J., and Austin, S. (2020), "In whom college teachers  
39  
40 trust? On the role of specific trust referents and basic psychological needs in optimal  
41  
42 functioning at work", *Higher Education*, Vol. 80, pp. 511-530. doi:  
43  
44 10.1007/s10734-019-00496-z  
45  
46

47 Deci, E. L., Olafsen, A. H., and Ryan, R. M. (2017), "Self-determination theory in work  
48  
49 organizations: The state of a science", *Annual Review of Organizational Psychology*  
50  
51 *and Organizational Behavior*, Vol. 4, pp. 19-43. doi: 10.1146/annurev-orgpsych-  
52  
53 032516-113108  
54  
55  
56  
57  
58  
59  
60

- 1  
2  
3 Deci, E. L. and Ryan, R. M. (2000), "The 'what' and 'why' of goal pursuits: Human needs  
4 and the selfdetermination of behavior", *Psychological Inquiry*, Vol. 11 No. 4, pp.  
5 227-268. doi: 10.1207/S15327965PLI1104\_01  
6  
7  
8  
9  
10 De Cuyper, N. and De Witte, H. (2011), "The management paradox: Self-rated  
11 employability and organizational commitment and performance", *Personnel  
12 Review*, Vol. 40 No. 2, pp. 152-172. doi: 10.1108/004834811111106057  
13  
14  
15  
16  
17 De Cuyper, N., Mäkikangas, A., Kinnunen, U., Mauno, S., and Witte, H. D. (2012),  
18 "Cross-lagged associations between perceived external employability, job  
19 insecurity, and exhaustion: Testing gain and loss spirals according to the  
20 conservation of resources theory", *Journal of Organizational Behavior*, Vol. 33  
21 No. 6, pp. 770-788. doi: 10.1002/job.1800  
22  
23  
24  
25  
26  
27  
28  
29 De Lange, A. H., Taris, T. W., Jansen, P. G. W., Smulders, P., and Houtman, I. L. D.  
30 (2006), "Age as a factor in the relation between work and mental health: Results of  
31 the longitudinal TAS survey, McIntyre, S. and Houdmont, J. (Eds.),  
32 *Occupational Health Psychology: European Perspectives on Research, Education  
33 and Practice* (Vol. 1.) (pp. 21-45). Maia, Portugal: ISMAI Publications.  
34  
35  
36  
37  
38  
39  
40 De Witte, H. (1992), *Langdurig werklozen: Tussen optimisten en teruggetrokkenen* [*The  
41 Long-term unemployed: Between optimism and resignation*], Leuven, Belgium:  
42 Hoger instituut van de arbeid.  
43  
44  
45  
46  
47 De Witte, H. (2000), "Arbeidsethos en jobonzekerheid: Meting en gevolgen voor welzijn,  
48 tevredenheid en inzet op het werk [Work ethic and job insecurity: Assessment and  
49 consequences for wellbeing, satisfaction and performance at work] ", Bouwen, R.,  
50 De Witte, K., De Witte, H. and Taillieu, T. (Eds.), *Van groep naar gemeenschap*  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60



- 1  
2  
3 [From group to community]. Liber Amicorum Prof. Dr. Leo Lagrou (pp. 325–350).  
4  
5 Leuven, Belgium: Garant.  
6  
7  
8 De Witte, H. (2005), “Job insecurity: Review of the international literature on definitions,  
9  
10 prevalence, antecedents and consequences”, *SA Journal of Industrial Psychology*,  
11  
12 Vol. 31 No. 4, pp. 1-6. doi: 10.4102/sajip.v31i4.200  
13  
14  
15 Drabe, D., Hauff, S., and Richter, N. F. (2015), “Job satisfaction in aging workforces: An  
16  
17 analysis of the USA, Japan and Germany”, *The International Journal of Human*  
18  
19 *Resource Management*, Vol. 26 No. 6, pp. 783-805. doi:  
20  
21 10.1080/09585192.2014.939101  
22  
23  
24 **Erdogan, B., Karaeminogullari, A., Bauer, T. N., & Ellis, A. M. (2020). Perceived**  
25  
26 **overqualification at work: Implications for extra-role behaviors and advice network**  
27  
28 **centrality. *Journal of Management*, 46(4), 583-606. doi:**  
29  
30 **10.1177/0149206318804331**  
31  
32  
33 Erdogan, B., Tomás, I., Valls, V., and Gracia, F. J. (2018), “Perceived overqualification,  
34  
35 relative deprivation, and person-centric outcomes: The moderating role of career  
36  
37 centrality”, *Journal of Vocational Behavior*, Vol. 107, pp. 233-245. doi:  
38  
39 10.1016/j.jvb.2018.05.003  
40  
41  
42 Espada, M., and Chambel, M. J. (2013), “Employability and temporary workers' affective  
43  
44 commitment: the moderating role of voluntariness”, *Spanish Journal of Psychology*,  
45  
46 Vol. 16, E108. doi: 10.1017/sjp.2013.108  
47  
48  
49 Fugate, M., and Kinicki, A. J. (2008), “A dispositional approach to employability:  
50  
51 Development of a measure and test of implications for employee reactions to  
52  
53 organizational change”, *Journal of Occupational and Organizational Psychology*,  
54  
55 Vol. 81 No. 3, pp. 503-527. doi: 10.1348/096317907X241579  
56  
57  
58  
59  
60

- 1  
2  
3 Gander, F., Hofmann, J., and Ruch, W. (2019), "From unemployment to employment and  
4 back: Professional trajectories and well-being", *Applied Research in Quality of Life*,  
5 pp. 1-13. doi: 10.1007/s11482-019-09797-y  
6  
7  
8  
9  
10 Gillet, N., Morin, A. J., Huart, I., Colombat, P., and Fouquereau, E. (2020), "The forest and  
11 the trees: Investigating the globality and specificity of employees' basic need  
12 satisfaction at work", *Journal of Personality Assessment*, Vol. 102 No. 5, pp. 702-  
13 713. doi: 10.1080/00223891.2019.1591426  
14  
15  
16  
17  
18  
19 Giunchi, M., Emanuel, F., Chambel, M. J., and Ghislieri, C. (2016), "Job insecurity,  
20 workload and job exhaustion in temporary agency workers (TAWs)", *Career  
21 Development International*, Vol. 21 No. 1, pp. 3-18. doi: 10.1108/CDI-07-2015-  
22 0103  
23  
24  
25  
26  
27  
28 Gnambs, T., Stiglbauer, B., and Selenko, E. (2015), "Psychological effects of (non)  
29 employment: A cross-national comparison of the United States and Japan"  
30 *Scandinavian Journal of Psychology*, Vol. 56 No. 6, pp. 659-669. doi:  
31 10.1111/sjop.12240  
32  
33  
34  
35  
36  
37  
38 Grah, B., Perme, E., Colnar, S., and Penger, S. (2019), "Age management: What can we  
39 learn from high-end luxury fashion designer with more than 50 years of working  
40 experience?", *Organizacija*, Vol. 52 No. 4, pp. 325-344. doi: 10.2478/orga-2019-  
41 0020  
42  
43  
44  
45  
46  
47 Greenhalgh, L., and Rosenblatt, Z. (1984), "Job insecurity: Toward conceptual clarity",  
48 *Academy of Management Review*, Vol. 9 No. 3, pp. 438-448. doi:  
49 10.5465/AMR.1984.4279673  
50  
51  
52  
53  
54 Harari, M. B., Manapragada, A., and Viswesvaran, C. (2017), "Who thinks they're a big  
55 fish in a small pond and why does it matter? A meta-analysis of perceived  
56  
57  
58  
59  
60

- 1  
2  
3 overqualification”, *Journal of Vocational Behavior*, Vol. 102, pp. 28-47. doi:  
4  
5 10.1016/j.jvb.2017.06.002  
6  
7 Heckhausen, J., and Schulz, R. (1995), “A life-span theory of control”, *Psychological*  
8  
9 *Review*, Vol. 102 Vol. 2, pp. 284-304. doi: 10.1037/0033-295X.102.2.284  
10  
11 Hu, L. T., and Bentler, P. M. (1999), “Cutoff criteria for fit indexes in covariance structure  
12  
13 analysis: Conventional criteria versus new alternatives”, *Structural Equation*  
14  
15 *Modeling*, Vol. 6, pp. 1-55. doi: 10.1080/10705519909540118  
16  
17  
18 Hull, C. L. (1943). *Principles of behavior: An introduction to behavior theory*. Oxford,  
19  
20 England: Appleton-Century.  
21  
22 Hur, H. (2019), “Job security matters: A systematic review and meta-analysis of the  
23  
24 relationship between job security and work attitudes”, *Journal of Management &*  
25  
26 *Organization*, pp. 1-31. doi: 10.1017/jmo.2019.3  
27  
28  
29  
30  
31 Kaabomeir, N., Mazhari, K., Arshadi, N., and Karami, M. (2022), “How supervisors can  
32  
33 support employees' needs and motivation? An experimental study based on SDT”,  
34  
35 *Current Psychology*, 1-13. doi: 10.1007/s12144-022-02922-5  
36  
37  
38 Kanfer, R., and Ackerman, P. L. (2004), “Aging, adult development, and work motivation”,  
39  
40 *Academy of Management Review*, Vol. 29 No. 3, pp. 440-458.  
41  
42 doi:10.5465/amr.2004.13670969  
43  
44  
45 Khan, L. J., and Morrow, P. C. (1991), “Objective and subjective underemployment  
46  
47 relationships to job satisfaction”, *Journal of Business Research*, Vol. 22, pp. 211-  
48  
49 218. doi: 10.1016/0148-2963(91)90002-F  
50  
51  
52 Klimchak, M., Ward, A. K., Matthews, M., Robbins, K., and Zhang, H. (2019), “When  
53  
54 does what other people think matter? The influence of age on the motivators of  
55  
56  
57  
58  
59  
60

organizational identification”, *Journal of Business and Psychology*, Vol. 34 No. 6, pp. 879-891. doi: 10.1007/s10869-018-9601-6

Law, K. S., and Wang, C. S. (1999), “Multidimensional constructs M structural equation analysis: An illustration using the job perception and job satisfaction constructs”, *Journal of Management*, Vol. 25 No. 2, pp. 143-160. doi: 10.1177/014920639902500202

Lee, A., Erdogan, B., Tian, A., Willis, S., and Cao, J. (2020), “Perceived overqualification and task performance: Reconciling two opposing pathways”, *Journal of Occupational and Organizational Psychology*, online first. doi: 10.1111/joop.12323

Lopes, S., Chambel, M. J., and Cesário, F. (2019), “Linking perceptions of organizational support to temporary agency workers’ well-being”, *International Journal of Organizational Analysis*, Vol. 27 No. 5, pp. 1376-1391. doi: 10.1108/IJOA-08-2018-1502

Marescaux, E., De Winne, S., and Sels, L. (2013), “HR practices and HRM outcomes: The role of basic need satisfaction”, *Personnel Review*, Vol. 42 No. 1, pp. 4-27. doi: 10.1108/00483481311285200

Martini, M., Cavenago, D., and Marafioti, E. (2019), “Enhancing the employability of temporary agency workers: The interplay between agency support and client company investments”, *The International Journal of Human Resource Management*, pp. 1-29. doi: 10.1080/09585192.2019.1579750

Maynard, D. C., Joseph, T. A., and Maynard, A. M. (2006), “Underemployment, job attitudes, and turnover intentions”, *Journal of Organizational Behavior: The*

- 1  
2  
3 *International Journal of Industrial, Occupational and Organizational Psychology*  
4  
5 *and Behavior*, Vol. 27 No. 4, pp. 509-536. doi: 10.1002/job.389  
6  
7  
8 McClelland, D. C., Atkinson, J. W., Clark, R. A., and Lowell, E. L. (1953), *The*  
9  
10 *achievement motive*. New York: Appleton-Century Crofts.  
11  
12 Millar, C. C., Groth, O., and Mahon, J. F. (2018), "Management innovation in a VUCA  
13  
14 world: Challenges and recommendations", *California Management Review*, Vol. 61  
15  
16 No. 1, pp. 5-14. doi: 10.1177/0008125618805111  
17  
18  
19 Neto, J. M. G., and Borges-Andrade, J. E. (2018), "Escala de sobrequalificação percebida:  
20  
21 Adaptação e evidências de validade [Scale of perceived overqualification:  
22  
23 Adaptation and validity evidences], *Estudos de Psicologia* (Natal), Vol. 23 No. 3,  
24  
25 pp. 224-235. doi: 10.22491/1678-4669.20180022  
26  
27  
28 Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., and Podsakoff, N. P. (2003), "Common  
29  
30 method biases in behavioral research: A critical review of the literature and  
31  
32 recommended remedies", *The Journal of Applied Psychology*, Vol. 88 No. 5, pp.  
33  
34 879-903. doi: 10.1037/0021-9010.88.5.879  
35  
36  
37 Rueda, F. J. M., Martins, L. J., and Campos, K. C. L. (2004), "Empregabilidade: o que os  
38  
39 alunos universitários entendem sobre isto? [Employability: What do university  
40  
41 students understand about it?]", *Psicologia: Teoria e Prática*, Vol. 6 No. 2, pp. 63-  
42  
43 73.  
44  
45  
46 Sánchez-Oliva, D., Morin, A. J., Teixeira, P. J., Carraça, E. V., Palmeira, A. L., and Silva,  
47  
48 M. N. (2017), "A bifactor exploratory structural equation modeling representation  
49  
50 of the structure of the basic psychological needs at work scale", *Journal of*  
51  
52 *Vocational Behavior*, Vol. 98, pp. 173-187. doi: 10.1016/j.jvb.2016.12.001  
53  
54  
55  
56  
57  
58  
59  
60

- 1  
2  
3 Selenko, E., Stiglbauer, B., and Batinic, B. (2020), “More evidence on the latent benefits of  
4  
5 work: bolstered by volunteering while threatened by job insecurity”, *European*  
6  
7 *Journal of Work and Organizational Psychology*, Vol. 29 No. 3, pp. 364-376. doi:  
8  
9 10.1080/1359432X.2019.1706487
- 11  
12 Silva, M. S. D. A. (2016), *Overqualification: Consequências no engagement e na*  
13  
14 *satisfação laboral*, (PhD thesis, ISPA-Instituto Universitário, Lisboa). Retrieved  
15  
16 from <http://repositorio.ispa.pt/bitstream/10400.12/5115/1/20980.pdf>
- 17  
18  
19 Sousa, I. C., Almeida, T., and Leal, C. C. (2021), “Trapped in the COVID-19 pandemic:  
20  
21 The effect of risk concern and emotions on burnout among health care workers”,  
22  
23 *Revista Psicologia*, pp. 1-11. doi: 10.17575/psicologia.v35i1.1697
- 24  
25  
26 Sousa, I. C., Ramos, S., and Carvalho, H. (2019), “Age-diversity practices and retirement  
27  
28 preferences among older workers: A moderated mediation model of work  
29  
30 engagement and work ability”, *Frontiers in Psychology*, Vol. 10, 1937. doi:  
31  
32 10.3389/fpsyg.2019.01937
- 33  
34  
35 Spector, P. E. (2019), “Do not cross me: Optimizing the use of cross-sectional designs”,  
36  
37 *Journal of Business and Psychology*, Vol. 34 No. 2, pp. 125-137. doi:  
38  
39 10.1007/s10869-018-09613-8
- 40  
41  
42 Spector, P. E. (2006), “Method variance in organizational research: Truth or urban  
43  
44 legend?”, *Organizational Research Methods*, Vol. 9 No. 2, pp. 221-232. doi:  
45  
46 10.1177/1094428105284955
- 47  
48  
49 Spurk, D., Hirschi, A., Wang, M., Valero, D., and Kauffeld, S. (2020), “Latent profile  
50  
51 analysis: A review and “how to” guide of its application within vocational behavior  
52  
53 research”, *Journal of Vocational Behavior*, Vol. 120, 103445.  
54  
55 doi:10.1016/j.jvb.2020.103445
- 56  
57  
58  
59  
60

- 1  
2  
3 Sverke, M., Hellgren, J., and Näswall, K. (2002), “No security: A meta-analysis and review  
4 of job insecurity and its consequences”, *Journal of Occupational Health*  
5  
6 *Psychology*, Vol. 7 No. 3, pp. 242-264. doi: 10.1037/1076-8998.7.3.242  
7  
8  
9  
10 Van den Broeck, A., De Cuyper, N., Baillien, E., Vanbelle, E., Vanhercke, D., and De  
11  
12 Witte, H. (2014), “Perception of organization's value support and perceived  
13 employability: insights from self-determination theory”, *The International Journal*  
14  
15 *of Human Resource Management*, Vol. 25 No. 13, pp. 1904-1918. doi:  
16  
17 10.1080/09585192.2013.860385  
18  
19  
20  
21 Van den Broeck, A., Ferris, D. L., Chang, C. H., and Rosen, C. C. (2016), “A review of  
22 self-determination theory’s basic psychological needs at work”, *Journal of*  
23  
24 *Management*, Vol. 42 No. 5, pp. 1195-1229. doi: 10.1177/0149206316632058  
25  
26  
27  
28 Van der Heijde, C. M., and Van der Heijden, B. I. J. M. (2006), “A competence-based and  
29 multi-dimensional operationalization and measurement of employability”, *Human*  
30  
31 *Resource Management*, Vol. 45, pp. 449-476. doi: 10.1002/hrm.20119  
32  
33  
34  
35 Walker, I., and Pettigrew, T. F. (1984), “Relative deprivation theory: An overview and  
36 conceptual critique”, *British Journal of Social Psychology*, Vol. 23, pp. 301-310.  
37  
38 doi: 10.1111/j.2044-8309.1984.tb00645.x  
39  
40  
41  
42 Wang, H., Jin, Y., Wang, D., Zhao, S., Sang, X., and Yuan, B. (2020), “Job satisfaction,  
43 burnout, and turnover intention among primary care providers in rural China:  
44 Results from structural equation modeling”, *BMC family practice*, Vol. 21, pp. 1-10.  
45  
46  
47  
48  
49 doi: 10.1186/s12875-020-1083-8  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

**Table 1.** Demographics of the sample.

	<b>Total sample</b> ( <i>n</i> = 350)	<b>Younger workers</b> (< 35 years; <i>n</i> = 105)	<b>Middle-aged workers</b> (35-49 years; <i>n</i> = 100)	<b>Older workers</b> (≥ 50 years; <i>n</i> = 145)
Age (Mean)	44.37 ( <i>SD</i> = 12.63)			
Gender (% men)	56.0%	51.4%	59.0%	57.2%
Education				
9th grade	4.0%	0.0%	2.0%	8.3%
12th grade	23.7%	8.6%	24.0%	34.4%
Bachelor's degree	35.4%	14.3%	48.0%	42.0%
Master's degree or higher	36.8%	77.2%	26.0%	15.2%
Job tenure				
Less than 2 years	12.9%	35.3%	7.0%	0.7%
Between 2-5 years	17.7%	43.8%	11.0%	3.4%
Between 6-10 years	9.1%	15.2%	15.0%	0.7%
More than 10 years	60.3%	5.7%	67.0%	95.2%
Job function				
Operational	13.1%	7.6%	21.0%	11.7%
Administrative	14.3%	4.8%	6.0%	26.9%
Higher technician	54.9%	75.2%	57.0%	38.6%
Other	17.7%	12.4%	16.0%	22.8%
Employment contract				
Temporary contract – Fixed-term	15.4%	20.0%	8.0%	17.2%
Temporary contract – Uncertain term	3.4%	3.8%	3.0%	3.4%
Permanent contract	78.3%	69.5%	89.0%	77.2%
Other	2.9%	6.7%	0.0%	2.1%



**Table 2.** Discriminant validity.

<b>Constructs</b>	<b>CR</b>	<b>AVE</b>	<b>MSV</b>
1. Perceived employability	.78	.54	.07
2. Perceived job insecurity	.86	.51	.14
3. Perceived overqualification	.84	.63	.14
4. Global psychological needs satisfaction	.88	.67	.10

Note: CR = Composite reliability; AVE = Average variance extracted; MSV = Maximum shared variance.

**Table 3.** Means and standard-deviations for the studied variables.

Mean ( <i>SD</i> ) for each studied variable							
Sample	Perceived employability	Perceived job insecurity	Perceived overqualification	Global psychological needs satisfaction	Autonomy need	Competence need	Relatedness need
1. Younger workers	3.17 ( <i>SD</i> = .72)	2.00 ( <i>SD</i> = .95)	3.61 ( <i>SD</i> = 1.13)	5.46 ( <i>SD</i> = .83)	5.33 ( <i>SD</i> = 1.02)	5.81 ( <i>SD</i> = .67)	5.25 ( <i>SD</i> = 1.19)
2. Middle-aged workers	2.91 ( <i>SD</i> = .76)	1.75 ( <i>SD</i> = .71)	3.48 ( <i>SD</i> = 1.17)	5.54 ( <i>SD</i> = .76)	5.53 ( <i>SD</i> = .87)	5.85 ( <i>SD</i> = .70)	5.26 ( <i>SD</i> = 1.00)
3. Older workers	2.41 ( <i>SD</i> = .86)	1.62 ( <i>SD</i> = .58)	3.08 ( <i>SD</i> = 1.10)	5.79 ( <i>SD</i> = .58)	5.71 ( <i>SD</i> = .71)	6.08 ( <i>SD</i> = .50)	5.59 ( <i>SD</i> = .84)
<i>F</i>	29.16**	8.16**	7.83**	7.44**	6.02**	6.98**	5.00**
Post-hoc comparisons	1 > 2 > 3	1 > 2, 3	3 < 1, 2	3 > 1, 2	3 > 1 = 2	3 > 1, 2	3 > 1, 2

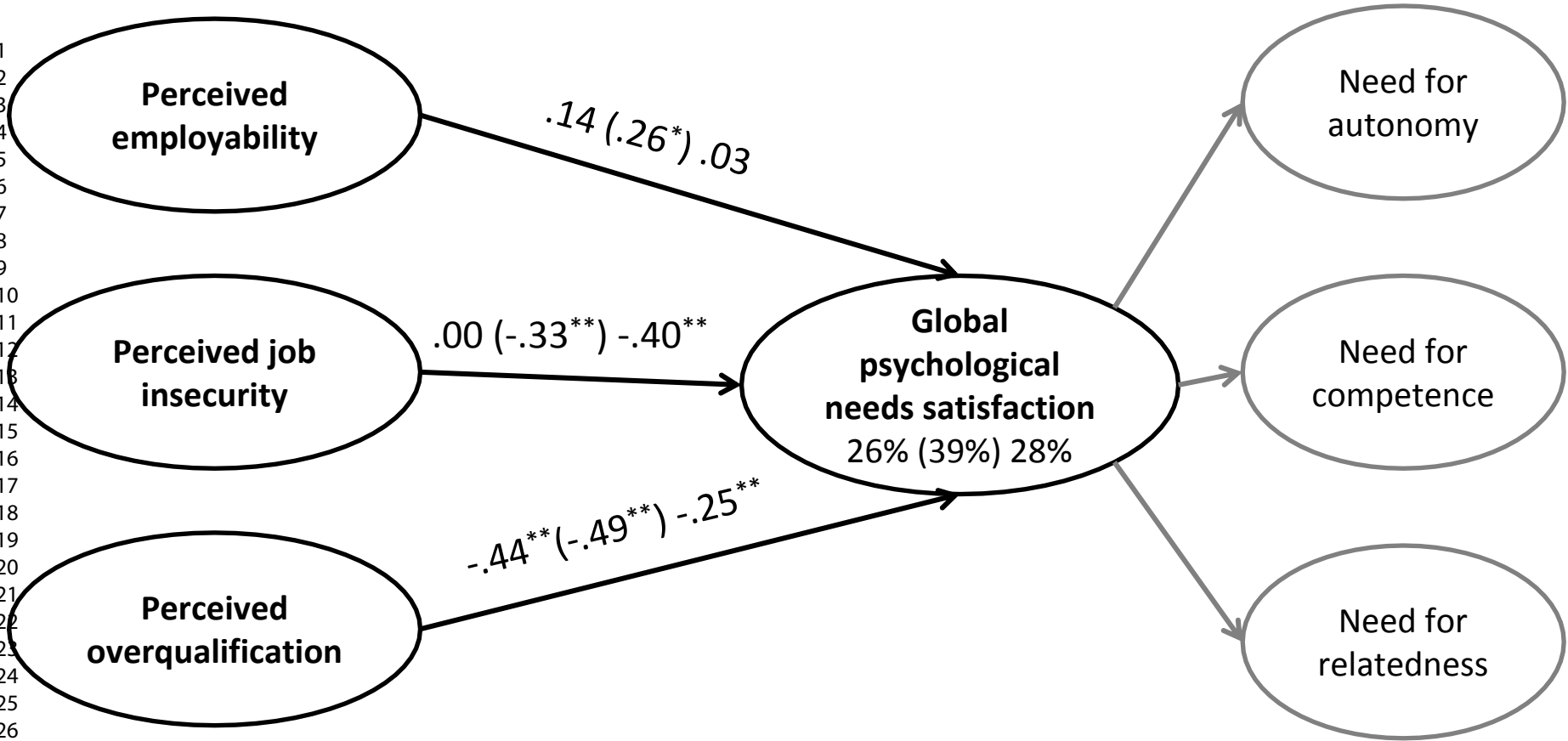
Note. \*\*:  $p < .01$ ; \*:  $p < .05$ .

**Table 4.** Correlations matrix for the three samples.

Variables	1.	2.	3.	4.	5.	6.	7.	8.
1. Educational level								
2. Job tenure	.01 (-.07) -.08							
3. Perceived employability	.10 (.33**) .31**	.11 (-.01) -.01						
4. Perceived job insecurity	.09 (-.03) -.12	-.41** (-.15) -.09	-.08 (-.13) .33**					
5. Perceived overqualification	-.05 (.25*) -.18*	-.02 (-.04) -.01	.03 (.14) .17*	.23* (.18) .14				
6. Global psychological needs satisfaction	.21* (.02) .15	.04 (.02) .20*	-.08 (.15) -.09	-.14 (-.39**) -.37**	-.39** (-.45**) -.23**			
7. Autonomy need	.17 (.04) .06	.08 (.01) .20*	-.01 (.16) -.08	-.15 (-.33**) -.29**	-.39** (-.44**) -.23**	.90** (.90**) .86**		
8. Competence need	.11 (.03) .13	-.02 (.01) .12	-.07 (.16) -.04	-.08 (-.33**) -.36**	-.25** (-.34**) -.20*	.76** (.88**) .82**	.61** (.64**) .66**	
9. Relatedness need	.23* (-.05) .17*	.01 (.05) .17*	-.13 (.06) -.10	-.13 (-.39**) -.30**	-.34** (-.42**) -.15	.90** (.88**) .85**	.69** (.76**) .52**	.51** (.63**) .53**

Note. Educational level and job tenure are a categorical variable; \*\*:  $p < .01$ ; \*:  $p < .05$ ; the values presented on the left side of the brackets refers to younger workers; the values presented within brackets refers to middle aged-workers; the values presented on the right side of the brackets refers to older workers.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41



Note: \*\* :  $p < .01$ ; \*  $p < .05$ ; the values presented on the left side of the brackets refers to younger aged group; the values presented within brackets refers to middle aged group; the values presented on the right side of the brackets refers to older aged group.

**Figure 1.** The structural model with standardized estimates and the percentage of the variance of global psychological needs satisfaction explained by the independent variables.

**Table 5.** Moderation hypothesis testing.

<b>Groups Comparison (z-scores)</b>	<b>Hypothesis 4a</b>	<b>Hypothesis 4b</b>	<b>Hypothesis 4c</b>
Younger aged group vs middle-aged group	$Z = 2.33^*$	$Z = -2.80^{**}$	$Z = 0.07, n.s.$
Middle-aged group vs older-aged group	$Z = -1.81^*$	$Z = 0.31, n.s.$	$Z = 2.25^*$
Younger aged group vs older-aged group	$Z = 1.18, n.s.$	$Z = -3.06^{**}$	$Z = 2.14^*$

Note. \*\*:  $p < .01$ ; \*:  $p < .05$ ; *n.s.*: non-significant; *Hypothesis 4*: The association between employment characteristics and employees' global psychological needs satisfaction is moderated by age groups; *Hypothesis 4a*: The association between perceived employability and employees' global psychological needs satisfaction will be stronger in the younger-aged group as compared to the other age groups – i.e., middle-age and older age group; *Hypothesis 4b*: The association between perceived job insecurity and employees' global psychological needs satisfaction will be weaker in the younger-aged group as compared to the other age groups – i.e., middle-age and older age group; *Hypothesis 4c*: The association between perceived overqualification and employees' global psychological needs satisfaction will be stronger in the younger-aged group as compared to the other age groups – i.e., middle-age and older age group.