Stress in Teaching Professionals across Europe

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Abstract

Teaching professionals´ stress and burnout imply human capital costs and, consequently, economic costs. These costs justify the aim of this research: to offer an analysis of European teachers´ health compared with other workers. To achieve this goal, a review of PsycoINFO, ERIC, Web of Science and Google Scholar databases from 2017 to 2019 was conducted. The study is complemented by an empirical analysis from the Sixth European Working Conditions Survey (n=27,756). Main findings show that teachers present higher levels of stress, anxiety, fatigue or sleeping problems when compared to other professions as a whole. Nevertheless, they are more satisfied at work. From an applied perspective, these results point to a need to develop specific actions to improve teachers´ wellbeing.

Keywords: teacher; educator; stress; burnout; self-efficacy; emotional intelligence; coping; mindfulness

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Abstract

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Highlights

- European teachers suffer higher stress than the rest of professions as a whole.
- Although being more stressed, teachers show higher levels of job satisfaction.
- There are significant differences between teachers and other workers in anxiety.
- Fatigue, problems sleeping and verbal abuse also differ significantly.
- Emotional stability, auto-efficacy and attention are proposed to raise wellbeing.

1. Introduction

Work-related stress is a major problem in the area of occupational health and safety (Hassard, Teoh, Visockaite, Dewe, & Cox, 2018; World Health Organisation, 2019). It affects not only people's health, but also that of organisations and national economies (European Agency for Safety and Health at Work, 2018).

Work-related stress may be defined as a negative psychological state with cognitive and emotional components which affect both the health of the individual and that of the group (Hassard & Cox, 2011). It occurs when someone realises that they do not have the physical or mental strength or the resources to cope with excessive demands and pressures (European Agency for Safety and Health at Work, 2018). In its 2013–2020 action plan on mental health in the workplace, the World Health Organisation (WHO) prioritises prevention of stress through specific programmes (mhGAP) in order to reduce workplace absenteeism, increase productivity and improve the wellbeing of workers (WHO, 2019): organisations must offer support to those who are stressed so that they may carry out their work properly or, if absent, return to it.

Within this area, education is one of the professions with the highest levels of work-related stress when compared to other professions (Travers, 2017). This is a worldwide phenomenon (Skaalvik & Skaalvik, 2017a, 2017b), and is escalating (Health and Safety Executive HSE, 2018; Mérida-López & Extremera, 2017b). In fact, stress has become the principal indicator for teachers' mental health (Guerrero-Barona, del Amo, Moreno-Manso, & Guerrero-Molina, 2018), and is a key variable in studies of the profession's psychosocial risks. In the UK alone, 595,000 workers suffer from stress and 15.4 million working days are lost for this reason. In every 100,000 educators in the UK, 2,100 suffer from stress (Health and Safety Executive, 2018). In the US, the Robert Wood Johnson Foundation estimates the cost of attending to teaching staff is 7,300 million dollars per year. For these reasons, recovery of teachers' wellbeing has become a priority in the last few years (Roberts, Gallagher, Daro, Ikura, & Sarver, 2017).

In addition, when stress reactions persist over a prolonged period of time, they cause permanent and hard-to-reverse health problems such as chronic fatigue, musculoskeletal problems or cardiovascular diseases, and professional burnout syndrome (Ahola, Salminen, Toppinen-Tanner, Koskinen & Väänänen, 2013). This is defined as a multilevel response

syndrome associated with prolonged stress and is characterised by physical and psychological exhaustion, depersonalisation and cynicism, and a sense of helplessness and low self-efficacy (Zysberg, Orenshtein, Gimmon, & Robinson, 2017). In May 2019, the WHO included this work-related exhaustion syndrome in its classification of diseases (ICD-11) which will come into effect in 2022. Currently exhaustion, together with perceived stress and anxiety, is attracting attention due to job-related health risks for education professionals at all levels of education (Rodríguez García, Sola-Martínez, & Fernández-Cruz, 2017; Skaalvik & Skaalvik, 2017a).

In this set of circumstances, this work intends to analyse the Sixth European Working Conditions Survey to determine if the teaching profession, compared with other professions in Europe, yields high results of stress and exhaustion, and to find what psychosocial aspects are significant in comparison with other professions. Its final objective is to create awareness of the importance of attending to and returning health to education professionals and institutions.

In order to find solutions to these problems, in recent years there has been more and more interest in research to find which variables affect the states of stress and exhaustion, and how they can be mitigated and reduced. This study therefore conducts a synthesis of research that shows the effectiveness of psycho-educational intervention in the development of self-efficacy (Putwain & von der Embse, 2019), coping (Ramón, 2015) or socio-emotional training, and more specifically how emotional regulation (Mérida-López, Extremera, & Rey, 2017; Extremera, Mérida-López, Quintana-Orts & Rey, 2020) and mindfulness (Elreda, Jennings, DeMauro, Mischenko, & Brown, 2019) can improve teachers' health and wellbeing.

The article is structured as follows. Firstly, the article details the theoretical framework of the subject. Next Section explains the materials and methods used in the empirical analysis, together with the results. The article ends with a discussion of the results and conclusion.

2. Theoretical framework

2.1 Stress among teaching professionals

Europe shows the highest prevalence of anxiety among education workers (Baxter, Scott, Vos & Whiteford, 2013). Similarly, the surveys by the Spanish Ministry for Employment and Social Security on the quality of work life, carried out over ten years, confirm a worrying increase in stress since 2010. In a survey completed by over 1,000 non-university teachers in Spain in 2017, 90.6 per cent of 1,100 educators considered teaching to be a very stressful profession with a major impact on students' results, the atmosphere in the school room and absenteeism (Barómetro Laboral del Profesorado Colejobs-Magisterio, 2017). Recent research has underlined disturbing levels of stress and exhaustion in the education sector (von der Embse, Ryan, Shannon, Gibbs & Mankin, 2019). In fact, there is growing interest in the study of this issue in international research (Mérida-López & Extremera, 2017b; Szigeti, Balázs, Bikfalvi & Urbán, 2017). Rodríguez-García et al. (2017) point out that 46.9 per cent of the research into this subject originates in Europe.

The literature offers multiple reasons for both stress and exhaustion. On the one hand, teaching staff are faced with complex situations with high emotional involvement (Mérida-López & Extremera, 2017a). On the other, education presents a high level of complexity deriving from the continuing political reforms, never-ending bureaucratic burdens, and management of the learning and personal needs of a very diverse student body, including challenging behaviour, absenteeism, family problems or lack of motivation. In addition, teaching professionals must make continuous emotional adjustments regarding the organisation and expectations of both students and parents (Castillo-Gualda, Herrero, Rodríguez-Carvajal, Brackett & Fernández-Berrocal, 2019), with an overload of work and lack of discipline in the classroom (Aparisi, Torregrosa, Inglés & García-Fernández, 2019).

More specifically, at the preschool, primary and secondary levels (from 3 to 15 years old), Guerrero-Barona et al. (2018) find that pupils' lack of discipline and interest, and the limited collaboration of families, are the main causes of stress for 550 teachers at non-university level. In that study, together with perceived stress, the main indicators of teachers' mental health were the level of satisfaction and the degree of commitment they showed. In a regression study, Jones-Rincón & Howard (2019) found that factors associated with teaching stress were being Hispanic, not having many years' teaching experience, suffering from major depression and teaching at primary level.

In addition, Boldrini, Sappa & Aprea (2019) state that a sample of Swiss vocational education teachers were stressed by their low social status, continuous exposure to curricular reforms

and changes in the subject matter, together with frustration related to students' low motivation and little vocational maturity.

At the higher education stage, in a systematic study review carried out by Rodríguez-García et al. (2017), greater stress was found amongst young women teachers who used passive strategies to confront stress and had introverted, isolated and cold personalities; they were overworked, had inadequate salaries, did not feel the support and assistance of management and/or colleagues, did not feel their work was recognised, and were highly engaged and committed.

Cladellas-Pros, Castelló-Tarrida & Parrado-Romero (2018) find that the satisfaction, health and stress of university teaching staff depend mainly on their contractual status. The highest level of stress is associated with the profile of a young teacher with a temporary employment contract and low work satisfaction.

Furthermore, the personal characteristics of the teaching staff may also explain the causes of stress and may be taken into account in teacher training. A recent meta-analysis (n=6294) (Kim, Jörg & Klassen, 2019) states that exhaustion, at any level of education, is connected with the emotional stability of the teacher (peace of mind and security), extraversion (sociability, assertiveness) and awareness (organisation, responsibility and trustworthiness).

The consequences of stress and exhaustion are multiple and may include less professional commitment, greater absenteeism, lower efficiency in the management of the classroom and the teaching, and less assessment feedback to students (Castillo-Gualda et al., 2019), in addition to abandoning the profession (LaBarbera & Hetzel, 2016; Skaalvik & Skaalvik, 2017a, 2017b), lower quality relationships with the children (Collie, Perry & Martin, 2017; Jiménez, Albéniz, Molina & Pedrero, 2019) and a positive association with depression among teachers (Roberts et al., 2017).

2.2 Interventions on teaching professionals´ well-being

The high number of interventions about stress prevention and strategies to reduce the levels of stress of teaching professionals found in the literature is astonishing.

In this context, mindfulness programmes (MBI), intervention to develop emotional intelligence and the development of self-efficacy among teaching staff appear to be the most studied and most effective methods over the last few years.

2.1.1 Enhancing emotional intelligence

Enhancing the emotional intelligence of teachers has a potential protective effect both in the education organisation and in the treatment of stress and exhaustion at a personal level (Chan, 2006; Durán, Extremera & Rey, 2004; Llorent, Zynch & Varo-Millán, 2020; Mérida-López, Extremera & Sánchez, 2019; Mérida-López & Extremera, 2020). Mérida-López, Bakker & Extremera (2019) only partially support this hypothesis, because emotional intelligence does not moderate the effect of the emotional demands created by self-perceived stress, but it does moderate the relationship between perceived stress and commitment to work in both preschool and primary teachers. Emotional intelligence functions as a personal resource which helps teachers manage the effects of stress on their work commitment. In addition, Martínez-Monteagudo et al. (2019) have studied different emotional intelligence profiles (trait) and their relationship with teacher depression, anxiety, stress and exhaustion. Thus, teachers with high levels of attention and low levels of repair show greater exhaustion, depersonalisation, anxiety and stress. On the other hand, the profiles that adapt best to exhaustion, anxiety, depression and stress correspond to teachers with high levels of comprehension, attention and repair, and those with a predominance of low attention and high emotional repair. So, it seems that, whatever the case, improving emotional regulation is a clear asset in teacher training.

2.1.2 Mindfulness intervention

A mindfulness-based intervention (MBI) favoured the increase of self-efficacy and regulation of the emotions, and reduced stress (Emerson et al. 2017). In the same vein, Lomas, Medina, Ivtzan, Rupprecht, and Eiroa-Orosa (2017), in a systematic review of studies (n=1,981), found that mindfulness reduced exhaustion, anxiety, depression and stress in teachers, and so improved their wellbeing and satisfaction with life. In other cases, MBI, through the CARE programme, enhanced the relationship with students and sympathy for them, due to perspective-taking and reassessment. Furthermore, the teachers stopped interpreting students' reactions as a personal affront (Jennings, 2016; Sharp & Jennings, 2016). However, Elreda et al. (2019) and Becker, Gallagher, and Whitaker (2017) only find a moderate but significant

relationship between the practice of interpersonal mindfulness, the perceived stress of teachers and the emotional support perceived by students, which suggests that for teachers with high levels of stress, interpersonal attention in particular may be a valuable resource to promote the emotional support of students. This is not the case in Klingbeil and Renshaw (2018), whose meta-analysis on the impact of mindfulness on stress (n=1,493 educators) found more moderate effects, basically only on the atmosphere in the classroom. Zarate, Maggin & Passmore (2019), in another meta-analysis of 1,001 teachers, observed moderate effects on the reduction of stress and anxiety, and little reduction of depression and exhaustion.

2.1.3 Working on self-efficacy beliefs

From the meta-analysis by Zee & Koomen (2016), which reviews 40 years' research into teachers' self-efficacy and its influence on the quality of the classroom atmosphere, the academic adjustment of the pupils and the psychological wellbeing, satisfaction and commitment of the teaching staff, we can conclude that, in the majority of studies, low self-efficacy is related to teacher exhaustion. In turn, this self-efficacy influences the academic adjustment of the pupils due to the educational support they receive from their teachers. In the case of Nathaniel, Sandilos, Pendergast, & Mankin (2016), the results indicate a significant effect of self-efficacy on the participation and self-efficacy of the students. Moreover, in a recent study, the self-efficacy of the teacher has been shown to moderate the relationship between the pressure he/she is under and perceived stress, so the higher the self-efficacy, the lower the stress in a sample of 839 teachers (Putwain & von der Embse, 2019). In the same vein, in a study of 1,115 primary teachers, self-efficacy was related positively to enthusiasm and satisfaction and negatively to anxiety and depression (Huang, Yin, & Lv, 2019). Likewise, in primary and secondary teachers, self-efficacy, optimism, hope and resilience (the so-called psychological capital) together were a protective factor against exhaustion thanks to a positive coping style, particularly in teaching staff with over ten years' professional experience (Zhan, Zhan, & Huang, 2019). In addition, faith in collective efficacy, relative to the support, communication or management of stress, together with confidence in colleagues, favours teacher wellbeing (Strahan née Brown, Gibbs & Reid, 2019). In short, work on teacher self-efficacy is an asset that cares for their health (Skaalvik & Skaalvik, 2014).

2.1.4 Coping styles

Regarding coping styles, García-Arroyo and Osca (2019) have carried out an exhaustive review of studies among the teaching population on the effect of the use of either active or direct strategies (which change the situation and modify the stress factor), or passive or indirect strategies (directed towards regulating the emotional response generated by the stressor). They conclude that the former have to do with the psychological wellbeing of teachers and the latter with their exhaustion. In turn, evasive actions (distracting oneself from the stressful stimulus) may be useful when the work overload is very high.

In fact, according to extant literature, teachers seem to suffer from higher stress and burnout than other professions and concrete interventions have been carried out to support teachers´ wellbeing. In this context, research about burnout in teaching professionals has received the attention of researchers in recent years. This article contributes to this line of research.

3. Research questions

The purpose of this research is to answer the following questions:

1) What is the state of the art of this topic in the scientific literature in recent years (from 2017 to 2019)?

2) What is the situation of teaching professionals across Europe concerning stress and burnout in the workplace?

3) Are the number of years' experience and/or teachers´ age a relevant variable to explain stress and burnout in the workplace in the case of teaching professionals?

4) Are there significative differences between teaching professionals and other workers in Europe?

5) What strategies are defined in the literature from the last two years to control the stress and burnout that teaching professionals face?

Questions (1) and (5) will be addressed through the literature review, while research questions (2), (3) and (4) will be answered by means of the analysis of data from the aforementioned Sixth European Working Conditions Survey.

4. Materials and methods

4.1 Literature review analysis: Mapping techniques

To answer the proposed research questions, a literature review on the topic was conducted. Concretely, publications from PsycINFO (APA) (related to psychological research), ERIC (educational research), the Web of Science and Google Scholar databases were retrieved in the review. The search in the PsycINFO (APA) database was based on: (a) papers published between 2017 and 2019; and (b) articles which specifically included the terms "teacher", "educator", "stress" and "burnout" in their abstracts, keywords or titles. The exclusion criteria were based on the assumption that if none of these terms appeared in any of these fields for an article, it was likely that they did not occupy a core position in the article, and it could therefore be excluded. Results showed a total of 1,194 outcomes. This review was complemented by the ERIC database for articles published in 2019. A total of 149 publications were obtained. On the other hand, a search of the terms in Google Scholar for research published in 2019 yields 4,140 publications (9,460 articles were obtained in Google Scholar from 2017 to 2019). Finally, the search in the Web of Science database showed a total of 535 outcomes.

The inclusion criteria were that the publications addressed the mentioned variables from a theoretical or empirical perspective, articles were published in English, Spanish or French, and samples were teaching professionals from all educational stages. Finally, 56 articles were selected.

The results obtained were represented using graphical resources, where scientific maps were used to represent the results visually. These maps correspond to a spatial representation of the relationships among scientific specialities. This technique facilitates the study of collaborations among researchers, institutions and countries. These scientific maps were obtained from the information analysed through clustering analysis. The relationships among papers were analysed through VOSViewer software. Concretely, an optimisation algorithm was used to identify the relationships between keywords in the papers included in the review.

Figure 1 presents the results of this analysis.

INSERT FIGURE 1 HERE

In this figure, items are shown by a label and a circle: the larger the size of the circle, the higher the weight of an item. In addition, relationships among items are shown in different colours that represent the clusters in which an item is included. Furthermore, the distance between two papers in the network visualisation indicates the relationship between them: the closer they are, the stronger their relatedness.

As can be observed in Figure 1, “burnout” is the most cited keyword among the papers selected. “Stress” is also relevant in the analysis, although several terms are used to refer to this concept (as the term is included in Spanish and English). Finally, “mental health” appears alongside stress and anxiety, showing the relationships among these terms.

On the other hand, several clusters can be identified. Most refer to the linkages between stress and burnout, mental health and anxiety.

4.2 Data

The empirical analysis uses data from the sixth wave of the European Working Conditions Survey (hereafter, EWCS) [1] conducted by the European Foundation for Living and Working Conditions. Data from the EWCS were gathered from February to September 2015 in the EU28, Norway and Switzerland, and from September to December 2015 in Albania, the Former Yugoslav Republic of Macedonia, Montenegro, Serbia and Turkey. The questionnaire collected information on a broad range of factors related to the situation of labour conditions in Europe and on the nature and content of changes affecting workplaces. Information is structured by occupations.

This article is based on data from 35 European counties, the 28 EU Member States as well as Norway, Switzerland, Albania, the Former Yugoslav Republic of Macedonia, Montenegro, Serbia and Turkey (n=43,850). After checking for the variables required for the empirical analysis, the final subsample size was 27,756 observations.

The target sample size for the sixth EWCS was 1,000 interviews per country, but the number was increased in larger countries to reflect the larger workforce: 1,200 in Poland, 1,300 in Spain, 1,400 in Italy, 1,500 in France, 1,600 in the UK, and 2,000 in Germany and Turkey. All interviews were conducted face-to-face in the respondent's own home, with an average duration of 45 minutes. Moreover, some countries took up Eurofound's offer to top up their sample, leading to a final sample of 2,500 in Belgium, 1,600 in Slovenia and 3,300 in Spain. In the end, in total in the 35 countries, 43,850 interviews were carried out.

The sample of the EWCS is representative of people in employment (employees and self-employed) during the fieldwork period in each of the countries covered. Regarding the job of each respondent, the survey classifies occupations according to the International Standard Classification of Occupations (ISCO) structure. Information is sought according to the ISCO four-digit classification (Q5. "What is the title of your main paid job? By main paid job, we mean the one where you spend most hours. – Probe for as much information as possible with a view to obtaining an accurate four-digit ISCO classification"). Nevertheless, Eurofound publishes two-digit ISCO data.

Descriptive statistics are presented in section 5.1 for both the complete sample and the subsample of teaching professionals in order to find major differences between these groups.

4.3 Teaching professionals

In order to identify those employees that work in the educational sector as teachers, ISCO group 23 ("Teaching professionals") was selected from the two-digit classification. A total of 1,849 observations from the sample correspond to the subsample of teaching professionals.

As the ISCO classification states, the teaching professionals group includes different types of teacher: university and higher education teachers, vocational education teachers, secondary education teachers, primary school and early childhood teachers, and other teaching professionals.

It can be highlighted that these professionals need skills from the fourth level of the ISCO ("Clerks"), as their tasks include conducting classes; conducting adult literacy programs; teaching and educating persons with learning difficulties or special needs; designing and modifying curricula; inspecting and advising on teaching methods; participating in decisions;

conducting research; and preparing scholarly papers and books. Additionally, as stated by the ISCO classification, teaching professionals may supervise other workers.

4.4 Instruments

In line with the effort-reward imbalance stress model (Siegrist, 1996) and its version from the questionnaire defined by Díaz and Feldman (2010), this research considers the available variables from the survey that include relevant information for those models: *overall job satisfaction in the workplace* (Q88); *work distribution* (Q70d); *conflict solving* (Q70c); *well-paid workers* (Q89a); *personal relationships and support from superiors* (from Q63 to Q63f, except 63c: workers are respected, recognised, working together, there is help, feedback, encouragement, etc.); *support from colleagues* (Q61a); *worry*, in terms of the capacity to disconnect from work at home (Q45a); and *tiredness*, referring to be too tired to do chores (Q45c). In addition, the way stress affects sleep quality is included: *feeling active and vigorous* (Q87d); *sleeping problems in the last 12 months* (Q79a); *waking up during sleep in the last 12 months* (Q79b); and *waking up tired* (Q79c). On top of that, other variables are included, such as responses from the employees about if they *experience stress in their work* (Q61m); *have suffered from anxiety in the last 12 months* (Q78h); and have felt *cheerful and in good spirits* (Q87a) and *calm and relaxed* (Q87b) in the last two weeks. On the other hand, several factors linked to the burnout-engagement dichotomy are also considered (Maslach Burnout inventory, Spanish version in Gil-Monte, 2002; Torrente, Salanova, Llorens, & Schaufeli, 2013) that facilitate recognition of if stress is causing worker fatigue, with items that measure if they have felt *active and vigorous* (Q87c) in the last two weeks; *too tired after work to do some of the household jobs which need to be done* (Q45b); *full of energy at work* (Q90a); *enthusiastic about the job* (Q90b); in a situation where *time flies when working* (Q90c); and have felt *overall fatigue in the last 12 months* (Q78i). Socio-demographic variables are also considered, such as *discrimination by age, nationality, gender, religion, disability or sexual orientation* (from Q72a to Q72g); *suffering from verbal abuse in the last month* (Q80a); *unwanted sexual attention* (Q80b); *threats* (Q80c); *humiliating behaviours* (Q80d); *physical violence* (Q81a); *sexual harassment* (Q81b); or *bullying* (Q81c). Depression is measured through *being cheerful and in good spirits* (Q87a) and *interest in daily life* (Q87e). Finally, health is also included: *health or safety at risk because of work* (Q73) and *work affects health* (Q74).

Table 1 shows the variables used to define each construct.

INSERT TABLE 1 HERE

5. Results

5.1 Descriptive statistics

The definitions and descriptive statistics of the variables under analysis are shown in Table 2. As mentioned, these statistics are analysed for the sample of total workers and for the subsample of workers linked to the educational sector (teaching professionals). Table 2 also shows the items employees answered and the corresponding scale for each question.

INSERT TABLE 2 HERE

As can be observed in Table 2, there are several differences between teachers and other professionals. In particular, teaching professionals are, in general terms, more satisfied than the average worker (M_T=1.80, M_W=1.94, on a Likert scale from 1=very satisfied to 4=not at all satisfied). Although they experience higher levels of job satisfaction when compared with other professions as a whole, they also experience more stress (M_T=2.95, M_W=3.15, on a Likert scale from 1=always stressed to 5=never stressed) and anxiety (M_T=1.81, M_W=1.84, where 1=anxious and 2=not anxious). Furthermore, teaching professionals feel less calm than the medium worker (M_T=2.61, M_W=2.44, on a Likert scale from 1=all the time to 6=at no time). They also suffer from high levels of fatigue (M_T=1.57, M_W=1.60, on a Likert scale from 1=overall fatigued to 2=not overall fatigued). In terms of their ability to relax, teaching professionals have more problems sleeping (M_T=3.98, M_W=4.04, on a Likert scale from 1=always to 5=never), waking up at night (M_T=3.79, M_W=3.90, on a Likert scale from 1=always to 5=never) or even waking up more tired (M_T=3.87, M_W=3.91, on a Likert scale from 1=always to 5=never) than the medium worker.

Finally, in terms of their workplace wellbeing and related to their security, teaching professionals also suffer more verbal abuse than other workers (M_T=1.86, M_W=1.90, on a Likert scale from 1=suffering verbal abuse to 4=not suffering verbal abuse).

5.2 Stress, burnout and job satisfaction by age

After conducting the descriptive analysis, we focus on the role of age to study if this variable is relevant to explain teachers' job satisfaction, stress and burnout in the workplace. It is relevant to highlight that age is used as a proxy variable for experience, although there are

several cases where that is not the situation. As the research is based in a large database, it can be assumed that, on average, age shows a high correlation with experience.

Figure 2 shows the main results of the mentioned variables grouped by age.

INSERT FIGURE 2 HERE

As can be observed, there is a similar trend in all the groups considered. Nevertheless, small differences can be detected among groups. Although young teachers present higher levels of job satisfaction than the other groups as a whole (1.91 versus 1.95, 1.96 and 1.95), they suffer more stress (3.16 versus 3.03, 3.11 and 3.16), and higher fatigue than medium age and experienced teachers (1.61 versus 1.59 and 1.58) and less fatigue than the older teachers (1.61 versus 1.63).

With the exception of fatigue (which can be explained by taking into consideration the role of age on fatigue), it seems that young teachers are more exposed to stress and burnout than their counterparts.

Finally, job satisfaction seems to maintain or reduce a little along the professional career. This result contradicts the findings from Cladellas-Pros et al. (2018), where the youngest teachers were the least satisfied with their work.

5.3 Heterogeneity results

5.3.1 Mean differences

Our research aims to analyse whether or not the described differences between teaching professionals and the worker average are significant. Several subsamples were compared in order to analyse gender differences. To achieve the objectives, a test of differences between means was calculated. Accordingly, the following groups were compared:

i. The group of teaching professionals (a)

ii. The other workers (b)

Table 3 presents the results for the described comparisons.

INSERT TABLE 3 HERE

As Table 3 shows, significant differences are found in all the variables previously described (stress, job satisfaction, health, anxiety, cheerfulness, fatigue, problems sleeping, waking up during sleep and verbal abuse), except from the variable that refers to waking up tired or exhausted.

According to the data collected by the Sixth EWCS, the empirical evidence confirms the situation described in the literature of higher levels of stress and burnout suffered by teaching professionals if we compare them with other workers.

As a result, it can be concluded that teaching professionals across Europe face higher levels of job stress and burnout than the medium worker, as predicted by Baxter et al. (2013), among others.

5.3.2 Heterogeneity across professions

In order to complete the analysis, the study is focused on the differences across professions. Turkey and Ducan test were conducted in order to analyse significant differences among groups of professions[1].

Figures 3 and 4 show the heterogeneity for job satisfaction and stress. According to these results, health professionals and administrative and commercial managers are the most stressed professions whereas commissioned armed forces officers present the highest job satisfaction. As it can be observed, teaching professionals are one of the most stressed professions (9 position out of 43), and they also state a high job satisfaction (it is important to remember than both scales go from "very stress" to "not at all stress" and "very satisfied" to "not at all satisfied"; in consequence, a minor value represents more stress and more job satisfaction).

INSERT FIGURE 3 HERE

INSERT FIGURE 4 HERE

To sum up, empirical evidence based on data from the Sixth EWCS shows a difference between teaching professionals and other professions across Europe in terms of stress and burnout. Nevertheless, although teachers are more stressed than the medium worker, they present higher levels of job satisfaction. A first descriptive study confirms this evidence. A

[1] Detailed results are available upon request to the authors.

heterogeneity analysis is conducted after, which suggests that differences between teachers and other professions are significant and shows heterogeneity across professions. Finally, a comparative analysis is presented for the respondents that suffer the most and fewest problems in both groups and their levels of stress. These results are in line with the previous analysis. All these analyses are coherent with extant literature that suggests that teaching is considered a stressful profession (Baxter et al., 2013; Barómetro Laboral del Profesorado Colejobs-Magisterio, 2017; von der Embse et al., 2019).

6. Discussion

By comparing teaching professionals with other groups of professions of the European Working Conditions Survey, it can be concluded that teachers are not the most stressed profession, but they are one of the professions that experience highest stress. Along with this line, European education professionals present particular characteristics, and there is a significant difference with the average of the rest of professionals surveyed as a whole. All these elements are being discussed extensively in this Section.

Regarding the satisfaction of European education professionals, although what is common in research is to find a significant negative relationship between satisfaction and stress (Castillo-Gualda et al., 2019), Boix-Vilella, Alacreu-Crespo, Abad-Tortosa, Costa & Serrano (2016) find that the most exhausted teachers feel the highest level of satisfaction. Our study concludes, similarly, that teachers present higher levels of exhaustion compared with the rest of professionals as a whole and higher levels of employment satisfaction. Boix-Vilella et al. (2016) understand that this exhaustion is not negative, but is rather the result of teachers' efforts to do their work well, and may reflect that the teachers, although exhausted, are pleased with the support offered by the centre. The vocational component of this profession may also explain this result, as the pleasure is compatible with a profession that is emotionally exhausting. Valledano and Rubio-Valdehita (2018) also found more satisfaction among teachers than in other caring professions such as social workers and social educators.

Regarding the stress, anxiety and uneasiness found to a greater extent amongst European education professionals compared to other professionals as a whole. The Report of the Teacher Ombudsman (2018) in Spain stated that, of the teachers that worked in the 2017–

2018 school year, 74 per cent suffered from anxiety and 13 per cent from depression, while 11 per cent were on sick leave. There is an increase in the deterioration of teachers' morale, together with a rise in sick leave, assaults on teachers and disrespect (from 7 to 14%) there is also a rise in parental harassment of teachers; Results from the research conducted by Granados, Aparisi, Inglés, Aparicio, Fernández-Sogorb & García-Fernández (2019) also support our outcomes since stress, together with depression and anxiety, indicated both depersonalisation or cynicism and low personal fulfilment among teachers from preschool to secondary education.

Along with this line, European education professionals are significantly more exhausted than the rest of professionals as a whole. Several European studies confirm the existence of high exhaustion in teachers and connect it with a high workload and excessive commitment, and also with a high presenteeism which redounds in lower satisfaction and performance. Evasive coping mechanisms are mainly used to overcome the situation (Huyghebaert, Gillet, Beltou, Tellier & Fouquereau, 2018; García-Arroyo and Osca, 2019).

On the other hand, European education professionals present significantly more sleeping and insomnia problems compared to the rest of professionals as a whole. Rivero & Cruz (2010) find similar results in sleeping disorders, anxiety and depression, associated with long hours, strict work supervision and repetitive tasks. For Huyghebaert et al. (2018), workload is an indicator of sleeping problems, but only among teachers with excessive commitment, while psychological detachment modulates the negative effect of employment stressors on the quality of sleep (Pereira & Elfering, 2014). Fostering educators´ leadership and empowering teachers act as moderators of sleeping problems (Galliker et al., 2019).

Regarding the verbal harassment which European education professionals say they receive more than other European professionals as a whole, data in the Report of the Teacher Ombudsman in Spain (2018) indicate that although cyber-harassment has diminished, there has been an increase in disrespect for teaching staff and problems delivering lessons. Irvin & Cederblad (2019) conclude that rudeness towards teachers does not only come from students, but also from colleagues and even senior colleagues, and has a clear negative impact on employment satisfaction and teacher stress. Schonfeld, Bianchi, and Luehring-Jones (2017) make the case for the administration to guarantee security for educators through complaint management and measures to reduce the exposure of teachers to depression-causing factors such as the endemic disrespectful behaviour towards them.

As is reflected in the research, we find in our study that teachers notice work impacting on their health status. Similarly, Gómez, Perilla-Toro & Hermosa (2019) and Keser (2019) suggest that health problems are caused by excessive workload and employment demands, relationships with colleagues (perceived support and cohesion) and the nature of the work. Again, in opposition with our data, Ponce, Rieke, Camargo, and Mayagoitia (2016) find that although teachers feel physically healthy, they are a high-risk population group for cardiovascular diseases with high indexes of overweight, use of alcohol and tobacco, hypertension, glucose, cholesterol, LDL and triglycerides, and low levels of HDL, together with little physical exercise.

European education professionals have felt little joy and little good humour, and there is a significant difference with the average of the rest of professionals surveyed as a whole. This is proven by studies conducted in Italy and Switzeland (Bianchi y Janin, 2018; Capone, Joshanloo & Park, 2019). In fact, in the area of education, the comorbidity of depression with stress anxiety and health problems such as heart disease and digestive disorders is well-known (Rodríguez-Leonardo, Tovalín, & Rodríguez, 2018), as is the fact that teachers' depression has a negative effect on emotional support and intellectual stimulation for pupils (Roberts et al., 2016; Whitaker, Dearth-Wesley, & Gooze, 2015) and on their academic results (Roberts, LoCasale-Crouch, Hamre & DeCoster, 2016). Taking into account, then, that teachers' depression not only affects the teacher but also increases the number of conflicts and makes for worse quality communication with their pupils and inferior socioemotional development amongst them, it seems crucial that teachers' wellbeing should be cared for.

Finally, considering stress, burnout and job satisfaction by age, we obtain little differences by age in stress and burnout whereas Granados et al. (2017) find that teachers from 30 to 49 years present the highest levels of burnout, and Moreno et al. (2000) identify the group of 45-50 years as the most stressed.

7. Conclusion

Teaching profession has particular characteristics as it presents highest levels of stress than the average of professions as a whole, according to the data of a European survey. Nevertheless, teaching professionals show, simultaneously, a high level of job satisfaction

along the professional career. It can be concluded that teaching professionals present a very particular kind of stress, where pressure is neutralized with vocation.

- The literature reviewed between 2017 and 2019 continues to confirm that education is a profession of high psychosocial risk, and both the WHO and the European Agency for Safety and Health at Work address stress and exhaustion in their present and future action projects.
- In view of the reviewed literature, the strategies which have proved to be protective against stress and exhaustion are: 1) training in full attention or mindfulness, which has a positive effect on the relationship between the teacher and the students and the climate in the classroom; 2) development of emotional intelligence, more specifically, emotional regulation; 3) strengthening the self-efficacy of teachers, which may help them to address stress factors, to avoid exhaustion, and favour an atmosphere of personal and academic support for their students; and 4) the use of active and evasive coping strategies when the work overload is excessive.
- This phenomenon affects staff at all levels of education regardless of age and/or years of experience.
- The European survey on work reviewed shows that education professionals, compared with the other professions assessed as a whole, present levels above the average of stress and anxiety, exhaustion, higher bad humour and less joy; they have greater amount of sleeping disorders, a higher perception that work is affecting their health, and feel greater verbal harassment, although, strangely enough, they are mainly content as regards their working conditions. In short, teaching professionals present levels of stress above the average of professions as a whole, although heterogeneity across professions was also found. These results justify the need of a special attention with regard to the wellbeing of teaching professionals.

Like other studies, the current research has certain limitations. Specifically, given the nature of the data, variations such as personality traits, which, in recent years, are taken into account in the studies in order to additionally control the intrapsychic factors that explain work-related stress, cannot be controlled. Moreover, the basis was items given by the survey, which does not permit us to make a strict comparison of these results with others which use the models and assessment tools for stress and burnout in the literature. Finally, the information gathered is from a survey; hence the self-reporting data do not allow for strict generalisation.

This problem is partially offset by the large size of the sample (27,756 individuals). In fact, the quality of the sample used is one of the main strengths of this research work.

Given the relevance of the subject addressed and its effect on the quality and cost of education, it is considered important to continue the analysis over the next few years in order to define the tendency produced. That is to say, beginning with, for example, the next round of the EWCS, a similar analysis could be carried out to study the evolution of the degree of stress and burnout in the educators´ collective. In this way, it will be possible to see if the implementation of some of the measures proposed has resulted in reducing this problem, or if, on the contrary, we are facing a worsening future situation, as suggested by Mérida-López and Extremera (2017a).

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[1] The EWCS is publicly available from the European Foundation for the Improvement of Living and Working Conditions (https://www.eurofound.europa.eu/).

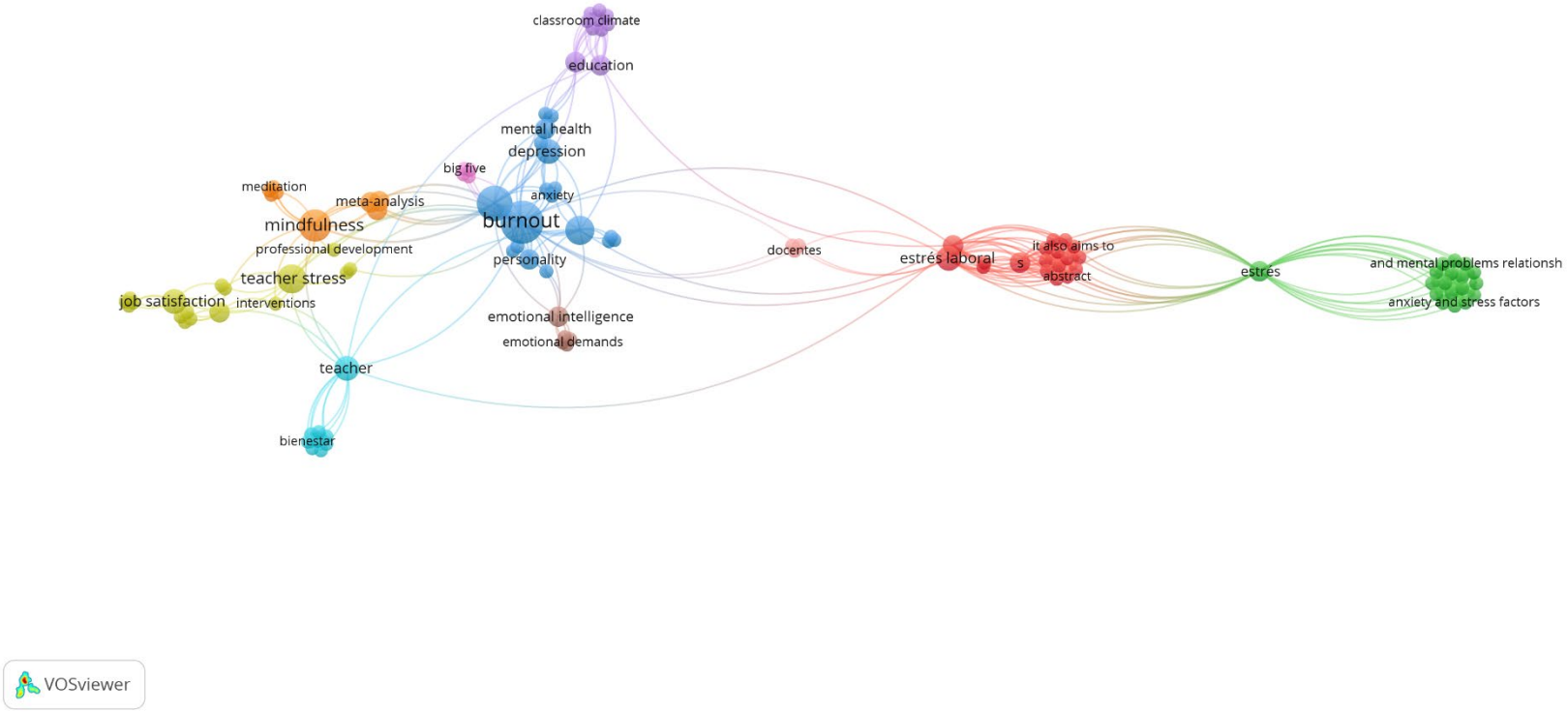

Figure 1. Relationships between the articles

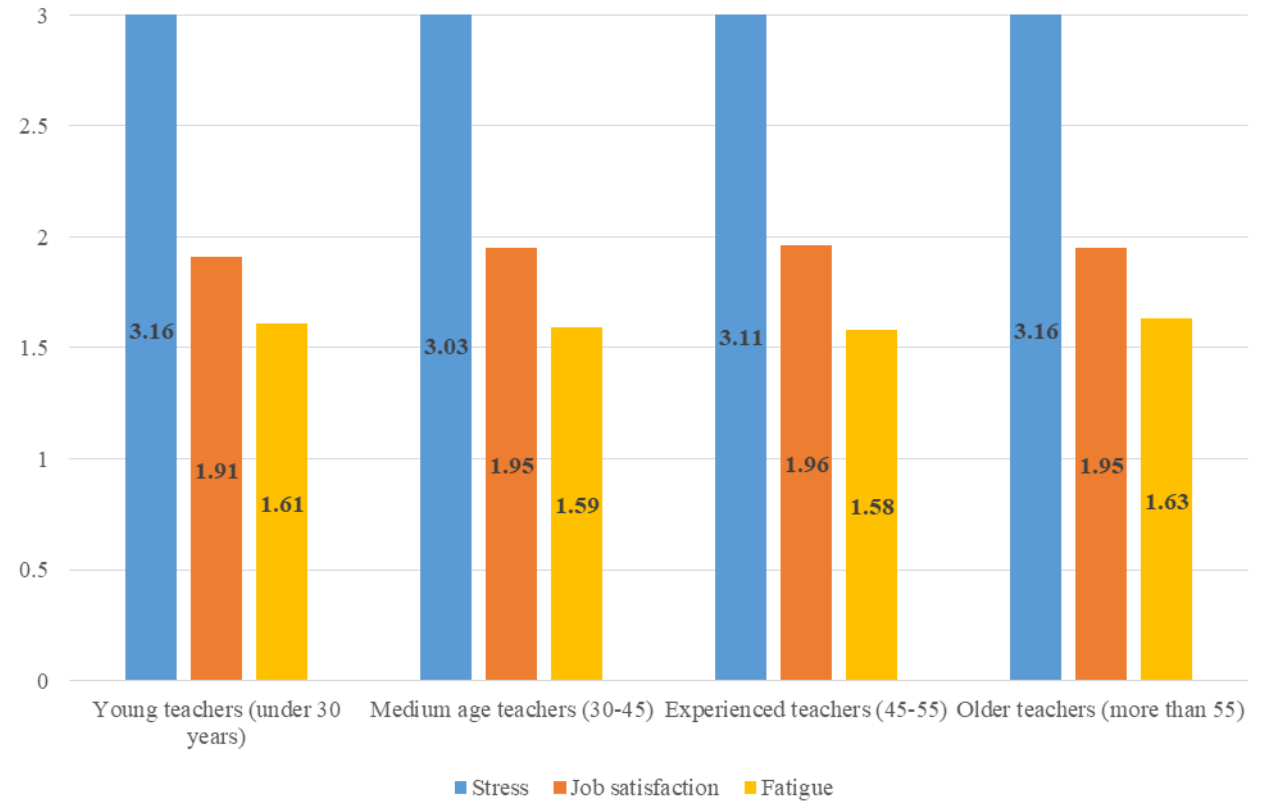

Figure 2. Teaching professionals´ stress, burnout and job satisfaction by age

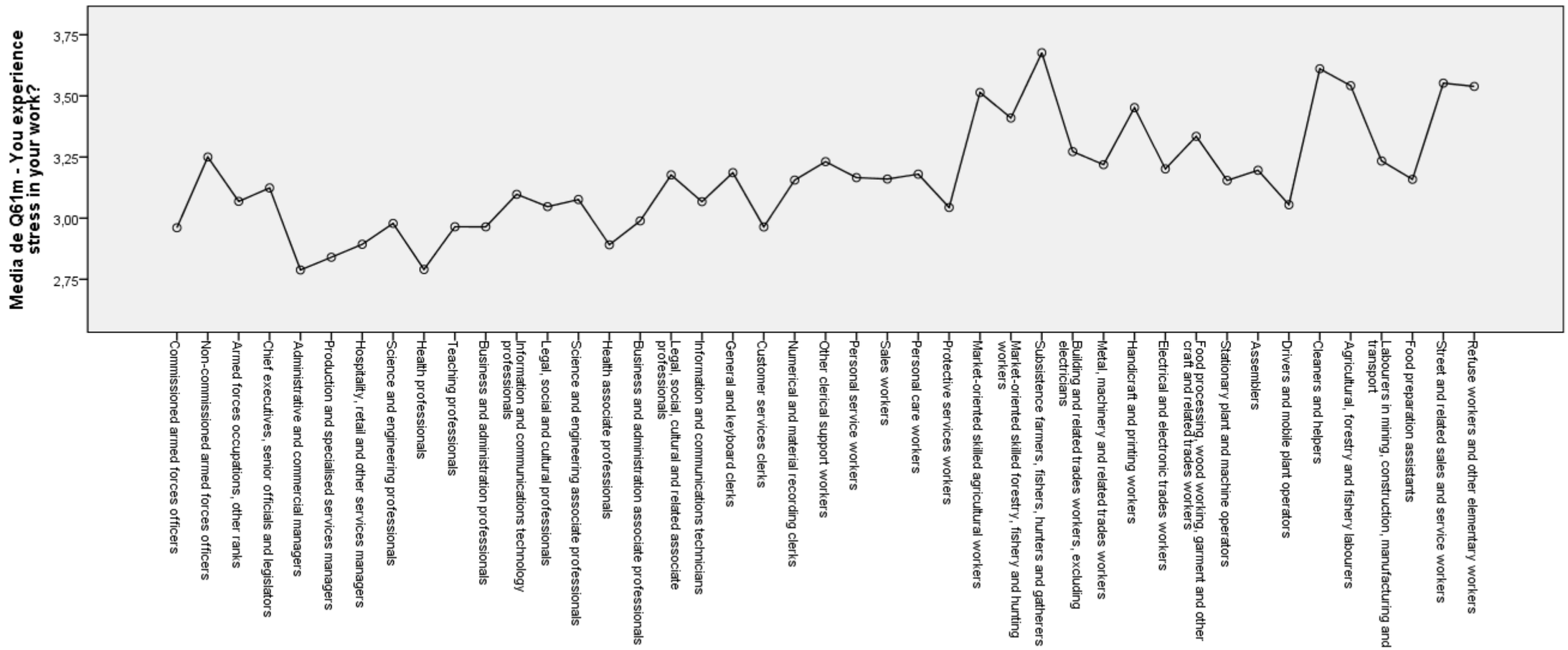

Figure 3. Stress situation for teaching professionals and other professionals across Europe (average from groups)

Figure 4. Job satisfaction for teaching professionals and other professionals across Europe (average from groups)

Table 1. Variables used per construct

Construct	**Variables**
Stress	Q45a: worry, in terms of the capacity to disconnect from work at home Q45b: tiredness, referring to be too tired to do chores Q61a: support from colleagues Q61m: support from employees if experiencing stress at work Q63 to Q63f (except 63c): personal relationships and support from superiors (workers are respected, recognised, work together; there is help, feedback, encouragement, etc.) Q70d: work distribution Q70c: conflict solving Q87b: calm and relaxed in the last two weeks Q88: overall job satisfaction in the workplace Q89a: well-paid workers
Sleep quality	Q79a: sleeping problems in the last 12 months Q79b: waking up during sleep in the last 12 months Q79c: waking up tired Q87d: waking up fresh and rested
Burnout-engagement	Q45b: too tired after work to do some of the household jobs which need to be done Q78i: overall fatigue in the last 12 months Q87c: active and vigorous in the last two weeks Q90a: full of energy at work Q90b: enthusiastic about the job

	Q90c: in a situation where time flies when working
Anxiety	Q78h: suffered from anxiety in the last 12 months
Depression	Q87a: felt cheerful and in good spirits Q87e: interest in daily life
Health	Q73: health or safety at risk Q74: work affects health
Others	Q72a to Q72g: discrimination by age, nationality, gender, religion, disability or sexual orientation Q80a: suffered from verbal abuse in the last month Q80b: unwanted sexual attention Q80c: threats Q80d: humiliating behaviours Q81a: physical violence Q81b: sexual harassment Q81c: bullying

Table 2. Descriptive statistics

			All workers					Teaching professionals				
Variable	**Question**	**Likert scale**	**N**	**Min**	**Max**	**Mean**	**SD**	**N**	**Min**	**Max**	**Mean**	**SD**
Job satisfaction	*Q88- On the whole, are you very satisfied, satisfied, not very satisfied or not at all satisfied with working conditions in your main paid job?*	1=very satisfied to 4=not at all satisfied	43,554	1	4	1.94	0.707	2,330	1	4	1.8	0.647
Work distribution	*The work is distributed fairly [Agree with the following statements?]*	1=strongly agree to 5=strongly disagree	34,570	1	5	2.1	1.06	2,183	1	5	2.09	1.047
Conflict solving	*Q70c - Conflicts are resolved in a fair way [Agree with the following statements?]*	1=strongly agree to 5=strongly disagree	34,005	1	5	2.1	1.046	2,191	1	5	2.08	1.002
Respect	*Q63a - Your immediate boss… - Respects you as a person*	1=strongly agree to 5=strongly disagree	34,499	1	5	1.58	0.854	2,200	1	5	1.43	0.732
Recognition	*Q63b - Your immediate boss... - Gives you praise and recognition when you do a good job*	1=strongly agree to 5=strongly disagree	34,410	1	5	2.12	1.156	2,190	1	5	1.97	1.054
Helpness	*Q63d - Your immediate boss… - Is helpful in getting the job done*	1=strongly agree to 5=strongly disagree	34,061	1	5	2.29	1.254	2,164	1	5	2.2	1.177
Feedback	*Q63e - Your immediate boss… - Provides useful feedback on your work*	1=strongly agree to 5=strongly disagree	34,230	1	5	2.12	1.136	2,181	1	5	2.09	1.113
Encouragement	*Q63f - Your immediate boss… - Encourages and supports your development*	1=strongly agree to 5=strongly disagree	34,065	1	5	2.14	1.157	2,191	1	5	1.95	1.046
Support	*Q61a - Your colleagues help and support you?*	1=always; 5=never	37,986	1	5	2.01	1.108	2,246	1	5	1.89	0.951
Stress	*Q61m - You experience stress in your work?*	1=always; 5=never	43,228	1	5	3.15	1.167	2,327	1	5	2.95	1.051
Well-paid	*Q89a - Considering all my efforts and achievements in my job, I feel I get paid appropriately [Agree, about your job?]*	1=strongly agree to 5=strongly disagree	42,358	1	5	2.77	1.31	2,321	1	5	2.69	1.302
Worrying	*Q45a - Kept worrying about work when you were not working [How often have you…?]*	1=always; 5=never	43,374	1	5	3.69	1.189	2,325	1	5	3.31	1.169
Tiring	*Q45b - Felt too tired after work to do some of the household jobs which need to be done [How often have you…?]*	1=always; 5=never	43,297	1	5	3.3	1.147	2,328	1	5	3.31	1.031

Conciliation	*Q45c - Found that your job prevented you from giving the time you wanted to your family [How often have you…?]*	1=always; 5=never	43,131	1	5	3.86	1.136	2,314	1	5	3.9	1.055
Age discrimination	*Q72a - Age discrimination [Past 12 months at work, subjected to?]*	1=yes; 2=no	43,671	1	2	1.97	0.178	2,330	1	2	1.96	0.196
Race, ethnic discrimination	*Q72b - Discrimination linked to race, ethnic background or colour [Past 12 months at work, subjected to?]*	1=yes; 2=no	43,651	1	2	1.98	0.127	2,330	1	2	1.99	0.118
Nationality discrimination	*Q72c - Discrimination linked to nationality [Past 12 months at work, subjected to?]*	1=yes; 2=no	43,642	1	2	1.98	0.135	2,329	1	2	1.99	0.116
Sex discrimination	*Q72d - Discrimination on the basis of your sex [Past 12 months at work, subjected to?]*	1=yes; 2=no	43,680	1	2	1.98	0.14	2,327	1	2	1.98	0.151
Religion discrimination	*Q72e - Discrimination linked to religion [Past 12 months at work, subjected to?]*	1=yes; 2=no	43,670	1	2	1.99	0.093	2,328	1	2	1.99	0.095
Disability discrimination	*Q72f - Discrimination linked to disability [Past 12 months at work, subjected to?]*	1=yes; 2=no	43,634	1	2	1.99	0.1	2,330	1	2	1.99	0.083
Sexual orientation discrimination	*Q72g - Discrimination linked to sexual orientation [Past 12 months at work, subjected to?]*	1=yes; 2=no	43,624	1	2	2	0.07	2,327	1	2	2	0.059
Health	*Q74 - Does your work affect your health?*	1=affects positively; 2=affects negatively; 3=no	42,511	1	3	2.48	0.703	2,262	1	3	2.41	0.786
Health at risk	*Q73 - Do you think your health or safety is at risk because of your work?*	1=yes; 2=no	43,050	1	2	1.75	0.434	2,307	1	2	1.83	0.374
Anxiety	*Q78h - Anxiety [Last 12 months, have any health problems?]*	1=yes; 2=no	43,692	1	2	1.84	0.369	2,329	1	2	1.81	0.389
Cheerfulness	*Q87a - I have felt cheerful and in good spirits [...which is the closest to how you have been feeling over the last two weeks]*	1=all the time; 6=at no time	43,683	1	6	2.44	1.122	2,330	1	6	2.33	1.013
Calm	*Q87b - I have felt calm and relaxed [...which is the closest to how you have been feeling over the last two weeks]*	1=all the time; 6=at no time	43,684	1	6	2.64	1.248	2,332	1	6	2.61	1.162
Active	*Q87c - I have felt active and vigorous [...which is the closest to how you have been feeling over the last two weeks]*	1=all the time; 6=at no time	43,685	1	6	2.56	1.208	2,332	1	6	2.46	1.124

Wake up fresh	*Q87d - I woke up feeling fresh and rested [...which is the closest to how you have been feeling over the last two weeks]*	1=all the time; 6=at no time	43,680	1	6	2.78	1.323	2,330	1	6	2.71	1.266
Interests in daily life	*Q87e - My daily life has been filled with things that interest me [...which is the closest to how you have been feeling over the last two weeks]*	1=all the time; 6=at no time	43,611	1	6	2.48	1.216	2,332	1	6	2.26	1.049
Energy	*Q90a - At my work I feel full of energy [Please tell me how often you feel this way...]*	1=always; 5=never	43,646	1	5	2.19	0.849	2,331	1	5	2	0.699
Enthusiasm	*Q90b - I am enthusiastic about my job [Please tell me how often you feel this way...]*	1=always; 5=never	43,608	1	5	2.17	0.993	2,330	1	5	1.79	0.739
Time	*Q90c - Time flies when I am working [Please tell me how often you feel this way...]*	1=always; 5=never	43,666	1	5	1.92	0.912	2,329	1	5	1.73	0.753
Fatigue	*Q78i - Overall fatigue [Last 12 months, have any health problems?]*	1=yes; 2=no	43,655	1	2	1.60	0.491	2,326	1	2	1.57	0.495
Sleeping problems	*Q79a - Difficulty falling asleep [Last 12 months, any sleep related problems?]*	1=always; 5=never	43,771	1	5	4.04	1.128	2,330	1	5	3.98	1.123
Waking up during the sleep	*Q79b - Waking up repeatedly during the sleep [Last 12 months, any sleep related problems?]*	1=always; 5=never	43,751	1	5	3.90	1.235	2,328	1	5	3.79	1.276
Waking up tired	*Q79c - Waking up with a feeling of exhaustion and fatigue [Last 12 months, any sleep related problems?]*	1=always; 5=never	43,747	1	5	3.91	1.173	2,329	1	5	3.87	1.147
Verbal abuse	*Q80a - Verbal abuse [Last month, subjected to any of the following?]*	1=yes; 2=no	43,658	1	2	1.90	0.301	2,327	1	2	1.86	0.348
Unwanted sexual attention	*Q80b - Unwanted sexual attention [Last month, subjected to any of the following?]*	1=yes; 2=no	43,681	1	2	1.98	0.131	2,329	1	2	1.99	0.113
Theats	*Q80c - Threats [Last month, subjected to any of the following?]*		43,673	1	2	1.96	0.201	2,329	1	2	1.95	0.228
Humillation	*Q80d - Humiliating behaviours [Last month, subjected to any of the following?]*		43,612	1	2	1.94	0.234	2,326	1	2	1.94	0.242
Violence	*Q81a - Physical violence [Last month, subjected to any of the following?]*		43,726	1	2	1.98	0.129	2,330	1	2	1.98	0.146

Sexual harassment	*Q81b - Sexual harassment [Last month, subjected to any of the following?]*		43,709	1	2	1.99	0.089	2,329	1	2	1.99	0.077
Bullying	*Q81c - Bullying/ harassment [Last month, subjected to any of the following?]*		43,665	1	2	1.96	0.201	2,322	1	2	1.95	0.222
		N	27,756					1,849				

Table 3. Heterogeneity analysis. Mean differences

	Teaching professionals versus other workers			
	F	M_1 - M_2	t-stat	
Stress	114.706	-0.211	-9.343	***
		(0.023)	(0.000)	
Job satisfaction	13.548	-0.153	-11.071	***
		(0.014)	(0.000)	
Health	150.55	-0.076	4.49	***
		(0.017)	(0.000)	
Anxiety	38.827	-0.025	-3.06	**
		(0.008)	(0.002)	
Cheelfulness	72.742	-0.114	-5.239	***
		(0.022)	(0.000)	
Fatigue	21.431	0.048	-2.639	**
		(0.011)	(0.008)	
Sleeping problems	1.664	-0.061	-2.532	**
		(0.011)	(0.024)	
Waking up during sleep	22.074	-0.113	1,959	***
		(0.027)	(0.000)	
Waking up tired	1.775	-0.04	0,209	
		(0.025)	(0.109)	
Verbal abuse	162.334	-0.043	10,095	***
		(0.007)	(0.000)	

Note: standard errors in parentheses; * p< .1; ** p< .05; *** p< .001