

Occupational Burnout on University Teachers Through the Confirmatory Factorial Model

Desgaste ocupacional en docentes universitarios mediante el modelo factorial confirmatorio

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Summary

The research addresses occupational burnout on university teachers, understood as progressive loss of energy, emotional exhaustion, fatigue, irritability, negative attitudes and feelings of dissatisfaction. The purpose of the study was to compare the presence of job burnout on teachers of the School of Education and Electronic Engineering from a Public University of Peru. It was developed according to principles of quantitative approach, transactional non-experimental design, and type of substantive, descriptive-comparative research. The sample was made up of 125 teachers from both faculties to which the Occupational Attendance Scale-EDO was administered. This instrument presented the required validity and reliability. The results obtained through the confirmatory factor model of structural equations, estimated through the asymptotic free distribution method, led to the conclusion that the teachers from the School of Education report greater emotional wear than teachers of the School of engineering.

Keywords: Emotional Exhaustion, Burnout, Depersonalization, Factorial Model.

Resumen

La investigación aborda el desgaste ocupacional en docentes universitarios, entendida como pérdida progresiva de energía, cansancio emocional, fatiga, irritabilidad, actitudes negativas y sentimientos de insatisfacción. El propósito del estudio fue comparar la presencia de desgaste ocupacional en docentes de la Facultad de Educación e Ingeniería Electrónica de una Universidad Pública del Perú; se desarrolló según principios del enfoque cuantitativo, diseño no experimental transaccional, tipo de investigación sustantivo, descriptivo-comparativo y la muestra estaba constituida por 125 docentes de ambas facultades a los que se administró la Escala de Desgaste Ocupacional- EDO, dicho instrumento presentó validez y fiabilidad requerida. Los resultados a través del modelo factorial confirmatorio de ecuaciones estructurales, estimados mediante el método de distribución libre asintótica, permite concluir que los docentes de la Facultad de Educación presentan mayor desgaste emocional que los docentes de la facultad de ingeniería.

Palabras clave: Desgaste emocional; Agotamiento; Despersonalización; Modelo factorial.

Introduction

Occupational burnout also known as burnout syndrome or professional burnout syndrome, as a form of fatigue or exhaustion caused by dedication to a cause, way of life, or relationship. Freudenberg (1974), the importance of studying it has been increasing in recent years. In a research carried out in more than 2,000 public and private sector workers, it was observed that 41% present high levels of work stress; two out of three reported feeling overloaded with work, and 36% reported not getting any support from their peers and supervisors. In addition, one out of five did not report their high level of stress, and 48% avoided sick leave, in both cases for fear of dismissal (Paton, 2011). This is a percentage that is also extrapolated to the prevalence of burnout among teachers (El Sahili, 2015). The fact is that although this syndrome has been associated mostly with secondary school teachers (León, León and Cantero, 2013), it is also present in university teachers, due to the lack of concern on the part of the Peruvian State to provide appropriate working conditions to higher education teachers; likewise due to the large number of teachers belonging to different areas of specialization who require the development of updated skills. If the frequent teacher rotation and the large amount of administrative work they have to do are added, in addition to their teaching activity, they would be more likely to suffer burnout (Rodríguez & Sánchez, 2018).

Occupational burnout is characterized by a series of aspects, behaviors, and organizational conditions (Chavarría, Colunga, Loria & Peláez, 2017) in which university teachers are involved and which can lead to bodily discomfort, moodiness, emotional and physical burnout, tiredness, low motivation, low performance, and irritability. We are referring to the general weakening of

the subject, added to the depersonalization of tasks, which implies attitudes of rejection (Rodríguez & Sánchez, 2018) or ill treatment. All this has important consequences for the main recipients of our teaching activity: students (Küster & Vila, 2012), since they are offered a bad service, showing no interest for them, giving them a poor support for the assigned tasks or not providing them with an adequate or appropriate feedback. All these aspects can also be understood as psychosomatic symptoms that transcend, if not identified and addressed promptly.

It is important to bear in mind that occupational burnout occurs in some teachers of the School of Education and Electronic Engineering, affecting both their physical and mental wellbeing, as well as working relations with their peers. (Cabezas, 2016) refers that the teacher of the School of Engineering has a work load that fluctuates around 40, 20, 12, being the burnout syndrome one of the consequences because of workload and the socio-demographic conditions. Some teachers who work in the School of Education are exposed and so vulnerable and susceptible to suffer acute levels of job burnout, due to the considerable physical, mental and emotional work generated by thinking about the situation of education, the people who make it up, the needs, demands and what it implies to concentrate on the attention that is given to university students; thus, making their work rigorous, tense and exhausting. It is necessary to add to all this, the awareness to situations of conflict and tension with some students and co-workers, alongside research tasks still under construction (Arquero & Donoso, 2013). Engineering teachers on the other hand, do not consider or show interest in aspects related to their students, but rather worry about external labor aspects not necessarily related to teaching, which obviously also leads to occupational burnout.

Hence, the need to study the syndrome of occupational burnout and the significant repercussions it has on the health of the person and the organization, generating conflicts or imbalances in work and family (Patlán, 2013; Esteras, Chorot&Sandín, 2014) (absenteeism, decrease in productivity, decrease in quality, among others). It should also be noted that the greatest number of cases of wasting syndrome occur in professionals who provide a service with a social function, as mentioned above, thus developing into a public health problem. Because of these situations, it is important to begin research in the country that addresses this field of study in order to evaluate this situation and, if necessary, recommend to the rectorate that it adopt measures for the occupational health care of its teaching staff that reduces the presence of professional burnout (Gaxiola-Villa, 2014), especially in the schools of social sciences and humanities. This result is also consistent with other international studies that have analyzed the de-motivation factor, which is greater in the social sphere (Pascual and Conejero, 2015). However, in other studies, it was the science teachers who showed the greatest "emotional exhaustion" and, therefore, the most susceptible to suffer this syndrome (Chávez, 2017).

Occupational burnout, with the characteristics already mentioned, is present in some of the teachers of the School of Education and Engineering. Thus, in the study we can observe that the most affected ones are the teachers who teach in the School of Education, since these teachers are in close relationship with students who have diverse interests and needs; in addition, they play a role of intervention, inclusion and attention to students of the Regular Basic Education in its three levels; initial, primary and secondary; incorporated in the poor social reality and showing multiple deficiencies that should be attended by classroom teachers. We are referring to students, teachers to be, and as a whole, it is the university teacher who has a great challenge: the wholesome education of the future teacher whose responsibility is the transformation of people in society and is also concerned with providing quality education.

Aware of the little practice of values in the country, teachers are called to provide the future teacher with values such as ethics, responsibility, honesty and the education of better people; this in the long run could generate exhaustion and deficits in their quality of life affecting their health with symptoms such as sleep disorders, anxiety, depression and pain (Fernández, 2017). On engineering teachers we can find occupational burnout strictly focused on work pressure, relationships with co-workers and with students who present different technological demands such as design and creation of new proposals or electronic prototypes that the university teacher does not use, as most of them are old and reluctant to change, and their work activities have ceased

to seem important. Finally, it should be noted that those with the highest levels of occupational burnout are the teachers of the School of Education, being reflected in their low work performance as the years go by. The presence of Burnout syndrome on university teachers can be considered as a deterioration of mental health, having negative consequences in their work performance (García, Arlington, Escorcia & Pérez, 2017).

Below, we present the theoretical background of occupational burnout.

Theoretical approach to occupational burnout

From the identification of emotional fatigue, depersonalization, dissatisfaction, as well as the multiple studies on occupational burnout or burnout syndrome, there have emerged various proposals that are explained in different models related to the components involved. In this context, two theoretical clinical and psychosocial perspectives are presented, which are necessary to know in order to be able to adequately attend to them.

Clinical Perspective. It is the perspective adopted by Freudenberguer (1974), who considers burnout syndrome as a state, the product of an intra-psychic phenomenon resulting from a predisposition to personality and also from stress at work. From this point of view, the appearance of occupational exhaustion is the result or consequence of absolute dedication to work, the use of work as a replacement for the social life of workers and overworked professionals, who feel indispensable and who, because of the above, are predisposed to present the syndrome. People assess their self-esteem and self-acceptance in terms of how important they feel at their workplace. In this sense, in stressful situations, where they are not able to respond to the demands of the job, the Burnout syndrome would be present (Burisch, 2002). University teachers, specifically trained educators, are always involved in their daily work, thinking about students. However, after so much effort, they feel that the planned objectives were not achieved due to situations that occur within the classroom or institution, which often causes them to feel frustrated, leading to stress and, therefore, to acquire the Burnout syndrome. The engineers in charge of sharing their knowledge and learning strategies show discomfort and personal dissatisfaction because they consider that they were replaced and not taken into account in spite of their dedication and devotion to the career for many years. Occupational burnout manifests itself with psychological changes that increase intensity from dissatisfaction and irritability to emotional outbursts, especially on professionals in relation to dependency, mainly in the area of service provision, as in the case of university teachers (Chávez, 2016).

Psychosocial Perspective. From this point of view, burnout syndrome is a cause of chronic labor stress that is characterized on the professional by the feeling of failure and much exhaustion, and to this is added the pessimistic attitudes towards co-workers. From this perspective, the burnout syndrome is considered as a process that develops from the relationship between the characteristics of the work and personal environment, giving rise to different manifestations at each stage of the development of the syndrome (Gil-Monte & Peiró, 1999); in the study carried out, specifically in the School of Education, it is observed that teachers feel undervalued and little recognized by society; likewise, the negative work climate among authorities, colleagues and administrative personnel leads to teacher stress, work fatigue and demotivation, which brings personal and work repercussions to the detriment of students. The absence of harmony will have a harmful repercussion in their social, family, personal and work context and for these reasons emotional disorders and shifts in the conduct of university teachers are caused (Rodríguez, Guevara & Viramontes, 2017); as in the school of Electrical Engineering this perspective is shown when observing selfishness among colleagues, envy to those who assume administrative positions, hindering the processes of the institution, when experiencing it the majority of teachers show their discomfort and rejection producing stress. At present, a considerable number of university teachers have shown rejection of the institution in which they work for various reasons, including working conditions that result in the emergence of stress, psychological crises and lack of motivation, a problem that directly affects the quality of educational service, less interest in

students, absenteeism in the activities of the institution and as a relevant point negative actions with respect to their colleagues (Rodríguez, Guevara & Viramontes, 2017).

This research assumes as the psychosocial models, Gil-Monte and Peiró (1999, pp. 144-145), which support the results achieved in the research. They are: Self socio-cognitive theory, theory of social exchange and organizational theory, which are detailed below.

Self Socio-cognitive theory. This theory considers that the cognitions of teachers influence what they perceive and do; these cognitions are modified by the effects of their actions and by the accumulation of the consequences observed in others, and the teachers' belief in their own capacities, which will determine the effort that the subjects will make to achieve their objectives as well as the ease or difficulty in achieving them. It will also determine certain emotional reactions, such as depression or stress, which accompany action (Gil-Monte & Peiró, 1999). In both schools we find teachers with a high academic level, who at their time made a great contribution for several generations and achieved personal and professional objectives, but as time went by they remained static, as they were not updated according to the academic and administrative demands of the corresponding instances. Therefore, when these teachers want to obtain a position or promotion, they are surprised to find out that they do not comply with the established requirements, so it is then, when they feel disappointed, demotivated and, in short, renegade of their actions. According to Ford (1992), a motivational deficit develops, which favors the appearance of negative expectations concerning their teaching capacities teachers and the sensation of being not very competent.

Authors such as Harrinson (1983) maintain that perceived competence and efficiency are elements for the advancement and development of this process. The majority of teachers who begin to work in social service through students are highly motivated to help others and have a feeling of popular support, since most of the teachers in the School of Education before becoming university teachers were school teachers. In this way, being so involved in students' problems, elements arise, which become barriers such as professional overload, interpersonal problems, lack of resources, role dysfunctions, etc., which hinder the achievement of objectives, reduce feelings of self-efficacy and end up causing the burnout syndrome. Chávez (2016) refers that the burnout affects in a special way those professions whose tasks are concretized in a continuous and close relationship with people, relationship of help and service in this particular case the teacher of higher education to the service of the students. This self socio-cognitive theory determines its attention to self-efficacy, self-concept, and self-confidence as a transcendental role, which will be key to explaining the appearance and process of occupational exhaustion in higher education teachers.

Theory of social exchange. This theory states that the burnout syndrome has its cause in the perceptions of lack of justice or lack of profit that university teachers develop as a result of the process of social comparison when they establish interpersonal relationships (Gil-Monte & Peiró, 1999). University teachers establish compensatory relationships (help, appreciation, gratitude, recognition) with co-workers and with the university and the community in general. When they continuously perceive that they contribute more than they receive in exchange for their personal involvement and effort, they develop feelings of burning for work. It produces job burnout when negative work dynamics, tense, competitive relationships, with conflicts between peers and with students, lack of social support, absence of collaboration among peers in complementary tasks and absence of reciprocity in social exchanges (Chávez, 2016).

This theory of social exchange has its origin in the perception that university professors have regarding the lack of equality, when they make comparisons of their work with that of other colleagues, and they see that they give more than they receive, creating feelings of job burnout. This aspect is reflected when comparing the two Schools of Education and Engineering. Thus, although the amount received for the work done is proportional to one or the other at the university, it is necessary to find other sources of income to cover the needs and that is where the difference lies; a training teacher works in other educational institutions whose remuneration helps but does not cover what is required, while engineering teachers do not worry about looking

for teaching activities, they carry out competitive projects and receive double remuneration or, in some cases, even triple with which all their needs are covered.

In the research and in the context it is shown that the teachers of the School of Education work more and earn less, something which causes stress and fatigue at work and, ultimately, they feel burned out. University teachers worldwide have suffered specific changes, such as the drop in salaries, the rise in increasingly unstable academic positions, thus turning them into stress-causing actions (Avargues, 2010).

Organizational theory

One of the first models of this group is that of Golembiewski (1983), who highlights role dysfunctions (overload or role poverty), as triggers of depersonalized attitudes that would be the key element of the process. In this organizational theory, importance is given to the behaviors of the members of a group or organization. We refer to unproductive behaviors that lead to group dispersion, conflicts and dysfunctional roles understood as histories of occupational wasting in the organization, identifying as predictors the work overload, the incongruence between university teachers and their work and social support in interpersonal relations at work, the lack of organizational health, the organizational structure and climate. Chávez (2016) refers that the causes of stress for university teachers are presented when they cannot act on factors such as time control, ambiguity of the role, work overload, emotional demands in the interaction with students, lack of time for attention, lack of control of the results of assignments, unfinished tasks that have no end, little autonomy in decisions.

The university teacher, specifically in the School of Education, feels burned-out because he observes and lives day by day with the ineffective work of the authorities, who do not respect agreements, contests, do not care about attending to the demands and needs of the students, and rather their work is oriented towards satisfying political demands and thus creating distance, Non-conformity, passivity, conflict between classmates that, in turn, causes fatigue and exhaustion when trying to improve things and no answer is found. In addition, certain incongruences are denoted as teachers who are observed or marked by the students; the very hierarchical and rigid structure of the organization, lack of instrumental support on the part of the organization, excess of bureaucracy, "professionalized bureaucracy", lack of coordination among units, conflicting relations in the organization, inadequate management style and the way in which the service is rendered is relevant to identify burnout problems (Chávez, 2016). On the contrary, in the School of Engineering, the established norms are complied with, and training of the academic is carried out constantly to improve teacher development, with the objective of having repercussions on students. From what has been stated, it can be assumed that the teachers in the School of Education present high levels of occupational burnout, which will be defined below.

Occupational burnout

The definitions assumed in the research on Occupational Burnout on university teachers are those of Uribe (2010, p. 450) who quotes Freudenberger (1974), who defines occupational burnout "as an individual psychological state characterized by a set of physical and psychic symptoms". This author represented a series of symptoms and behaviors experienced by professionals who provided services, calling it in the English language as burnout, transferred to education we refer to the psychological state of the teacher that manifests itself with physical, bodily and mental discomfort, as well as Uribe (2010, p. 1). 450) quotes Maslach and Pines (1977) who defined Occupational Burnout as: A syndrome of physical and emotional exhaustion that implies the development of negative attitudes towards work, poor self-concept, and loss of interest in students that appears in the professionals of organizations that provide educational services. For higher education teachers, it implies pessimistic attitudes due to physical and emotional exhaustion, as well as the feeling of being at the limit, of not being able to give more from the professional point of view and of having exhausted all emotional resources (García, Escorcía & Pérez, 2017). These are the same characteristics presented in teachers; selfishness for the professional growth of others, disinterest for innovation in science and technology that students require, powerless to improve and knowing that nothing can be done because the obstacles are the authorities. It should

also be said that Uribe (2010, p. 450), quoting Maslach (1982), describes occupational burnout as a syndrome of growing responses composed of feelings of emotional exhaustion (emotional burnout), negative attitudes toward learners (depersonalization), a predisposition to evaluate oneself in a negative way, and concerns feelings of dissatisfaction with teaching work. Also, Perlman and Hartman (1982) concluded that burnout is a response to the emotional stress rooted with three elements; emotional and/or physical exhaustion, low labor productivity and an excess of depersonalization. Burnout and stress bring with them the low performance of teachers in front of students who need to be attended to. Hence, some studies, also with university teachers, emphasize that "burnout at work is significantly related to the way of coping with stress" (Guerrero, 2001, p.12). In addition, it is necessary to point out that according to some studies (Esteras, Chorot&Sandín, 2014) work stress and low job satisfaction are powerful predictors of emotional exhaustion.

Risk factors for the development of Burnout Syndrome or occupational burnout on university professors

The risk factors that cause occupational burnout or development of Burnout Syndrome on university teachers are classified into four conflict factors: personal factors, interpersonal relationship factors, social factors and organizational factors (Ourcilleón, Abarca, Puentes & Rodríguez, 2007).

Individual risk factors. Among the particular aspects for the development of burnout syndrome are personal characteristics, altruistic and idealistic feelings, reinforced when approaching the profession of teaching, which lead him to become excessively involved in the problems of his students (Ourcilleón, Abarca, Puentes & Rodríguez, 2007). This leads to guilt in the errors, both their own and those of others, which induces a decrease in their professional performance at work and an increase in emotional exhaustion. The professional tries to distance himself from the members of the team with which he works, shows irritability, irony and even showing a derogatory treatment, attributing guilt for his frustrations and his performance decline (Guerrero Barona, 2003; Castro, 2005; Tifner, 2006). Thus, we can observe in the university classrooms tired, irritated, grumpy teachers that transcends or is reflected in the attention to the students, that is to say, boring classes, monotonous and therefore to a discomfort of the students with the teachers that causes stress and occupational weariness in the teaching staff. Occupational burnout is accompanied by an increase in irritability and a loss of motivation towards work (Chávez, 2016).

Interpersonal Relationship Risk Factors. Within the interpersonal relations for the development of burnout syndrome, there are tense, complicated and extensive interpersonal relations with students, teachers of the same or different rank as full professors; all this associated, and mainly due to the lack of support at work from each other, as well as supervisors and the university administration itself, or the excessive identification of the professional with the student and with the behaviors and feelings of colleagues (Ourcilleón, Abarca, Puentes & Rodríguez, 2007). When we are in a university institution, it implies that we are in constant interaction with students, authorities, colleagues and administrative staff. A deteriorated organizational work climate is observed in the School of Education due to issues of power as there are two groups of teachers, one that supports the work of the authority, despite bad decisions or management, and another group that is concerned with the academic development of the faculty, these conflicts make teachers stressed by worrying about improving situations that are not supported politically. Relations with colleagues is a daily activity in many cases leading to burnout, causing a series of risk factors such as dealing with problematic co-workers, negative work dynamics, tense relations, competitive conflicts between teachers, and the absence of help in group work; while in the Engineering School things are different, for the actions of the authority allow academic growth (Chávez, 2016).

Social risk factors. Among the social risks for the development of burnout syndrome are the appearance of new laws and statutes that regulate the exercise of the profession, new instructions for work and functions due to the rapid progress of technology, as well as changes in

training programs for professionals, in the demographic profiles of the population (which requires a change in the professional role) and in the increased demand for services by the population (Ourcilleón, Abarca, Puentes & Rodríguez, 2007). Teaching is a specialty that must be in constant change, in the university classrooms there are students who request that their teachers be updated, that they handle information and communication technologies. However, even in the classrooms of the School of Education and Engineering we find some traditional teachers who are not updated and who reject the use of information and communication technology. It is this way that teachers in the search for new tools, get exhausted, because many of them do not want to leave their comfort zone, thus leading to teacher stress and discomfort. The development of the functions as university teacher allows to identify burnout problems, in this case the structure of a very hierarchical and rigid organization, the absence of practical training in new technologies for teachers as well as and to deal with the new generations causes exhaustion in some of the professionals (Chávez, 2016).

Organizational Risk Factors

Among the organizational risks, it should be born in mind that the profession develops in structures with a professionalized bureaucratic scheme, which derives complications of coordination among members, freedom of action, incapacity of professionals, aggregation of innovations, and dysfunctional responses, on the part of the management to organizational problems (Ourcilleón, Abarca, Puentes & Rodríguez, 2007). At the university there are "political controls" that do not allow academic advancement, although there are teachers concerned about the integral formation of students, there are others concerned about obtaining power for economic and political interests, forgetting the fundamental role of the university teacher, that is, the students who are the reason for the existence of the university. Likewise, because of these "maneuvers" the laboratories are not attended to, the classrooms do not have the latest equipment and the workshops in the specialties of pre-school, primary, biology, chemistry and physics are out of date, since the budgets have been destined to benefits of those who have the power. The organization of the university presents prevalent burnout factors such as hierarchical and rigid structure, excess of bureaucracy, "professionalized bureaucracy", lack of professional development and inadequate management style (Chávez, 2016).

Occupational Burnout Components

To work on the components of Occupational Burnout we refer to Uribe (2010) who quotes Maslach and Jackson (1982), indicating that occupational burnout is a syndrome of growing responses, formed by feelings of emotional exhaustion, negative attitudes towards the recipients of a service (depersonalization), a predisposition to evaluate oneself negatively and relating feelings of dissatisfaction with the job. In his Occupational Burnout Scale he proposes four elements: exhaustion, depersonalization, achievement dissatisfaction, and psychosomatic; the same elements that are taken in the present study.

Exhaustion Component. Uribe (2010) quoting Maslach and Jackson (1982), refers to exhaustion, as the gradual loss of energy, tiredness, wear and fatigue, workers feel that they can no longer give more of themselves at the affective level. At the same time Chavarría, Colunga, Loria and Peláez (2017) refer that exhaustion is the sensation of failure as a result of the demands of energies and spiritual strength of the worker, presented as a situation of exhaustion of energy or emotional resources. An experience of being emotionally weak due to the daily relationship maintained with people to whom it is necessary to communicate as objects of work (students, teachers and administrators). This dimension essentially refers to the following indicators: progressive detriment of energy, emotional weakness, burnout and fatigue. It should also be noted that this condition of being emotionally exhausted can be observed when teachers become more susceptible, lose the ability to enjoy the tasks they perform, and complain about having a lot of work. This is due to frequent contact with students linked to the School of Education, unlike engineering students who are taught by teachers who do not have many social concerns. This is due to frequent contact with learners linked to the School of education, unlike engineering students who are taught by teachers who do not have many social concerns.

This component is especially relevant if we bear in mind that in some studies (Borges, Ruiz, Rangel & González, 2012), it is evident how emotional exhaustion has turned out to be the area of greatest affectation in the majority of teachers.

Component 2. Depersonalization. Uribe (2010) quotes Maslach and Jackson (1982) to refer to the depersonalization presented by irritability, unassertive attitudes and cold and interpersonal responses towards people (students, colleagues and administrative staff, etc.). It can be considered as the development of pessimistic feelings and false behaviors and feelings towards people in the work center. These people are seen by the professionals as insensitive due to an affective hardening, which leads to them being blamed for their problems. On the other hand, as far as depersonalization is concerned, the variables to be taken into account would be irritability and choleric attitudes towards their learners, expressing cold and indifferent responses. Fatigue provokes the depersonalization of teachers, manifesting itself in negative feelings such as lack of appreciation, erroneous work attitudes, under self-concept, cynicism and disinterest in attention to students (Patlán, 2013).

Component 3. Dissatisfaction with accomplishments. Uribe (2010) quotes Maslach and Jackson (1982), who mention that achievement dissatisfaction is negative responses to self and work. It is the inclination of teachers to self-evaluate negatively and, in a special way, this negative self-evaluation affects the skill in carrying out the teaching work and the relationship with the students it trains. The variables taken into account in this study are impressions of dissatisfaction with the work and scarce self-concept in the teachers of the School of Education, in comparison to those of engineering due to the assignment of positions in the corresponding areas, without taking meritocracy into account. Also the salary difference and the social recognition that training teachers have in spite of the efforts made and the overload in attention to students. As Patlán (2013) refers, overload puts teachers at risk in satisfying their needs and job expectations. From a psychological point of view, overload is associated with labor dissatisfaction, tension and low self-esteem.

Method

The study corresponds to the positivist paradigm following the parameters established by the quantitative research approach, deductive hypothetical method, substantive type, non-experimental design, cross section, comparative descriptive with two groups of study that tries to identify the differences of components of occupational burnout on university teachers from two different schools.

The study sample consisted of 125 teachers, 55 teachers from the School of Education and 70 from the School of Electrical Engineering from the National University Mayor de San Marcos. For the delimitation of the professors that make up the sample, the inclusion criterion was used, made up of professors appointed by the teaching rank of assistant, associate and principal, presenting occupational exhaustion; the exclusion criterion was made up of teachers having a full time or a part-time job.

For the collection of information, although there are numerous scales for the measurement of burnout with different characteristics and dimensions or elements subject to measurement (Torres, El-Sahili & Gutiérrez, 2019), it was decided to use the survey technique and the instrument: Occupational Burnout Scale (EDO for its Spanish acronym) supported by Uribe, (2010), made up of 30 components and divided into four modules, the first called exhaustion, with 9 components; Depersonalization with 9 other components and Achievement Dissatisfaction, with 12 components; all these items or components will be valued through ranges ranging from totally disagreement to total agreement to which a value of 1 to 6 is given.

The instruments have demonstrated validity and reliability in several studies (García, 2010; Hurtado & Pereira, 2012; Barrios, 2014; Uribe, López, Pérez & García, 2014). The occupational burnout instrument, according to Uribe (2010, p. 26), went through the validity of content of inter judges and construct. It correlated significantly and according to international literature with psychosomatic variables, among other variables. In the investigation, a pilot test was applied,

from which the validity of the construct (Lawshe, 1975) and the reliability with Cronbach's alpha (Cronbach, 1951) was carried out, due to having ordinal polytomic responses whose values were: Occupational Burnout: 0.888, emotional exhaustion: 0.871, depersonalization: 0.878 and the dissatisfaction of the achievement: 0.979. For the collection of information the authorization of the department directors was requested, also the support of collaborators of both schools was counted on, since it became complicated as teachers had multiple schedules. The multivariate normality of Mardia (1970) was applied to the kurtosis multivariate (critical ratio or r.c.), which was higher than the theoretical value of 1.96, so multivariate normality is rejected. Therefore, the sample size is sufficient for the estimation of the confirmatory factorial model because reliable variables are available (Lacobucci, 2010). Thus, the estimation was made using the free scale least squares method, due to the noncompliance of the multivariate normality of the variance matrix (Sik-Yum, 2007) of the occupational burnout on teachers of the UNMSM, they were estimated using the asymptotic free distribution method.

Results

The confirmatory factorial model using structural equations of occupational burnout on teachers of the UNMSM was estimated using the asymptotic free distribution method. Figure 1 shows that the model is moderately adequate ($RMR > 0.05$; $GFI < 0.90$; $AGFI < 0.90$; $NFI < 0.90$) for the teachers from the School of Engineering, which may be due to the influence of sample size (Byrne, 2016) and with a good fit of the model ($RMR > 0.05$; $GFI > 0.90$; $AGFI > 0.90$; $NFI < 0.90$) for School of Education teachers (Ramlall, 2017).

Likewise, the standardized coefficients and the estimation of the determination coefficient for each item are observed, where it stands out that in the engineering School teachers, item 5 has the highest structural coefficient with 74% variability explained by the emotional wear dimension, item 9 has the highest structural coefficient with 59% variability explained by the depersonalization dimension, and item 1 has the highest structural coefficient with 51% variability explained by the dissatisfaction dimension of achievement. While in the School of Education, item 2 has the highest structural coefficient with 81% variability explained by the emotional wear dimension, item 29 has the highest structural coefficient with 82% variability explained by the depersonalization dimension, and item 30 has the highest structural coefficient with 76% variability explained by the achievement dissatisfaction dimension (Kline, 2016).

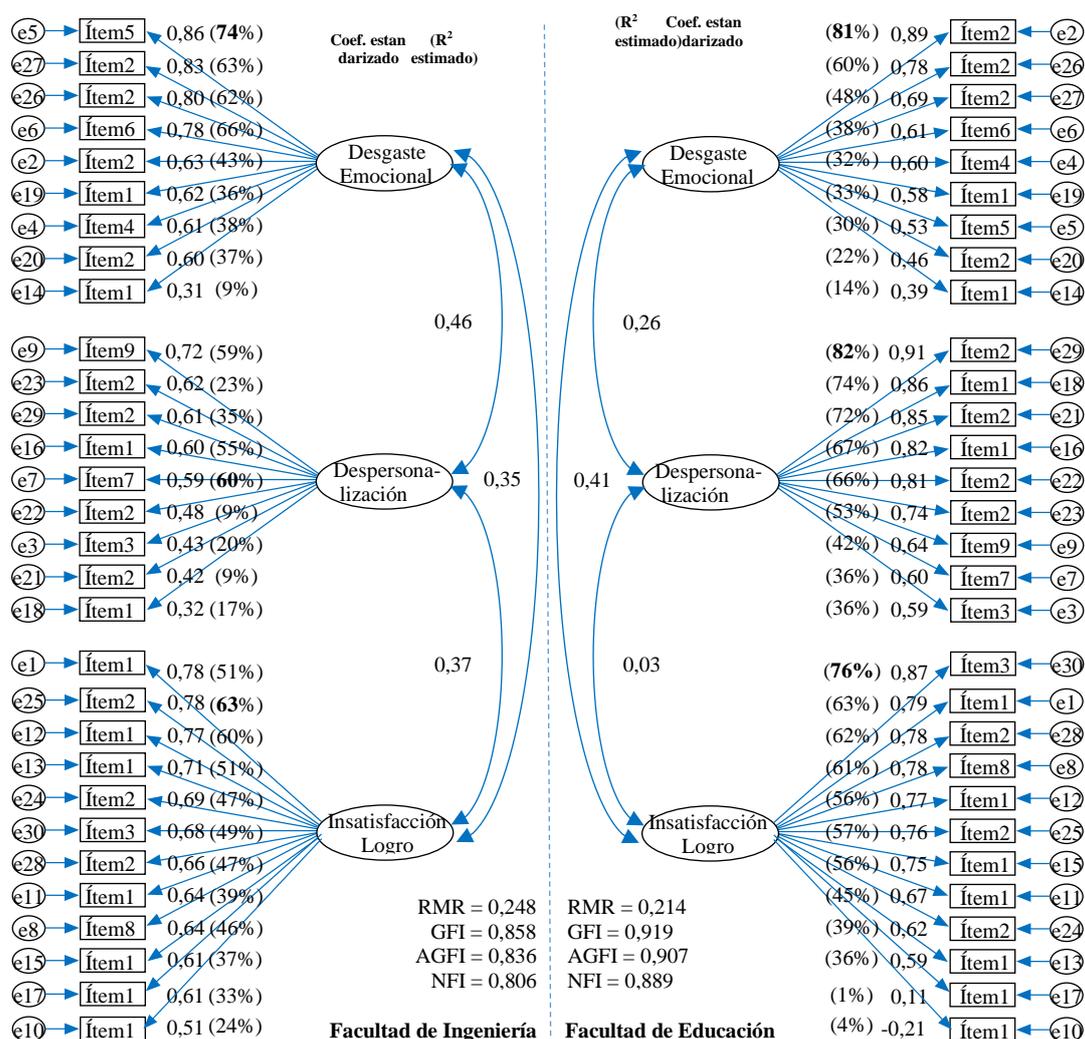


Figure 1. Confirmatory factorial model through structural equation of the items in the Occupational Burnout on teachers.

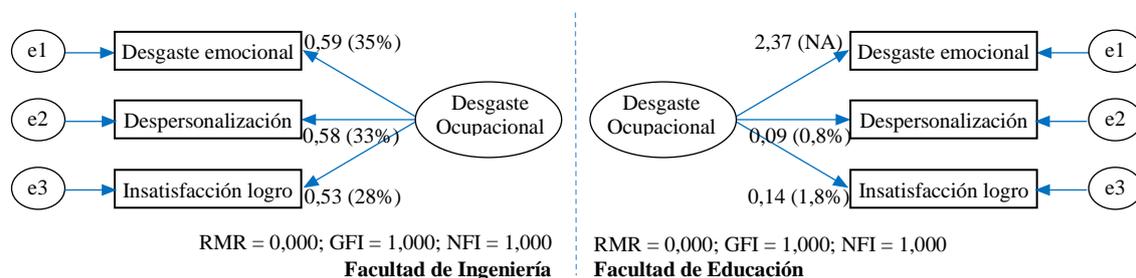


Figure 2. Confirmatory factorial model through structural equations of the dimensions in the Occupational Burnout on teachers

For both cases, the models are satisfactory (figure 2), however, it is outstanding that the teachers in the School of Education show an emotional exhaustion with a very high standardized coefficient, which means that such dimension is explained almost totally by the emotional

exhaustion, while for the teachers in the School of Engineering the three dimensions show standardized coefficients similar to those explained by the occupational burnout.

Discussion

The results of the research show that the teachers from the School of Education present a much higher emotional exhaustion when compared with the other components. This means that for them there is an existing progressive loss of energy, emotional weakness, fatigue and exhaustion because of the work demanded by the attention to students with plenty of needs, who at the same time are related with the problems the society faces. However, for the teachers from the School of Engineering the three components are present in moderate levels (emotional exhaustion, depersonalization and dissatisfaction with accomplishments); so it was deduced that it is gradual since they do not have much external link and, although they are in charge of students with multiple needs, they do not worry about the socio-cultural problems that the country demands. According to research conducted by Bareño, Berbesi and Montoya (2010) in their study "Factors associated with burnout syndrome in nursing teachers, Medellín-Colombia 2008", it was found that the prevalence of the Burnout Syndrome trend in specifically emotionally tired nursing teachers was 21.1%. It then confirms that university teachers in charge of future teachers, who are going to carry out social work, run the risk of occupational burnout specifically oriented to the emotional burnout of the functions performed. For this reason, it is fundamental to carry out actions that counteract it and can make the teachers of the School of Education more efficient and have positive attitudes.

The study conducted by Gonzalez and Rivera (2012) found that according to the evaluation made through the Maslach Scale, to the resident doctors and attachés of the Regional Hospital of Sonsonate, the subscale with enough level of affectation is emotional wear, as well as the present research where it is highlighted that the teachers of the School of Engineering, item 5 (I feel that one of these days my mind will explode from so much pressure at work) is the one with the highest structural coefficient with 74% variability manifested by the emotional wear dimension. All of this means that what is causing the greatest emotional wear is the pressure that engineers have in the curricular programming with a focus on competencies, elaboration of links, preparation of sessions, teaching and learning strategies, evaluation by competencies, and to this we can add that engineering teachers have poor management of pedagogical aspects, especially if the teachers are older than 65 years of age; While in the School of Education, item 2 (it is very difficult for me to get up in the morning to go to work) has the highest structural coefficient, with 81% variability explained by emotional exhaustion. That is, because they feel that they have a lot of academic load in the afternoons in the classroom, attention in tutoring, counseling and in the evenings they stay reviewing work, exams and scheduling classes the next day. Hence, any activity scheduled in the mornings has little participation. Therefore, the activities mentioned above cause the teacher to be emotionally drained. Likewise, Ayala (2013) identified the emotional exhaustion or weariness in the nursing workers of the critical services at a high level, specifically in the tiredness when waking up in the mornings and have to start another day of work, in addition, they express that working all day with patients implies a great effort. These results are similar to those recorded on the work of teachers in the School of Education, of course, both investigations are carried out in different specialties and contexts, but they are similar because of the arduous work they do and the difficulties they have when trying to get up to do their activities.

Quispe and Fuster (2016) conclude that the dimension of occupational burnout with the greatest impact is depersonalization, with 57% of the workers, noting that the level of impact on the dimensions of occupational burnout are different in both studies, so it is necessary to understand the working conditions in which workers operate, perceptions of their employment situation and the individual characteristics of the people they serve or how they perceive the work they do and their achievements. In accordance with the depersonalization component, the research carried out highlights that in the Engineering School teachers item 9 (I easily establish communication with the users of my work) has the highest structural coefficient with 59% variability explained by the depersonalization dimension, This means that constant attention is paid to students with different problems, needs that are addressed in tutoring, the involvement of

the tutor-engineer with the problems, which, in turn, causes negative attitudes towards students in teachers, even more so, when the student does not attend the established tutoring, developing depersonalization in the teacher. Meanwhile, in the School of Education, item 29 (Providing good treatment to the users of my work is very important for me) has the highest structural coefficient with 82% variability explained by the depersonalization dimension. Thus, teachers who serve future teachers are always concerned with establishing affective bonds, trust, empathy in the student, even more so if we talk about the competency-based approach that requires the development of cognitive, procedural, and with greater emphasis on attitudinal skills. Nevertheless, some learners consider that the best teaching is still traditional and, therefore, they do not investigate, they are not autonomous, it is clear that they are the product of other colleagues who still assume that learning is achieved with the mastery of the teacher's knowledge, mechanically imposed on the students. This attitude, for the majority of teachers in the School of Education, provokes irritability and emits cold and impersonal responses towards some students, colleagues and administrators who do not accept that the faculty must change and be at the forefront of pedagogical issues. All of this leads to the depersonalization of teachers, which in turn manifests itself in a lack of interest, negative attitudes and, therefore, low academic performance.

The results of the investigation highlight that the teachers of the School of Engineering, in item 1 (I feel that my work is so monotonous that I no longer like it) is the one with the highest structural coefficient with 51% variability explained by the dissatisfaction dimension of achievement, manifesting that imparting the same knowledge to students year after year is boring, which originates in them dissatisfaction for the work. Whereas, in the teachers of the School of Education, item 30 (In my work I have reached a moment in which I act only for what I am paid) is the one with the highest structural coefficient with 76% variability, explained by the dissatisfaction dimension of achievement. This is due to the fact that the amounts received for the work done do not reward the effort and dedication that the teacher makes, the meritocracy within the School of Education is neither recognized nor differentiated, since the directorates and leaderships in the different areas position themselves as teachers without academic merit but by political management. All of this causes teachers to be dissatisfied with their achievements since they are not valued by the institution, and there is little self-concept that this is ratified by Uribe (2010, p.3), who states that if there are harmful attitudes and elements in the institution, it will lead to a negative evaluation and, in a special way, this negative evaluation affects the ability and competence in carrying out the work and the relationship with the people who provide the service. Both investigations agree that the best thing for teachers and their professional growth is to have positive situations in which institutions manage or administer in a correct and meritocratic manner for a better development of teachers, with respect to the search to be more efficient and competent.

With regard to the limitations of this study, it should be noted that it is not possible to generalize the results, given the size of the sample, although it allows us to know and contrast the results obtained by the teachers of both schools, and to inquire about their occupational burnout, which will undoubtedly help to bet on university policies that contribute to giving an adequate response to this issue. Similarly, although the use of the ODE scale has provided adequate values of reliability and validation in the aspects evaluated and in other studies carried out (which has determined its use in this study), this has not been the case in other research for certain variables (Torres, Al-Sahili & Gutiérrez, 2019). All this implies, in turn, the importance of contrasting the results with those obtained with other instruments and, in short, it highlights the need to continue researching this subject in the university context.

With regard to research foresight, the study carried out indicates the need to continue researching and investigating on this subject (from different areas of knowledge), taking into account different socio-demographic aspects, different types of categories (from associates and assistants to professors) and combining different instruments and methodologies. In fact, according to some authors (Guerrero, 2001, p.19), "longitudinal and follow-up studies are non-existent, since in general the professional is evaluated only once, in a single sample". And being aware that longitudinal studies can provide valuable information on the development process and

the successive symptomatological phases of the syndrome, as well as the causal relationships between the different personal, social and labour factors with which it is linked. Finally, it is necessary to highlight the importance of investigating the differences that may exist between teachers of public and private universities. Some studies show significant differences in working conditions, work stress and psychological well-being of university teachers (Milan, Calvanese & D'Aubeterre, 2017).

Finally, as some studies suggest (Díaz & Gómez, 2016; Fuster, 2019; Rodríguez & Caurcel, 2019), it is important to expand research in this area with other qualitative or mixed methodologies in order to answer questions related to this problem at a regional or global level.

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