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Amotivation in physical education teachers: an approach from their perceived pressures and vocation

Desmotivación en el profesorado de educación física: una aproximación desde la percepción de presiones y su vocación

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ABSTRACT

The increasing personal discomfort experienced by teachers in their work has received a great deal of attention in the last decade. The pressures they perceive in their work environment, or their vocational interest have been pointed out as factors that could influence both their well-being and their teaching practice. Following self-determination theory, the aim of the present study was to verify the existence of profiles of Physical Education (PE) teachers according to their perceived pressures and their vocation, as well as to analyse the frustration of basic psychological needs and amotivation in these profiles. A

total of 245 PE teachers (129 males and 116 females) with a mean age of 39.04 years (DT = 10.12) and 13.70 years of experience (SD = 9.74) participated. Cluster and analyses revealed the existence of three different profiles: a group of teachers who perceived high pressures and had high vocation, another group who perceived low pressures and had low vocation, and a final group who perceived low pressures and showed high vocation. These profiles were characterised by significant differences in the motivational variables analysed, with the group of teachers who showed low levels of perceived pressures and high vocation being identified with the most adaptive motivational patterns. The findings highlight the need for attention to vocational interests in educational institutions and suggest the influence of perceived pressures on teachers' amotivation, which may negatively affect their teaching behaviours.

Keywords: interests, teaching, professors, motivation

RESUMEN

El creciente malestar personal que experimenta el profesorado en su trabajo está recibiendo gran atención en la última década. Las presiones que perciben en su ámbito laboral o el interés vocacional que presentan han sido señalados como factores que podrían influir tanto sobre su bienestar como su práctica docente. Siguiendo la teoría de la autodeterminación, el presente trabajo tuvo como objetivo comprobar la existencia de perfiles en profesores de Educación Física (EF) según las presiones y vocación percibidas, así como analizar la frustración de las necesidades psicológicas básicas y la desmotivación en dichos perfiles. Participaron un total de 245 profesores de EF (129 hombres y 116 mujeres) con una media de 39.04 años de edad (DT = 10.12) y 13.70 años de experiencia (DT = 9.74). Los análisis clúster pusieron de manifiesto la existencia de tres perfiles diferentes: un grupo de profesores que percibían altas presiones y tenían alta vocación, otro grupo que percibía bajas presiones y tenía baja vocación, y un último grupo que percibía bajas presiones y mostraba alta vocación. Estos perfiles se caracterizaron por diferencias significativas en las variables motivacionales analizadas, siendo el grupo de profesores que mostró niveles bajos de presiones percibidas y alta vocación el que se identificó con los patrones motivacionales más adaptativos. Los hallazgos ponen de manifiesto la necesidad de atención hacia los intereses vocacionales desde las instituciones educativas, y sugieren la influencia de las presiones percibidas sobre la desmotivación de los docentes, pudiendo afectar de forma negativa a su práctica docente.

Palabras clave: intereses, enseñanza, docentes, motivación

INTRODUCTION

Teacher motivation in the physical education (PE) classroom has emerged as a factor of interest to the scientific community, with evidence that it can affect teacher-student interactions (Cheon et al., 2014; Franco et al., 2021; Jansen in de Wal et al., 2014) and, consequently, can indirectly influence students' actions and behaviours (Behzadnia et al., 2018). While motivation is positively related to teachers' well-being, job satisfaction and its autonomy-supportive role, it seems to be negatively associated with states of distress, exhaustion and burnout (Slemp et al., 2020).

Self-determination theory (SDT; Deci & Ryan, 1985) is one of the most frequently used frameworks to analyse teacher motivation and, in general, to explain motivational processes involving teachers and students in the context of EF (Vasconcellos et al., 2019). SDT suggests that the regulation of behaviour towards an activity varies on a continuum that extends from autonomous motivation (in teachers, characterised by the pleasure inherent in teaching or by the recognition of the values and importance of that activity), to amotivation. When a teacher is demotivated, he/she probably does not understand why he/she is teaching. This perception seems to be related to certain maladaptive manifestations such as the use of more controlling styles that do not support and accompany students in their learning process, that generate feelings of incompetence in the teacher to motivate students during classes or simply the feeling that their teaching performance is exhausting and frustrating (Franco et al., 2021; Franco et al., 2022; Vermote et al., 2020). While the satisfaction of basic psychological needs (BPN; autonomy, competence and relatedness) seems to promote psychological and physical well-being (Vansteenkiste et al., 2020), studies in recent years have suggested that the frustration of BPNs among teachers may affect not only the well-being of teachers themselves, but also their interactions with students and thus the quality of the teaching-learning process (Vansteenkiste et al., 2020). Although frustration was initially understood as an absence of BPN satisfaction, research has shown that it does not simply reflect the perception that BPN satisfaction is low, but that BPNs are being actively threatened in a given context (Longo et al., 2018; Stebbings et al., 2012). Previous studies have pointed out how this frustration can manifest in the teaching profession (Hornstra et al., 2021). Teachers may feel that their autonomy is frustrated if they cannot decide their own methodological approaches; they may perceive their competence as being undermined if they are not given the opportunity to demonstrate their teaching skills; and finally, they may feel that their relationship with others is being frustrated if they feel alienated by their colleagues at work.

Several authors have identified different sources of frustration of these BPNs in the PE context. Among them, the findings of Bartholomew et al. (2014) revealed that teachers' perceived work pressures were positively associated with the frustration of three BPNs. These pressures were previously identified in a qualitative study based on interviews with teachers (Taylor et al., 2009) and grouped into four different dimensions: pressures from school authorities (e.g., conforming to certain work methodologies), pressures from peers (e.g., feeling challenged by other teachers), pressures felt from being evaluated on the basis of their students' performance (e.g., feeling that their success depends on their students' performance), and time constraints (e.g., feeling that they have to hurry to finish their classes). While we may expect, on the basis of previous work, that teachers' perception of pressure lead to amotivation, it seems that the detrimental effect of pressure on different motivational aspects of PE teachers may not be the same for each of them. For example, the findings of Franco et al. (2021) indicated that the perception of external pressures might vary according to teachers' motivational profile, which suggests that personal motivation might moderate how these pressures affect teaching performance. Along these lines, Vermote et al. (2022) presented how pressures were related to autonomy-supportive, structured and controlling teaching behaviours; specifically, they reported that the source of pressure that most affected teachers was the pressure they felt from being evaluated based on their students' performance.

An underexplored factor among teachers is vocational, understood as the reasons why they decided to pursue the profession, and how it may affect their teaching practice (Pop & Turner, 2009). In recent decades, vocation has been explored from different perspectives and can be understood, in line with the modern-individualist approach, as the preference for pursuing a particular profession (Madero, 2021) based on passion (Dobrow, 2013). Vocation has also been related to high levels of job satisfaction (Rosso et al., 2010). According to a review of studies on vocation in educational contexts with early childhood education teachers, several studies have identified the importance of vocation both in the choice of studies, expressed by students, and in professional practice, declared by active teachers and retired teachers (Romero-Sánchez et al., 2020). In such contexts, in line with Mtika and Gates (2011), a teacher with high vocational levels tends to be highly effective and very aware of their goals and objectives, which could promote their confidence and determination. More specifically, Fray and Gore (2018) noted that most studies have identified intrinsic and altruistic motives for teaching, and Valenzuela et al. (2018) pointed to a predilection for the profession as an intrinsic motive, and with professional security or salary being extrinsic motives (Watt & Richardson, 2007). Despite the relevance that this construct seems to have for teacher performance, previous work has shown that, in addition to a vocation for teaching, teachers also

need to perceive some control over their behaviour (where control is understood as the ability to decide on one behaviour or another). In a qualitative study in which PE teachers were questioned, they it appeared that professional vocation seems to be affected by low student involvement and lack of discipline (Albarracín et al., 2014). Van Uden et al. (2013) also suggest that the role that vocation plays in teachers' experiences is influenced by what they believe others expect of them. It therefore seems that the beliefs PE teachers hold may affect their motivation (Nye et al., 2017).

While both perceived pressure and vocation for teaching have been explored as influential constructs for teachers' experiences and behaviours, they have always been approached from a variable-centred approach, leading to the conclusion that, on the one hand, perceived pressure at work (Cuevas et al., 2018; Franco et al., 2022) and, on the other hand, vocation for teaching (Thomson et al., 2012; van Uden et al., 2013), , can affect teachers' well-being and behaviour. Although these studies have provided valuable insights, they have analysed perceived work pressures and vocation as isolated constructs. The question of whether perceived work pressures and vocation for teaching can coexist among PE teachers – and how their coexistence might affect teachers' amotivation and BPN frustration – remains unanswered.

The person-centred approach has emerged as a widely used alternative to overcome this limitation (Holzberger et al., 2021; Hornstra et al., 2021). This technique has been used in numerous studies to explore the interaction of variables of a different nature, such as motivational regulations (Abós et al., 2018; Franco et al., 2021), autonomy support, satisfaction, competence and relatedness (Hornstra et al., 2021), as well as other dimensions that directly affect teaching, such as burnout and teacher engagement (Abós et al., 2019), , professional beliefs, educational knowledge or perceptions of self-efficacy (Hornstra et al., 2021).

Based on the literature and the findings outlined above, this paper sought to identify profiles of PE teachers in terms of their perceived pressure and their vocation for teaching. For the sake of clarity, and given that the present study represents the first attempt to examine this pathway to date, teachers' perceived work pressures were considered as a unidimensional variable. Second, we considered whether the emerging profiles differed in their levels of BPN frustration and amotivation. In the absence of previous specific scientific evidence in relation to these variables – and taking into account similar studies (e.g., Hornstra et al., 2021) – , it was hypothesised that the profiles of teachers with low perceived pressure and high vocation would be found to present the most adaptive profile (less amotivation and BPN frustration). In the same way – and in the opposite direction – it was hypothesised that a profile with high perceived pressure and low vocation would be found with the least adaptive pattern. The establishment of teacher profiles could offer highly relevant information to advance the understanding of the influence of different backgrounds on teaching practice.

METHOD

Participants

The sample of this study consisted of 245 PE teachers (129 men and 116 women) from Spain (n=28), Argentina (n=102), Brazil (n=55), Colombia (n=30) and Chile (n=30). Participants ranged in age from 23 to 62 years (M = 39.04; SD = 10.12), with an average teaching experience of 13.70 years (SD = 9.74). All participating teachers taught PE at the secondary level or equivalent depending on the country (pupils aged 12-16 years), in public, private and state-subsidised schools. In all countries in the sample, PE is a compulsory subject in the curriculum, and at least two hours per week are required according to the class timetable.

Instruments

- *Perceived pressures at work:* The Spanish version (Franco et al., 2022) of the 16-item tool for measuring work-related pressures developed by Bartholomew et al. (2014) was used, based on from similar previous instruments (Pelletier et al., 2002; Taylor et al., 2008). The items were grouped into four subscales consisting of four items each: pressures related to time constraints in the subject (e.g., "I feel limited because PE is not given enough time in the school timetable"), pressures derived from school authorities (e.g., "I feel pressured to follow the official curriculum strictly"), pressures related to peers (e.g., "I teach as I like, regardless of how my peers teach"), and pressures associated with student performance (e.g., "My school will evaluate me poorly if my students do not achieve good results"). Responses were measured on a 7-point Likert-type scale (1 = strongly disagree and 7 = strongly agree). The instrument was translated into Portuguese following the recommendations of Hambleton and Patsula (1998) using the back translation method, and with data obtained from a Brazilian sample (n = 210) from a previous pilot study the same factor structure was tested, obtaining adequate fit indices ($\chi2(66) = 271.98$; $p < .001$; $\chi2/df = 4.12$; CFI = .90; IFI = .91; RMSEA = .07; SRMR = .06). Cronbach's alpha values ranged from .79 to .81.
- *Vocation:* An ad hoc instrument was created to measure vocation for being a PE teacher. This questionnaire was designed by a PE specialist and a career counsellor in line with the modern-individualistic approach to this construct set out by Madero (2021). The final instrument was composed of five items (see supplementary material) that were answered on 5-point Likert-type scale (1 = strongly disagree and 5 = strongly agree). The factor structure

presented adequate fit indices (χ2 (5) = 19.14, p = 002, χ2 /df = 3.83, CFI = .95, IFI = .95, RMSEA = .09; SRMR = .08).

- *Frustration of Basic Psychological Needs*: The Spanish version of the Psychological Need Thwarting Scale (PNTS; Bartholomew et al., 2011) was used (Cuevas et al., 2015). This instrument consists of 12 items measuring frustration with perceived autonomy (e.g., "I feel I am prevented from making decisions about how I teach"), competence (e.g., "I feel I do not measure up because I do not have opportunities to demonstrate my potential") and social relationships (e.g., "I feel I am rejected by those around me"), each with four items. Responses were measured on a 7-point Likert-type scale (1 = strongly disagree and 7 = strongly agree). The instrument was translated into Portuguese following the recommendations of Hambleton and Patsula (1998) using the back translation method, and with data obtained from a Brazilian sample (n = 210) from a previous pilot study the same factor structure was tested, obtaining adequate fit indices (χ2(31) = 59.91; p .001; χ2/df = 1.93; CFI = .92; IFI = .92; RMSEA = .06; SRMR = .05). Cronbach's alpha values ranged from .73 to .91.
- *Amotivation*: the amotivation dimension of the Spanish version (Franco et al., 2022) of the Multidimensional Work Motivation Scale (MWMS; Gagné et al., 2014) was used, introduced with the heading "Why do you, or would you, put effort into your work? This dimension consisted of three items (e.g., "I don't know why I am a PE teacher, this job is meaningless"). Responses were measured on a 7-point Likert-type scale (1 = strongly disagree and 7 = strongly agree). The instrument was translated into Portuguese following the recommendations of Hambleton and Patsula (1998) using the back translation method. The fit indices obtained for the tool in a Brazilian sample (n = 210) from a previous pilot study were adequate (χ2(103) = 140.85; p .008; χ2/df = 1.37; CFI = .95; IFI = .95; RMSEA = .07; SRMR = .06). The Cronbach's alpha values for the amotivation dimension were .89.

Procedure

After receiving approval from the University Ethics Committee, all participants were treated in accordance with the ethical guidelines of the American Psychological Association (2002) regarding consent, confidentiality and the anonymity of their responses. Non-random convenience sampling was used. We contacted the educational centres that have collaboration agreements with the Spanish universities to which the authors of the study belonged, as well as with other universities in Argentina, Brazil, Chile and Colombia with which the researchers collaborate on a regular basis. The teachers were informed of the purpose of

the study and gave their consent to participate. Their participation consisted of completing an online questionnaire through the Google Forms platform, which remained available for 6 months. The response rate ranged from 25% to 80% depending on the country.

Data analysis

Cluster analysis was carried out following the two-stage procedure designed by Hair et al. (1998). First, hierarchical cluster analysis was performed using the Ward method with the variables of vocation and perceived pressure. In a second phase, the k-means test was used to test the solution both in the subsample used in the Ward test and in the other subsample that had not been used. Once the profiles had been identified, multivariate analysis of variance (MANOVA, Wilks' Lambda test) was carried out to test whether there were significant differences between the profiles in terms of BPN amotivation and frustration, followed by the corresponding univariate tests. Finally, Scheffé's test was used for a posteriori comparison and the effect size of differences was calculated. The SPSS 26.0 statistical package was used.

RESULTS

Descriptive statistics and bivariate correlations are presented in Table 1. Overall, teachers showed high levels of vocation and low levels of amotivation and BPN frustration. Scores were moderate on perceived pressure. Vocation was negatively related to amotivation, while amotivation showed a positive association with perceived pressure and BPN frustration.

Table 1
Descriptive statistics and bivariate correlations of the variables under study

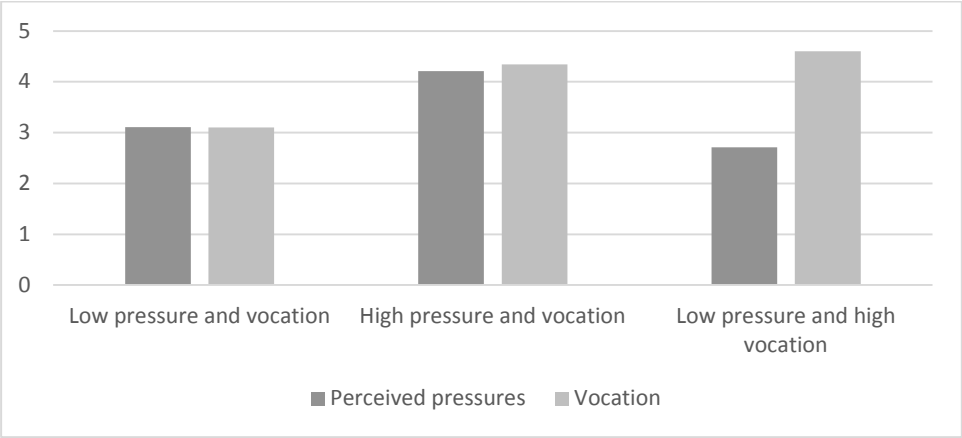
	1	2	3	4	5	6
1. Perceived pressures (1-7)	---	-.07	.64**	.45**	.33**	.16*
2. Vocation (1-5)		---	-.09	-.22**	-.14*	-.15*
3. Autonomy frustration (1-7)			---	.43**	.42**	.20**
4. Competence frustration (1-7)				---	.47**	.23**
5. Relatedness frustration (1-7)					---	.34**
6. Amotivation (1-5)						---
M (SD)	3.17 (.79)	4.17 (.76)	1.27 (.52)	2.10 (1.30)	2.06 (1.23)	1.93 (1.09)

Vocation for teaching and perceived work pressure were included as cluster variables in this analysis. Before cluster analysis, five outliers were removed, resulting in a final sample of 243 physical education teachers (128 men). According to the dendrogram and the agglomeration scheme, grouping the participants into two or three clusters were retained as possible solutions. The three-cluster solution explained between 53% and 74% of the variance in the results. The two-cluster solution did not reach the recommended 50% threshold of variance (Milligan & Cooper, 1985) in explaining the dimensions reflecting the feasibility of implementing motivational strategies. For this reason, together with the fact that it allowed for a meaningful conceptual interpretation, the three-cluster solution was chosen, for which the cross-validation procedure provided a mean kappa value of 0.71, indicating good stability.

The mean scores of the variables used to form the clusters (Figure 1) are presented in Table 2. Cluster analysis revealed the existence of three groups, with multivariate differences between the clusters ($F (4, 478) = .15$, $p < .001$, $\eta 2p = .62$). Based on their standardised relative scores, the following labels were assigned comparing the values between these groups: (a) a group perceiving low pressure and having low vocation (n = 127); (b) a group perceiving high pressure and having high vocation (n = 60); and (c) a group perceiving low pressure and having high vocation (n = 58).

Figure 1

Cluster scores established according to perceived pressures and vocation



The univariate differences and contrasts between clusters, as well as the differences found for each of the dependent variables, are presented in Table 2. The univariate differences confirmed the labelling of the clusters. Next, another MANOVA was conducted to test for differences in BPN frustration and amotivation as a function of the clusters. The results of this test revealed that there were differences between these three clusters ($F (8, 468) = 12.48$, $p < .001$, $\eta 2p = .18$). Regarding the dependent variables, the results showed higher scores for BPN frustration and amotivation in the high pressure-high vocation group. However, significant differences between the three profiles were only found in autonomy frustration. Finally, the low pressure-high vocation profile presented the lowest levels of amotivation and frustration of autonomy, competence and relationship.

Table 2

Univariate differences and between-cluster contrasts of the variables

	Low pressure – low vocation (n= 58) M (SD)	High pressure – high vocation (n=60) M (SD)	Low pressure – high vocation (n= 127) M (SD)	*F*	*p*	η^2 parcial
Perceived pressures	3.11 (.51)[a]	4.21 (.50)[b]	2.71 (.49)[c]	184.49	.001	.61
Vocation	3.10 (.49)[a]	4.34 (.55)[b]	4.58 (.40)[c]	208.00	.001	.63
Autonomy frustration	2.05 (1.11)[a]	3.23 (1.47)[b]	1.56 (.80)[c]	48.66	.001	.29
Competence frustration	2.32 (1.27)[a]	2.62 (1.36)[a]	1.68 (1.00)[b]	15.06	.001	.11
Relatedness frustration	2.05 (1.04)[a]	2.44 (1.17)[a]	1.62 (.96)[b]	13.04	.001	.10
Amotivation	1.30 (.43)[ab]	1.41 (.68)[a]	1.19 (.45)[b]	3.96	.020	.04

Note. Boxes with different letters reflect differences. Those with the same letter reflect no difference. For example, for the differences between clusters in amotivation, cluster 2 (a) is significantly different from cluster 3 (b) because they have different letters. However, cluster 1 (ab) has no difference with the other two clusters as they share the same letters (a and b).

DISCUSSION AND CONCLUSIONS

This study sought, on the one hand, to identify profiles of PE teachers according to the pressures they perceived and their vocation for teaching; on the other hand, we wanted to find out whether the emerging profiles differed in their levels of BPN frustration and amotivation. The discussion is structured in three sub-sections to present the most relevant findings of this study with the greatest clarity. The first section deals with the identification of an ideal profile, with low levels of perceived pressure and high levels of vocation. The second section is devoted to the absence of a profile with high levels of perceived pressure and low vocation. The third section presents the role played by pressure on teachers with high levels of vocation. Finally, conclusions and practical implications, as well as limitations and future lines of research are detailed.

Low perceived pressures and high vocation: The ideal profile

The results of the present study defined a profile characterised by low levels of perceived pressure and high levels of vocation. These teachers showed the most adaptive pattern, exhibiting the lowest values for frustration of the three needs of autonomy, competence and relatedness, as well as for amotivation. A recent line of research has pointed out that when PE teachers perceive pressure, they are more likely to feel demotivated, probably because their psychological needs are violated (Cuevas et al., 2018; Franco et al., 2022). The results of our study therefore align with the literature in suggesting that teachers who do not perceive themselves to be under pressure in their profession experience less amotivation and BPN frustration.

An important contribution of the present study was the incorporation of the vocation variable in profiling, which gives importance to the vocational factor that characterises the profession (e.g., Albarracín et al., 2014). It seems that the coexistence of low perceived pressure and high vocation in the work environment gives rise to an ideal motivational profile for PE teachers showing the lowest levels of BPN frustration and amotivation. If we compare this ideal profile with the group of teachers who, although perceiving few pressures, had low levels of vocation, we see that the latter experience more frustration for all BPNs and greater amotivation.

Different studies that have explored the reasons why a teacher goes into education have identified teaching as a profession of choice (i.e. it seems to be the first choice among prospective teachers and not an alternative to which they turn when other options have failed), in which intrinsic motives seem to play a key role (Valenzuela et al., 2018; Watt & Richardson, 2007). Specifically, it seems that intrinsic and altruistic motives could be determinant in teaching (Fray &

Gore, 2018). Recently, understanding vocation as a preference for the profession (Madero, 2021), it has been suggested that there could be different profiles of teachers depending on the type of motivation they experience. It thus seems that those teachers with a higher vocation are guided by intrinsic and altruistic motives, while extrinsic motives are related to lower levels of vocation (Pop & Turner, 2009). Given the above, the finding concerning the interaction between vocation and pressures in different teacher profiles suggests that, in contexts where no pressures are perceived, teachers who are enthusiastic and passionate about the teaching content or core knowledge – or simply about being teachers – will be less likely to experience frustration than those with low vocation. It is therefore suggested that the vocational factor may act as a protector of motivation. In any case, despite the existence of studies such as Spittle et al. (2009), it would be interesting for future research to further explore how the different motives for becoming a teacher relate to the motivational and behavioural aspects of teachers. Advancing the understanding of these processes could be of great value for improving of career guidance processes.

Lack of a profile of teachers with low vocation and high perceived pressures

Another relevant finding of the present study was the absence of a group with low vocational levels and high perceived job pressures among PE teachers. It has previously been noted that teacher vocation is generally characterised by high levels of altruistic and intrinsic motives for engaging in the profession. It could therefore be expected that teachers with high vocation, whose behaviours are guided by altruistic reasons (e.g. helping adolescents in their education, or contributing to the betterment of society) and intrinsic reasons (e.g. interest in the content or basic knowledge of the subject, or teaching itself) (Pop & Turner, 2009), would be more likely to perceive certain features of the environment as pressures, because they may feel threatened in their goals and objectives as teachers. Thus, when a teacher is concerned about the importance of presenting all of the content or basic knowledge in the syllabus (understood as an intrinsic motive), he/she would be more likely to feel pressure when there are only a few hours available to teach the subject. Such teachers would thus feel frustrated in their BPNs, which would even affect their teaching style and, therefore, student behaviour and motivation (Escriva-Boulley et al., 2021). This would explain the existence of the high vocation and high pressure profile. However, teachers with lower vocation values are more likely to choose the profession based on extrinsic motives such as professional security, salary or status (Valenzuela et al., 2018; van Uden et al., 2013). When this is the case and career choice is motivated by extrinsic reasons (professional security or salary), teachers may be less likely to feel that contextual features, such as time

constraints or peer pressures, may compromise their goals (e.g. a teacher is unlikely to perceive time constraints in the classroom as a pressure that threatens their job stability). This could explain the absence of a low vocation and high pressure profile.

Although there are no previous studies in the literature that have attempted to establish teacher profiles according to the pressures perceived in their work and their vocation, several studies have identified different motivational profiles among teachers (Abós et al., 2018; Franco et al., 2021). These studies have coincided in identifying four teacher profiles: those with high levels of autonomous motivation and low levels of controlled motivation and amotivation, those with high levels of both autonomous motivation and controlled motivation, another group with low levels in both types of motivation, and a final profile with high levels of controlled motivation and amotivation and low levels of autonomous motivation. Given the parallelism between vocation and autonomous motivation noted above, as well as the association found between the perception of pressures at work and maladaptive motivational variables (Bartholomew et al., 2014; Franco et al., 2022), we could hypothesise the identification in the present study of a profile similar to the last described in studies of motivational profiles. However, the fact that a group of teachers with these characteristics did not emerge opens the door to a line of research that has not been explored to date: the interrelationship between vocation and motivational regulations in teachers over time. Through the theory of occupational socialisation (Lawson, 1983a, 1983b), we can understand what factors really determine the choice of profession. It also distinguishes three main phases that allow us to understand how a set of experiences, together with the acquisition of knowledge and teaching skills, and their implementation, generate and foster interest in teaching. Recently, Washburn et al. (2019) analysed the impact of certain motivational variables on teaching styles that promote motivation through this theory, and found that teachers who have previously been in motivational contexts (where interest in teaching is generated) tend to be linked to styles that promote motivation. It would thus be interesting to know in depth how teachers' motivation evolves as a function of the vocation they feel at the beginning of their professional career and to know whether these teachers are more or less vulnerable to the demands of the teaching profession.

The detrimental role of perceived pressures on teachers with a high vocation for teaching

It is surprising how the highest levels of amotivation are found among teachers with the high-pressure-high vocation profile. Although a recent study suggested that teachers motivated by the utilitarian value of the profession (understood as an intrinsic motive) feel greater responsibility for the motivation of their students

(Berger & Girardet, 2021), it seems that the consequences of perceiving that certain pressures may hinder their professional development are more devastating for teachers with high levels of vocation for the profession. The literature has not only shown the detrimental role that pressures have on teacher motivation and well-being (Cuevas et al., 2018; Franco et al., 2022), but also on teaching styles (Soenens et al., 2012) and, consequently, on interactions with students. Different studies with teachers have shown that the need to adhere to strict curricular guidelines (Albarracín et al., 2014), as well as the feeling that they have limited and little control over their teaching in schools (e.g., Buckley et al., 2017) can be a source of work pressures. Feeling pressured, a teacher may make use of more controlling styles. Along these lines, SDT recognises that people may show maladaptive patterns when BPNs are violated (Vansteenkiste et al., 2020). Franco et al. (2021) suggested that when a teacher shows such maladaptive patterns, it seems that the perception of pressures fosters frustration of the three psychological needs and further amotivation.

Interestingly, in the present study, when comparing the profile of teachers with low perceived pressures and low vocation with the group of teachers with high perceived pressures and high vocation, no differences were found in amotivation, competence frustration or relationship frustration, but differences were found in autonomy frustration. Specifically, the results showed a higher score for the autonomy frustration variable in the profile with high pressures and high vocation, while for the profile with low pressures and low vocation, the levels of autonomy frustration were lower. In this sense, while high vocation could act as a protector of certain teacher variables against perceived pressures, it seems that this is not the case when it comes to the need for autonomy. While teachers' high vocation may influence the high expectations that are created around their professional development (Burgueño et al., 2020), it seems that this may make them feel more vulnerable to perceived pressures or characteristics of the work environment that threaten to undermine these expectations. Thus, when teachers perceive such pressures, they may feel that their autonomy is frustrated if they cannot make decisions in class, such as deciding which methodological approach to use or which strategies to select for the development of a given piece of content or core knowledge. This fact suggests that, when we talk about autonomy, vocation seems not to be enough to avoid the detrimental effects that pressures on teachers may generate. It would therefore be interesting to delve deeper into the profiles of those teachers who, despite choosing teaching as a professional vocation, their freedom of decision and independence are affected by pressures and, therefore, their motivation in the classroom is undermined.

Practical implications

In terms of practical implications, the present study sheds light on various educational aspects that seem to affect the teaching-learning process. The identification of three teacher profiles highlights the coexistence of perceived pressures and vocation among PE teachers.

First, the results suggest that, in contexts where there is no high perceived pressures, vocation seems to favour motivation, so that there is a need to improve guidance programmes among young people. Tools could be provided to enable them to reflect on their professional interests and to identify vocational motives that determine the choice of the teaching profession. As pointed out by different studies (e.g., Hernández Franco & Franco, 2020), it is of great importance to accompany young people in the guidance process as a step prior to the choice of studies or profession to attract future teachers to teaching who really feel that their choice is the result of vocation.

Second, this paper highlights, in line with the existing literature, the devastating consequences that the perception of pressure in the work context can have (e.g., Franco et al., 2022). It is therefore suggested that initiatives be proposed that promote the reduction of perceived pressures among PE teachers through, for example, the valuation of PE as a subject or the provision of spaces and materials for the proper development of the subject, which have been reported by teachers as frustrating and limiting in their performance (von Haaren-Mack et al., 2020). Likewise, it is of great importance that the different agents present in the educational community (e.g., administration, management teams, teachers, families) are able to understand the relevance of using pedagogical approaches that, although they may seem to generate chaotic and disorderly contexts in the classroom, seek to favour student autonomy in the proposed activities.

Finally, it should be noted that, despite the initiatives that may be proposed to try to reduce the pressures perceived by PE teachers, it is also necessary to offer tools, strategies and alternatives that would enable future teachers to cope with these pressures. It is thus essential to train teachers to cope with new curricula, to learn how to develop proposals with limited material and facilities that are inappropriate for the content or to provide methodological resources that allow teachers to feel secure and confident in the face of the imposition of certain methodological approaches in the schools where they work.

LIMITATIONS AND FUTURE LINES OF RESEARCH

This study has several limitations. As it is a cross-sectional study, it is not possible to establish cause-effect in the relationships found in the work. With regard to the sample, it is possible that the perception of pressures differs depending on the country, which is why further research should be carried out in international studies that address the relationship between the perception of pressure and different motivational variables. On the other hand, the nature of the methodology through the use of questionnaires may provide limited information. The absence of Portuguese versions of the questionnaires, as well as the design of the items to assess vocation, which were elaborated ad hoc, could be another limitation of the study. Regarding the vocation construct, for example, a recent study suggested reconceptualising the importance of the variable, given that it has been approached from different perspectives (Hoff et al., 2020). Future research could carry out a comparative analysis according to the country of the participants, taking into account other contextual variables that could affect perceived pressure and vocation. It would also be interesting to analyse this work in terms of different levels of education. It would also be useful to analyse the pressures perceived by teachers through interviews that would provide more complete and verifiable information. The use of mixed methods in education can be a valuable tool that would help us to better understand the reality of education. Finally, it would be interesting to validate a tool for assessing vocation.

CONCLUSIONS

The findings of the present study highlight the role that pressure has on different psychological and behavioural aspects of teachers. Furthermore, it suggests that pressures, although identified as a positive and motivating aspect in previous studies, can lead to teacher amotivation. It would therefore be advisable, on the one hand, to support orientation processes for future teachers and, on the other hand, to promote awareness through initiatives to reduce pressure on teachers in the educational context, as well as to provide future teachers with strategies to enable them to deal with the pressures present in their work, given the effects they may have on their own motivation and professional performance and, consequently, on the experience of their students in PE class.

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