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Language teacher wellbeing and psychological capital

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Abstract

Language teaching is a challenging profession with educators facing various sources of stress, ultimately leading to high rates of attrition (Mason, 2017). In this study, we draw on two theoretical models to examine the wellbeing of language teachers. PERMA includes physical, intellectual, psychological, and social components of wellbeing (Seligman, 2011), while PsyCap is referred to as a set of positive psychological resources which can help sustain wellbeing (Luthans et al., 2007). This study has three main aims: (a) to investigate the relationships between PERMA and PsyCap, (b) to identify teacher profiles based on their PERMA scores, and (c) to determine how these profiles varied in terms of teachers' PsyCap. Participants were 472 in-service teachers from five continents who completed an online questionnaire including PERMA and PsyCap measures. The survey was analyzed by means of correlation analyses, cluster analysis, and analyses of variance. Findings revealed strong correlations between elements of PERMA and PsyCap. They also revealed the defining role of positive emotions and health in differentiating the wellbeing profiles of the teachers, and differences in optimism across the four profiles. The study offers practical implications for language teachers, teacher trainers, and policy-makers in terms of supporting language teacher wellbeing.

Keywords: language teacher wellbeing; PERMA; PsyCap; teacher psychology

1. Introduction

Research in various educational settings has revealed that teachers experience critical levels of occupational stress and burnout, leading to increasing rates of attrition (Chang, 2009; Vesely et al., 2013). Foreign language teachers, in particular, are exposed to potentially unique additional stressors inherent in the profession (Borg, 2006). Whilst it is important to understand what causes stress, there is also a commensurate need to understand what counters it and what resources language teachers can draw on to give them strength, energy, and to maintain or enhance their wellbeing. In this study, we focus on understanding what resources teachers draw on to help support them in their personal and professional roles.

To explore teacher wellbeing, we turn to two empirically validated models: Seligman's (2011) PERMA model of wellbeing and Luthans et al.'s (2007, 2015) psychological capital (PsyCap) model of resources. PERMA is a multi-dimensional model of wellbeing incorporating positive (and negative) emotions, engagement, relationship, meaning, and accomplishment (Seligman, 2011). PsyCap comprises a set of four state-like constructs individuals can draw on to sustain their wellbeing, namely, hope, efficacy, resilience, and optimism (Luthans

et al., 2015). PERMA thus describes the physical, intellectual, psychological, and social components which contribute to wellbeing. In contrast, PsyCap is primarily a cognitive model outlining core resources known to support wellbeing. Both models enable a rich picture of core factors shaping wellbeing, with a particular focus on the psychological determinants.

This study has three main aims. Firstly, it seeks to explore the relationship between these two models, to better understand the connections between an individual's psychological resources and the physical, intellectual, psychological, and social components of wellbeing. Secondly, it investigates whether different profiles of language teachers can be determined based on their PERMA wellbeing scores (Seligman, 2011) with the aim of then examining how these different teacher wellbeing profiles might differ in terms of PsyCap. The hope is to better understand how these constructs and their relationships contribute to wellbeing, and thus how teacher wellbeing can best be fostered.

2. Defining wellbeing

Wellbeing is typically described from either hedonic or eudemonic perspectives (Ryan & Deci, 2001). A hedonic perspective focuses on the notion of pleasure, satisfaction, and happiness with wellbeing seen as subjectively determined by positive mental states (Kahneman et al., 1999). In contrast, a eudemonic perspective on wellbeing concerns the experience of functioning well, being engaged, feeling competent, having a sense of belonging, and feeling able to contribute to society (Ryan & Deci, 2001). One example of a eudemonic approach to wellbeing is Seligman's (2011) PERMA model. This model incorporates five interrelated elements: positive (and negative) emotions, engagement, engagement, relationships, meaning, and accomplishment. This view recognizes wellbeing as a multidimensional construct, incorporating both individuals' positive affect and a sense of meaning in life (Seligman, 2011).

Positive emotions have been shown as vital components for one's psychological and work outcomes, such as creativity, positive beliefs, and positive coping (Diener et al., 2020). Having a high level of positive emotions appears to boost "resilient dynamics of human flourishing" (Fredrickson & Losada, 2005, p. 684); thus, positive emotions help to broaden individuals' mindsets and awareness which consequently support them to build various resources (Fredrickson, 2001). The second element of PERMA, *engagement*, refers to feelings of being focused on and absorbed in a particular activity (Seligman, 2011). Engagement has been found to be a vital component in increasing life satisfaction (Hakanen & Schaufeli, 2012) and work performance (Harter et al., 2013). *Relationships*, the third element of the PERMA model, are understood as feelings of receiving

support and being cared for by others, including a sense of connectedness with a community and satisfaction with one's social networks (Seligman, 2011). The fourth element of PERMA is *meaning*, which refers to having a sense of direction and purpose in life; this is related to feelings of fulfilment and a life worth living (Seligman, 2011). Lastly, *accomplishment* concerns the desire to achieve something and to make progress towards one's goals (Seligman, 2011). The PERMA model was later expanded to include *health* as one of the main pillars of well-being (Butler & Kern, 2016). It is known that physical, psychological, and emotional wellbeing are interconnected; for instance, negative emotions are associated with higher risk of physical disease and poor health habits, while increasing physical activity is associated with higher mental focus, and lower symptoms of depression and anxiety (Hyde et al., 2013).

3. Psychological capital

Psychological capital (PsyCap) refers to a set of positive psychological resources that can be drawn on in order to overcome challenges, attain positive behaviors, and improve one's performance (Luthans et al., 2007; 2015). Luthans et al.'s (2015) multi-componential model of PsyCap incorporates four components: hope, efficacy, resilience, and optimism (HERO). These are viewed as a synergistic set of psychological resources, rather than independent constructs (Luthans & Youssef-Morgan, 2017).

The first component, *hope*, is "the process of thinking about one's goals along with motivation to move forward (agency) and the ways to achieve (pathways) those goals" (Snyder, 1995, p. 355). People high in hope create pathways and employ their agency to pursue and attain their goals as well as manage challenges in life (Lee & Gallagher, 2018). The second construct, *self-efficacy*, is defined as individuals' confidence or beliefs about their "abilities to mobilize the motivation, cognitive resources, and courses of action needed to successfully execute a specific task within a given context" (Stajkovic & Luthans, 1998, p. 66). Individuals with high levels of self-efficacy tend to set challenging goals, put effort to achieve these, and persevere when they face obstacles (Youssef-Morgan & Luthans, 2015). The third component of PsyCap is *resilience*. This refers to one's capacity to develop adaptation patterns with positive responses towards challenging situations (Luthans & Youssef-Morgan, 2017). Lastly, *optimism* describes a dispositional tendency for positive expectations towards future events. Optimism can help negative experiences to be perceived as situation-specific, and this gives the individual potential for growth (Carver et al., 2010; Luthans et al., 2015).

An ample body of research has confirmed the link between PsyCap and positive psychological outcomes in the workplace. Studies have shown that PsyCap

may enhance employees' psychological wellbeing, job satisfaction, and organizational commitment, while reducing stress, anxiety, and absenteeism (e.g., Avey et al., 2010; 2011). In education specifically, Cheung and colleagues (2011) have found that teachers' emotional labor, burnout, and job satisfaction were related to their PsyCap, while Fu (2015) has shown that high PsyCap appeared to alleviate teachers' emotional labor.

PsyCap provides an important lens for understanding some of the resources individuals can draw on to support their wellbeing. In this study, we seek to better understand how core components of PsyCap interrelate with core determinants of wellbeing as defined in the PERMA model of wellbeing. By examining the relationships between these models, we hope to contribute a more comprehensive understanding of the diverse factors generating and sustaining teacher wellbeing.

4. Language teacher wellbeing

The teaching profession appears especially susceptible to job-related stress (Worth & Brande, 2019), and increasingly high rates of burnout and attrition are leading many educators to leave the profession (Parker & Martin, 2009). For foreign language teachers specifically, additional factors have been found to influence their wellbeing. For example, teachers who deliver lessons in a language that is not their L1 might experience language anxiety (Horwitz, 1996; Pasaribu & Harendita, 2018; Sulis et al., 2023). In predominantly anglophone contexts, foreign language teachers have experienced a decline in language status (Boffey, 2013; Mason, 2017). Other factors such as insecure job contracts and cultural challenges of working abroad have also emerged as sources of stress for foreign language teachers (Talbot & Mercer, 2018). However, to date, only a small body of research has examined the wellbeing of foreign language teachers accounting for both stressors and sources of support. One example is a study by Gregersen et al. (2020) which explored the wellbeing of 47 language teachers worldwide focusing on daily stressors and positive uplifts. Their findings suggested taking a holistic view of teachers' lives in the research of teacher wellbeing because of the complexity of the links between stress, uplifts, and wellbeing in personal and professional settings. Another example is a study on the wellbeing, resilience, and foreign language teaching enjoyment (FLTE) of 147 teachers of Italian as a foreign language by Ergün and Dewaele (2021). Their findings showed that foreign language teachers' resilience and wellbeing can predict their FLTE, which, in turn, can positively influence their students' learning experiences (Ergün & Dewaele, 2021). Indeed, understanding teacher wellbeing is not only beneficial to the teachers themselves but also to their learners. Teachers who perceive their wellbeing as high teach more effectively, which can lead to higher students' attainment

(Moskowitz & Dewaele, 2019). It is clear that understanding and supporting teacher wellbeing is a vital goal, not only for teachers themselves but also for students' wellbeing and the general quality of education (Mercer, 2021).

While PsyCap provides a useful approach to understanding the kinds of factors teachers can draw on to support their wellbeing, to the best of our knowledge, the relationships between wellbeing and PsyCap have not been examined to date in relation to language educators specifically. As such, in this study, we examine how PERMA and PsyCap of the teachers are interrelated and contribute to their wellbeing. Secondly, we seek to understand potential differences in teacher profiles based on their wellbeing as measured through PERMA. Thirdly, the study examines to what extent these profiles may differ in terms of the components of PsyCap.

5. Methodology

5.1. Research questions

This study aims to answer the following research questions:

RQ1: What characterizes the relationships between language teachers' wellbeing and their PsyCap?
RQ2: What different profiles of language teachers exist in respect to their wellbeing?
RQ3: To what extent do the language teachers' wellbeing profiles differ in terms of their PsyCap?

5.2. Participants

The call for participation was shared among the researchers' professional and personal networks to reach as many language teachers as possible across the globe. The call followed a snowball sampling procedure and was distributed in person via flyers, as well as in an online form, through social media (Twitter, Instagram, Facebook), and via the researchers' institutes, project homepages, and email contacts. The survey remained open from January 2020 until March 2020. It was closed earlier than anticipated due to the outbreak of the global pandemic as it was expected that any responses after this time would potentially skew the data.

In total, 472 fully completed responses were obtained and subsequently analyzed. Out of this sample, 399 participants were female, 69 were male, and 4 wished not to specify their gender. 225 participants were working in Europe, 103 in America, 79 in Asia, 59 in Oceania, 5 in Africa, and 1 teacher did not want to specify the country where they worked. Over half of the participants were

teaching English (*N* = 267), followed by French (*N* = 138), Spanish (*N* = 105), and German (*N* = 94). 138 teachers had up to seven years of teaching experience, 236 participants had between eight to 23 years of teaching experience, and 98 teachers had been teaching for more than 24 years.

5.3. Instruments

A questionnaire survey comprising three sections was used for data collection. The first section encompassed questions about participants' biodata. Next, teachers were asked about their wellbeing (the PERMA scales; Butler & Kern, 2016). In the third section, participants answered items on their PsyCap (Luthans et al., 2007).

Language teachers' wellbeing was measured using the *PERMA Profiler* (Butler & Kern, 2016), which measures the five pillars of PERMA: positive emotions (α = .80; e.g., "In general, how often do you feel positive?"), engagement (α = .50; e.g., "In general, how often do you lose track of time while doing something you enjoy?"), relationships (α = .78; e.g., "To what extend do you feel loved?"), meaning (e.g., α = .83; e.g., "In general, to what extend do you lead a meaningful life?"), and accomplishment (α = .73; e.g., "How often do you achieve the important goals you have set for yourself?"). Negative emotions (α = .71; e.g., "In general, how often do you feel sad?)" and health (α = .90; e.g., "How satisfied are you with your current physical health?") were also included in the PERMA-profiler scales. Participants rated their responses on a five-point Likert scale from 1 = *never* to 5 = *always*. All seven scales included three items; thus, in total, 21 items were analyzed.

To measure participants' PsyCap, we used the established *PsyCap Questionnaire* (PCQ-24; Luthans et al., 2007). This included 24 items measuring the four scales of PsyCap: hope (α = .82; 6 items in total; e.g., "I can think of many ways to reach my current work goals"), efficacy (α = .83; 6 items in total; e.g., "I feel I can handle many things simultaneously at this job"), resilience (α = .66; 5 items in total; e.g., "I can get through difficult times at work because I've experienced difficulty before"), and optimism (α = .79; 6 items in total; e.g., "I always look on the positive side of things regarding my job"). Participants were asked to rate items on a five-point Likert scale ranging from 1 = *strongly disagree*, to 5 = *strongly agree*.

5.4. Ethics

For the distribution of the survey, we drew on the ethics guidelines proposed by the British Association of Applied Linguistics (BAAL, 2016). Before conducting the survey, ethics approval was obtained from our partner institution. At the beginning of the survey, participants were informed about the research project, their rights and involvement, anonymization and storage of data, and their right

to withdraw at any point of the study before its publication. Participants could only proceed to answer survey questions after agreeing to the consent statement. Furthermore, the participants were asked to assign themselves pseudonyms to protect their identity. At the end of the survey, as a gesture of reciprocity, participants were provided with digital resources for their wellbeing including open-source articles and book tips.

5.5. Data analysis

To assess the internal reliability of the scales, Cronbach's alpha values were calculated. To ensure that items not only related to one another but also loaded onto the same dimension, we performed principal component analysis without rotation for each construct separately. Next, we calculated descriptive statistics (means and standard deviations) to assess language teachers' dispositions towards the various PERMA and PsyCap scales. Correlation analyses were also conducted to examine the relationships among the PERMA and PsyCap scales. Following that, cluster analysis was conducted to determine whether the participants could be profiled into distinct groups based on their wellbeing. Cluster analysis was done in two steps: First hierarchical clustering was used on 10 percent of the sample to establish the number of clusters in the data. Once the number of clusters was defined, K-means clustering was run with initial cluster centers derived from the hierarchical clustering. Finally, analyses of variance were calculated for the PsyCap scales and the cluster groups. All calculations were done with SPSS for Windows 26 with the significance level set at .05.

6. Results

6.1. Reliability analysis and descriptive statistics of the scales

Table 1 below contains the reliability analysis of our data including both Cronbach's alpha values as well as principal component analysis. Based on Dörnyei (2007), we used the cut-off point of .60 for the scales as they all have only three items. Results show that apart from engagement, items seemed to measure the corresponding scales reliably and with a single dimension. As with earlier studies of PERMA (e.g., Butler & Kern, 2016; Tansey et al., 2018), due to the fact that the principal component analysis indicated a single dimension, we have decided to keep this scale in the analysis. In terms of the scales measuring teachers' PsyCap, there are acceptable Cronbach's alphas. For the scale of optimism, principal component analysis indicated a certain level of multidimensionality, but as all scales loaded onto the first dimension as well, the scale was kept in the analysis.

In the PERMA scales (Butler & Kern, 2016), paired-sample t-tests were calculated, and the results indicate that the lowest mean value of negative emotions is significantly different from all the other means values of the PERMA scales (see Appendix A for the statistical results). The highest mean value belonged to PERMA engagement, which is significantly different from all the scales except for meaning and relationship (see Appendix A for the statistical results). In terms of the HERO scales of PsyCap (Luthans et al., 2007), the highest mean values are obtained by the scales of hope and efficacy, which are significantly higher than the mean values of resilience and optimism (see Appendix B).

Table 1 Reliability analysis and descriptive statistics of the scales

Scales (number of items)	Cronbach's alpha	Number of components*	*M*	*SD*
accomplishment (3)	.73	1	3.63	0.65
engagement (3)	.50	1	3.89	0.60
positive emotions (3)	.80	1	3.52	0.72
negative emotions (3)	.71	1	2.93	0.69
health (3)	.90	1	3.38	0.94
meaning (3)	.83	1	3.83	0.79
relationship (3)	.78	1	3.85	0.82
hope (6)	.82	1	3.76	0.65
efficacy (6)	.83	1	3.74	0.74
resilience (5)	.66	1	3.61	0.43
optimism (6)	.79	2	3.53	0.72

Note. *principal component analysis without rotation

6.2. Correlations among the scales

The correlational results indicate overall significant results among the scales of wellbeing and PsyCap ranging from $r = .202$ to $r = .656$. Concerning the strongest relationships ($r > .60$), hope is associated with accomplishment, positive emotions, and meaning. Similarly, optimism shows high coefficient values with positive emotions and meaning. In addition, the negative link between optimism and negative emotions appears to be significant as well.

Table 2 Correlational results among PERMA and HERO scales

	accompl.	engagement	pos. emotions	neg. emotions	health	meaning	relation.
hope	.637*	.412*	.605*	-.518*	.351*	.613*	.324*
efficacy	.446*	.330*	.464*	-.395*	.237*	.468*	.250*
resilience	.410*	.271*	.304*	-.301*	.228*	.313*	.202*
optimism	.534*	.379*	.656*	-.620*	.387*	.608*	.343*

Note. * $p < .05$

6.3. Teachers' profiles based on cluster analysis

In order to answer the research question about teachers' profiles in relation to their wellbeing, we subjected the PERMA scales to cluster analysis. Based on the results of hierarchical clustering, a four-cluster solution was accepted as describing the dataset well. This decision was based on inspection of the dendrogram included in Appendix A. Table 3 details the results of the final cluster centers as well as the sizes of the clusters, while Table 4 contains the analyses of variance of the clustering scales for each cluster. Cluster 1 includes those participants who scored highest on all the PERMA scales except for the negative emotions. This group appears characterized by the highest levels of overall wellbeing. Cluster 2 contains those teachers who scored high on accomplishment, engagement, meaning, and relationships, but scored low on health. Cluster 3 occupies the middle position on all scales, showing moderate levels of overall wellbeing. Finally, Cluster 4 comprises those participants who scored highest on the scale measuring negative emotions and lowest on all the other scales. This group displayed the lowest levels of wellbeing among the four clusters.

Table 3 Results of the cluster analysis: Final cluster centers

Scales	Cluster 1	Cluster 2	Cluster 3	Cluster 4
accomplishment	4.01	3.94	3.38	2.76
engagement	4.12	4.14	3.70	3.41
positive emotions	4.04	3.84	3.24	2.31
negative emotions	2.48	2.72	3.20	3.80
health	4.30	2.64	3.20	2.47
meaning	4.40	4.30	3.41	2.67
relationship	4.35	4.21	3.55	2.72
Cluster sizes: *N* (%)	163 (35%)	91 (19%)	160 (34%)	58 (12%)

Table 4 The results of the cluster analysis

Clustering scales	Clusters				*F*	*p*	post-hoc comparison[a]
	1	2	3	4			
accomplishment	4.01	3.94	3.38	2.76	120.671	< .001	4 < 3 < 2,1
engagement	4.12	4.14	3.70	3.41	38.885	< .001	4 < 3 < 1,2
positive emotions	4.04	3.84	3.24	2.31	250.501	< .001	4 < 3 < 2 < 1
negative emotions	2.49	2.72	3.20	3.80	109.021	< .001	1 < 2 < 3 < 4
health	4.31	2.65	3.21	2.47	216.425	< .001	4 < 2 < 3 < 1
meaning	4.40	4.30	3.41	2.67	250.533	< .001	4 < 3 < 2,1
relationship	4.35	4.21	3.55	2,72	123.987	< .001	4 < 3 < 2,1

Note. [a] Duncan test was used. Numbers refer to groups. < indicates significant differences. , denotes a non-significant difference.

In terms of the size of the clusters, the majority of our participants belong to Cluster 1 and 3, while Cluster 2 and 4 are considerably smaller. This suggests that

most participants displayed either high or moderate levels of wellbeing, while only 12% of the total sample displayed low levels of wellbeing. It must be remembered that participation in the online survey was voluntary opt-in and, thus, the sample may be skewed towards those who generally have higher wellbeing.

6.4. The relationship between teachers' profiles and teachers' PsyCap

In order to map whether the cluster group membership accounts for meaningful differences in teachers' PsyCap, we compared the mean values of the scales measuring teachers' PsyCap across the four cluster groups. Only the scale of optimism differentiates consistently among the four cluster groups indicating significant differences among the groups of teachers in terms of their level of optimism, with Cluster 4 having the lowest mean value and Cluster 1 the highest mean value. For the scales of hope, efficacy, and resilience, cluster membership does not differentiate between Clusters 1 and 2, but their results are significantly higher than that of Cluster 3 and 4.

Table 5 The relationship between teachers' profiles and the scales measuring teachers' PsyCap

Clustering scales	Clusters				*F*	*p*	post-hoc comparison[a]
	1	2	3	4			
hope	4.15	4.02	3.48	3.01	94.849	< .001	4 < 3 < 2,1
efficacy	4.04	4.03	3.50	3.11	42.362	< .001	4 < 3 < 2,1
resilience	3.76	3.71	3.49	3.33	25.163	< .001	4 < 3 < 2,1
optimism	3.99	3.74	3.23	2.73	89.706	< .001	4 < 3 < 2< 1

Note. [a] Duncan test was used. Numbers refer to groups. < indicates significant differences. , denotes a non-significant difference.

7. Discussion

7.1. The relationship between language teacher wellbeing and PsyCap

The results of correlation analyses revealed that the meaning scale of PERMA (Butler & Kern, 2016) showed a high correlation coefficient with the hope scale of PsyCap (Luthans et al., 2007). Feldman and Snyder (2005) highlight a connection between meaning and hope; they consider that goal-directed thinking "appears theoretically central in establishing life meaning" (p. 407). Further empirical studies have also shown a positive correlation between hope and meaning (Bronk et al., 2009; Mascaro & Rosen, 2005). Individuals are thus more likely to engage their agency to develop pathways towards goals that are perceived as meaningful to them.

Our findings also revealed a strong correlation between the PERMA scale of meaning and the PsyCap scale of optimism. According to Scheier et al. (2001), optimists perceive themselves as being capable to attain desirable goals and are

also more persistent in trying to reach these goals. Earlier studies suggest that pursuing and attaining meaningful goals in life can positively influence expectancies for the future, fostering in turn wellbeing (e.g., Shoda & Smith, 2004). This indicates that the more frequently individuals attain meaningful goals, the greater positive expectancies towards future goals they are likely to hold.

The PsyCap scale of hope was also strongly correlated to the PERMA scale of positive emotions. This is consistent with previous research which has identified a direct relationship between positive emotions and hope (e.g., Carmona-Halty et al., 2019). In particular, the broaden-and-build theory (Fredrickson, 2001) suggests that positive emotions are able to "broaden people's attention and thinking, enabling individuals to draw flexibly on higher-level connections and wider-than-usual ranges of precepts and ideas. In turn, these broadened and flexible outlooks help people to discover and build survival-promoting personal resources" (Fredrickson & Kurtz, 2011, p. 35). Experiencing positive emotions might enhance individuals' resources including the ability to set goals and identify workable pathways towards attaining their goals; these resources, in turn, positively contribute towards an individual's wellbeing.

The PsyCap scale of optimism also revealed a high correlation with the PERMA scale of positive emotions, suggesting that expecting positive outcomes in relation to their efforts might be linked to experiencing positive affect. According to Scheier et al. (2001), optimistic people's confidence regarding positive outcomes "should yield a mix of feelings that is relatively positive" while, for pessimists, "this doubt should yield a greater tendency toward negative feelings" (p. 191). Previous studies have revealed a direct relationship between optimism and positive emotions (e.g., Carmona-Halty et al., 2019). The high correlation between positive emotions and optimism in our data seems to point to the fact that individuals high in positive emotions might hold more positive expectations for the future compared to people high in negative emotions.

Results also showed a strong relationship between the PsyCap scale of hope and the PERMA scale of accomplishment. Previous correlation studies have also revealed a relationship between hope and accomplishment (e.g., Wagner et al., 2020). Earlier research has also shown that self-reactions in relation previous achievement cyclically affect one's courses of future action through shaping one's sense of agency (e.g., Bandura, 2008). This indicates that the sense of accomplishment deriving from achieving a goal can strengthen one's sense of agency in relation to future attainments.

7.2. Language teacher wellbeing profiles

Findings from the cluster analysis revealed four clusters based on the PERMA scales: (1) high wellbeing, (2) high wellbeing but low health, (3) moderate wellbeing, and

(4) low wellbeing. Results have shown that all four clusters significantly differed in terms of health and emotions. Earlier studies revealed the interconnections between emotional and physical states, showing that when a person experiences low physical health, they are likely to experience more negative emotions and fewer positive emotions (e.g., Chida & Steptoe, 2008). Furthermore, while all the four clusters differed in terms of health and positive emotions, Cluster 1 and 2 significantly differed from Cluster 3 and 4 in terms of all other components of PERMA (i.e., accomplishment, engagement, meaning, and relationships). This suggests that all components of PERMA significantly differentiated between the high, moderate, and low wellbeing clusters, and each can be, therefore, understood as defining aspects of wellbeing. This is in line with empirical evidence showing each of the PERMA components as contributing towards wellbeing (see Butler & Kern, 2016). This also indicates that wellbeing is not simply the lack of mental illness (e.g., Seligman & Csikszentmihalyi, 2000), but it can be understood as a multidimensional construct made up of different components capturing affective, psychological, relational, and health domains.

7.3. Differences between language teacher wellbeing profiles based on PsyCap

The comparison of the four clusters in terms of their PsyCap has shown that only the scale of optimism differentiated consistently among the four cluster groups. Given that Cluster 1 and 2 only significantly differed in terms of emotions and health, this finding suggests that individuals with low health may generally experience not only more negative emotions but also a more negative outlook towards the future. Several studies have examined the correlations between optimism and healthy behaviors. Carver et al. (2010), for instance, have shown that optimistic people are likely to live longer, have better post-operative outcomes, and lower levels of depression.

While optimism differed across all clusters, Clusters 1 and 2 significantly differed from Cluster 3 and 4 in terms of other PsyCap constructs: Hope, efficacy, and resilience. This shows that all four constituent facets of PsyCap differed in individuals with low, moderate, and high wellbeing. Previous research from Luthans et al. (2013) has shown that these four psychological resources may facilitate positive appraisals of one's different life domains, thus promoting wellbeing. They maintain that, "a person with high overall well-being is likely to build and sustain high overall PsyCap levels," and consider that, "this helps not only in terms of domain-specific cognitive appraisals but also in the form of general, overarching mechanisms for self-evaluation, coping, problem solving, and overall energy levels" (p. 124). As such, our study supports the notion that one's sense of agency and ability to contemplate pathways to reach their goals (hope),

their positive beliefs about their competence (self-efficacy), ability to respond positively to setbacks (resilience), and positive attributions about future outcomes (optimism) can be defining for an individual's appraisals and regulation of wellbeing across the domains of emotions, engagement, relationships, meaning, accomplishment, and health.

7.4. General discussion

This study provides key insights in terms of the relationship between components of teacher wellbeing and their PsyCap. Our data shows that the more a teacher is driven by the pursuit of meaningful goals, the higher their sense of agency, their ability to find pathways to attain these goals, and their expectations of positive outcomes. A sense of meaning is seen as central in a teacher's work, and it has been associated with higher wellbeing (Pines, 2002) and more positive relationships with students (Lavy & Bocker, 2018). Our data also show that a sense of accomplishment in relation to a meaningful goal is related to higher hope. Accomplishment was found to be a predictor of job satisfaction for teachers (Skaalvik & Skaalvik, 2009). Our study has also revealed that positive emotions are highly correlated with both hope and optimism. Positive emotions play a central role in teachers' wellbeing (see Gkonou et al., 2020). Moreover, through processes of emotional contagion, teachers can transfer their positive emotions to their students (Moskowitz & Dewaele, 2019).

Another key finding concerns differences in teachers' wellbeing profiles based on PERMA. In particular, results show that teachers with overall high wellbeing across its psychological and relational dimensions may vary in terms of health and emotions. Teaching is a profession that typically involves substantial emotional labor, which is associated with health symptoms and emotional exhaustion, both known as predictors of burnout and attrition (e.g., Schaubroeck & Jones 2000). It is a pertinent reminder of the importance of understanding teacher wellbeing not only in terms of its psychological and relational components, but also across its affective and health dimensions.

Our findings also revealed that the two groups of teachers presenting overall high wellbeing varied in terms of their optimism. At present, research on teacher optimism remains particularly scarce, yet our findings suggest it could play a critical role in teacher wellbeing. In addition, as teachers with high, moderate, and low wellbeing differed across all four components of PsyCap, it implies the potential for interventions aimed at enhancing any of these psychological resources could help teachers to flourish in their personal and professional lives.

8. Conclusion and implications

The purpose of this study was to examine the relationships between language teachers' PERMA and their PsyCap, to identify teacher profiles based on their wellbeing, and to determine how these wellbeing profiles varied in terms of the four components of PsyCap. The insights generated by the study offer a number of implications for teachers, school administrators, and policy makers. Findings have revealed the central role played by a sense of meaning for developing a sense of agency, identifying pathways towards one's goals, and having a positive outlook towards the future. Although teachers are typically driven by a sense of mission, their sense of meaning can fluctuate based on a number of intra-individual and contextual factors (Ben-Amos & Tamir, 1995). This suggests that teachers' sense of meaning can be fostered through intervention and daily practices. School administrators and educational policies can promote teachers' sense of meaning by building teacher training and professional development programs that encourage teachers to get in touch with their sense of mission (see Korthagen, 2014).

The study has also revealed the importance of positive emotions for teacher wellbeing. King and Ng (2018) suggest three main preventive strategies that teachers may adopt to downregulate negative in-class emotions and alleviate emotional labor: (a) modifying situations that are likely to trigger teachers' emotional responses; (b), deploying attention on students' positive behaviors rather than negative ones; (c) reappraising a particular situation through self-talk to alter its emotional significance. Findings have also revealed how a sense of accomplishment is connected to a sense of agency and pathways to achieve one's goals. Teacher's sense of accomplishment can be encouraged by implementing initiatives and policies that foster teachers' autonomy and sense of control over their teaching lives (Skaalvik & Skaalvik, 2018).

The results have also shown how all four clusters significantly differed in terms of physical health and emotions. This suggests that teachers should be encouraged to attend not only to their psychological and affective wellbeing, but also to their physical health. The characteristics of teachers' work environment can significantly influence their health and organizations must take serious steps to protect and support teacher wellbeing, rather than leaving them to their own resources (Mercer, 2021).

Finally, the comparison of the four clusters in terms of their PsyCap has demonstrated that only the scale of optimism differentiated consistently among the four clusters, revealing the potentially defining role of optimism for teacher wellbeing. Optimism can be fostered through focused interventions aimed at training teachers in evaluating and reflecting on past experiences and recognize the positive aspects of these situations. Recent studies have also shown the effectiveness of visualization techniques in increasing levels of optimism (Carrillo et al., 2019).

As with all research, this study has some limitations. Firstly, it examines the PERMA and PsyCap scores of participants at one moment in time; measurements at different points in time would have provided a richer and more dynamic representation of our participants' wellbeing as it changes over time. Second, this study explicitly sought to focus on the psychological determinants of wellbeing; however, socio-contextual aspects need to be examined to provide more comprehensive holistic models of wellbeing. Indeed, integrating our quantitative survey findings with qualitative, individual data could contribute a more nuanced and context-sensitive picture of participants' wellbeing.

Despite these limitations, the present study has generated new insights into teacher wellbeing, revealing its multi-componential nature and its relationships with teachers' PsyCap which represents a valuable set of individual resources for supporting wellbeing. The study has shown the interdependence and critical role of psychological, affective, and physical components of wellbeing, and has revealed key psychological resources teachers can draw on to manage and support their wellbeing. As such, this study adds another valuable piece of the puzzle in our quest to understand the rich, multicomponential, complex character of teacher wellbeing.

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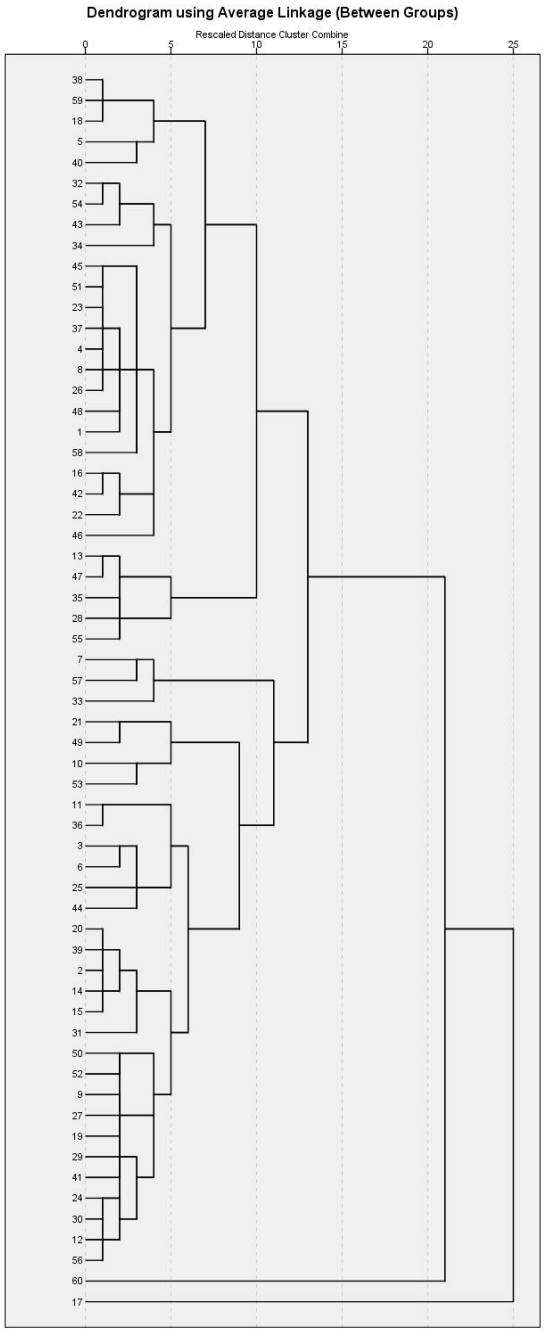
APPENDIX A

The dendrogram used as a basis for the division of participants into clusters



APPENDIX B

Results of *t*-tests

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	negemo - accomp	-,69915	1,14871	,05287	-,80305	-,59525	-13,223	471	,000
Pair 2	negemo - engage	-,96045	,99080	,04561	-1,05007	-,87084	-21,060	471	,000
Pair 3	negemo - posemo	-,58475	1,27301	,05859	-,69989	-,46961	-9,979	471	,000
Pair 4	negemo - health	-,45056	1,36754	,06295	-,57425	-,32688	-7,158	471	,000
Pair 5	negemo - meaning	-,89619	1,27502	,05869	-1,01151	-,78086	-15,270	471	,000
Pair 6	negemo - relation	-,91596	1,25373	,05771	-1,02936	-,80256	-15,872	471	,000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	engage - accomp	,26130	,68032	,03131	,19977	,32283	8,344	471	,000
Pair 2	engage - posemo	,37571	,70458	,03243	,31198	,43943	11,585	471	,000
Pair 3	engage - negemo	,96045	,99080	,04561	,87084	1,05007	21,060	471	,000
Pair 4	engage - health	,50989	,99249	,04568	,42012	,59965	11,161	471	,000
Pair 5	engage - meaning	,06427	,73683	,03392	-,00238	,13091	1,895	471	,059
Pair 6	engage - relation	,04449	,86702	,03991	-,03393	,12291	1,115	471	,265

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	hope - efficacy	,01624	,53148	,02446	-,03183	,06431	,664	471	,507
Pair 2	hope - resilience	,14555	,56903	,02619	,09408	,19702	5,557	471	,000
Pair 3	hope - optimism	,22952	,52911	,02435	,18166	,27738	9,424	471	,000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	efficacy - hope	-,01624	,53148	,02446	-,06431	,03183	-,664	471	,507
Pair 2	efficacy - resilience	,12931	,65787	,03028	,06981	,18881	4,270	471	,000
Pair 3	efficacy - optimism	,21328	,66468	,03059	,15316	,27339	6,971	471	,000