

RESEARCH ARTICLE

Preservice Teachers' Profiles of Emotional Competences: Associations With Stress, Anxiety, and Emotional Exhaustion During Practicum

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Received: 7 December 2023 | **Revised:** 31 January 2025 | **Accepted:** 9 March 2025

Funding: This study was funded by the Fonds Spéciaux de la Recherche of the Université catholique de Louvain.

Keywords: anxiety | emotional competencies | emotional exhaustion | preservice teachers | profiles | stress

ABSTRACT

This study investigates preservice teachers' profiles of intrapersonal emotional competencies (ECs) and their associations with perceived stress, anxiety, and emotional exhaustion during the practicum. Three hundred twenty-six Belgian preservice teachers completed questionnaires on ECs, stress, anxiety, and emotional exhaustion. Latent Profile Analysis identified four distinct profiles of ECs: High Emotional Competencies, Moderate Emotional Competencies, Poor Identification, and Highly Regulation. Perceived stress was the highest in the two last profiles, while the profile with higher ECs had less stress and anxiety. Results are discussed related to limitations of the study. Future research on preservice teachers, and practical implications for preservice teachers' initial training are provided.

Teaching is regarded as a high-risk profession for occupational stress and burnout (Collie 2023; Donker et al. 2020; García-Carmona et al. 2019; Klassen and Chiu 2011; Squillaci-Lanners 2020). Studies have observed signs of occupational stress in preservice teachers during their initial education (Chaplain 2008; Gardner 2010) and concerning levels of emotional exhaustion during practicum (Fives et al. 2007; Kokkinos and Stavropoulos 2016). In considering how to counter stress and burnout, researchers have highlighted intrapersonal emotional competencies as a possible protective factor (Gay and Genoud 2020; Ju et al. 2015; Mérida-López and Extremera 2017; Puertas Molero et al. 2019). In the present paper, emotional competencies refer to individual capacities to identify, understand, express, regulate, and use one's emotions and those of others (Brasseur et al. 2013; Salovey and Mayer 1990). Emotional competencies related to one's own emotions are named intrapersonal emotional competencies, while those concerning

others' emotions are termed interpersonal emotional competencies (Brasseur et al. 2013).

Most studies on emotional competencies have so far relied on a variable-centered approach (MacCann et al. 2020), assuming that all participants are from a homogeneous population. However, this approach can neglect the nuances and effects of emotional competencies (Keefer et al. 2012). An alternative method is the person-centered approach, which assumes that a studied sample includes multiple subpopulations with different levels of a given psychometric construct (Morin et al. 2017). The use of person-centered approach is relevant when studying emotional competencies, as individuals have substantial variability in their emotional processing capacities (Fiori 2009). Indeed, for the same emotionally intelligent behavior, individuals might differ regarding their abilities to identify or understand their feelings, or to manage these feelings

Summary

- Preservice teachers' profile characterized by higher emotional competencies is associated with lower stress and lower anxiety during practicum.
- Preservice teachers with low emotional identification or with mismatched levels of emotional competencies showed the highest levels of stress during practicum.
- Preservice teachers' emotional competencies during the initial education should be developed.

(Fiori 2009). Thus, person-centered study improves the validity of research into emotional competencies (Davis and Nichols 2016; Keefer et al. 2012).

In this perspective, a recent person-centered study (Martínez-Monteagudo et al. 2019) found that in-service teachers could be grouped into distinct profiles regarding a range of emotional competencies and that these profiles were linked to differing levels of teachers' stress vulnerability in the classroom. More precisely, teachers with higher emotional competencies and those with better emotional regulation were less prone to anxiety, depression, and burnout, whereas teachers with low emotional competencies and low emotional regulation reported higher distress (Martínez-Monteagudo et al. 2019). Research on the benefits of emotional competencies in preservice teachers is lacking (Birchinall et al. 2019) and needed, as emotional competencies could increase preservice teachers' well-being and help them respond appropriately to emotional situations in the classroom (Valente 2022).

To fill this gap, the goals of the present study were twofold. On the one hand, we aimed to identify intrapersonal emotional competencies profiles among preservice teachers. On the other hand, we aimed to explore the associations between these profiles and preservice teachers' levels of perceived stress, anxiety symptoms, and emotional exhaustion. In doing so, the present paper added three principal contributions to the education field. First, it responded to the call of research on preservice teachers and the role of emotional competencies on their well-being (Birchinall et al. 2019). Second, this study expanded previous findings on profiles of emotional competencies by using the core facets of emotional competencies that is, emotional identification, understanding, expression, regulation, and use (Martínez-Monteagudo et al. 2019), and by studying their associations with preservice teachers' stress, anxiety, and emotional exhaustion during the practicum. Third, this study held important implications for teacher education practices by exploring the benefits of developing emotional competencies during teachers' initial training (Corcoran and O'Flaherty 2022; Palomera et al. 2008).

1 | Preservice Teachers' Burnout and Stress

Teacher burnout is strongly associated with chronic stress (Rey et al. 2016; Zysberg et al. 2017), and symptoms of burnout have been detected in preservice teachers (e.g., Fives et al. 2007; Kokkinos and Stavropoulos 2016). A widely used definition of

burnout highlights three main symptoms: emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach et al. 2001). Emotional exhaustion is thought to be the core symptom of burnout as it is typically the first to develop (Greaves et al. 2017; Hornung et al. 2013; Schaufeli et al. 2002; Skaalvik and Skaalvik 2010; Turhan et al. 2023), with depersonalization and reduced personal accomplishment being secondary symptoms or consequences from prolonged emotional exhaustion (Maslach et al. 2001). Furthermore, a harmonized definition of occupational burnout puts emotional exhaustion at the core of the definition (Canu et al. 2021). The current study thus focused only on emotional exhaustion experienced during preservice teachers' practicum.

The practicum, or teaching internship, is an important period of teachers' initial training. The practicum is usually defined as "all varieties of observation and teaching experiences in a pre-service teacher education program" (Zeichner 1992, p. 297), referring to field experiences related to professional courses and internship experiences. In this paper, we refined Zeichner's (1992) definition of practicum, by only focusing on preservice teachers' professional teaching experiences. Hence, the practicum extends beyond classroom observations, as it allows future teachers to develop the mastery of teaching skills, methods, and techniques (Le Cornu and Ewing 2008), and helps their professional development (Mononen et al. 2023; Nghia and Tai 2020). During this period, preservice teachers put their pedagogical knowledge into practice in a real-world setting (Buckworth 2017; Smith and Lev-Ari 2005; Viau-Guay 2014), making practicum experiences a cornerstone of initial teacher education (White and Forgasz 2016). Furthermore, the practicum represents a period during which preservice teachers begin to develop a reflective professional orientation, fostering a moral and ethical perspective on teaching by collaborating with in-service teachers (Lacourse and Hensler 2008; Le Cornu and Ewing 2008; Van Nieuwenhoven and Roland 2015). In this regard, practicums were often perceived by preservice teachers as the most valuable experiences in their education (White and Forgasz 2016).

In addition, the practicum offers a unique opportunity for researchers to investigate preservice teachers' emotional reactions (Klassen and Durksen 2014). Some previous studies found that usually, preservice teachers were highly motivated for these practice experiences (Mairitsch et al. 2021; Martins et al. 2015; Smith and Lev-Ari 2005) and reported a sense of accomplishment after completing their practicum (Kokkinos and Stavropoulos 2016). Nevertheless, the practicum may also be a tumultuous period for many preservice teachers (Heryatun and Septiana 2020). Extreme positive and negative emotions experienced can boost individuals but cause significant stress in others (Chang 2009; Mairitsch et al. 2021). This elevated stress level appeared to persist regardless of the time already spent in practicum. In their study on English and Austrian preservice teachers, Mairitsch et al. (2021) found that Austrian preservice teachers, despite having completed at least four practicums of several months during their training, reported feeling highly stressed during these times, similar to their English peers, who had 5 months of practicum. In addition, preservice teachers in Mairitsch and colleagues' qualitative study (2021) perceived the practicum as detrimental for their mental and physical health,

associating it with their experiences of sleep disturbances and hormonal imbalances. When studying preservice teachers' stress, recent research often focused on their overall academic stress (García-Martínez et al. 2021; Núñez-Regueiro et al. 2023). For instance, one variable-centered study from Spain highlighted moderate academic stress among preservice teachers across all years of bachelor's degree (García-Martínez et al. 2021). Some sources of this stress might relate to practicum experience, like heavy workload or a poor relationship with practicum supervisor (Caires et al. 2012; Núñez-Regueiro et al. 2023). Quantitative research on practicum-related stress remains limited. One study reported that 17% of preservice teachers experienced high levels of stress during their practicum (Kokkinos and Stavropoulos 2016), whereas another study suggested that this proportion reached 38% (Chaplain 2008). In addition, some qualitative research found that preservice teachers felt anxious during their 2-month practicum (Danyluk 2013; Yangın Ekşi and Yılmaz Yakışık 2016), and one quantitative study suggested that up to 44% of preservice teachers felt highly anxious (Campbell and Uusimäki 2006).

These concerning findings implied that more research on how to preserve preservice teachers' mental health is necessary, especially since practicum structures vary widely across education systems. For instance, Chaplain (2008) studied an English cohort who reported moderate stress levels, during a 4-month practicum, while assuming 66% of teaching workload by the end. In contrast, Greek preservice teachers in Kokkinos and Stavropoulos' study (2016) completed a shorter, 4-weeks practicum but also reported moderate stress. Similarly, preservice teachers in Danyluk's study (2013) spent 11 weeks in practicum and experienced moderate levels of stress throughout period. These comparisons suggest that stress levels may not necessarily correlate with practicum length, underscoring the complexity of factors influencing preservice teachers' stress.

Little research attention has also been given to preservice teachers' psychological well-being (Birchinall et al. 2019; Gardner 2010), although teaching may present intense emotional demands (Travers 2017), which are already present during teachers' initial education (Birchinall et al. 2019). More precisely, one study indicated that most preservice teachers knew that teaching was associated with burnout and that those who dropped out often displayed burnout symptoms (Hong 2010). Recently, Bell (2023) found that preservice teachers rated themselves as moderately exhausted during their initial education. Several studies from Europe and the US indicated that preservice teachers showed signs of perceived stress and symptoms of emotional exhaustion after just 1 month of practicum, with higher perceived stress linked to more emotional exhaustion (Chaplain 2008; Fives et al. 2007; Kokkinos and Stavropoulos 2016). More importantly, regarding their teaching experiences during the practicum, one qualitative study found that preservice teachers tended to feel worned out from teaching, more sensitive to unexpected noises, and overwhelmed by workload (Squires et al. 2022). Altogether, those prior findings suggested first signs of preservice teachers' emotional exhaustion. It is, however, worthy to note that there is no consensus in the literature, as other research in Germany found low to moderate levels of emotional exhaustion among preservice teachers during practicum (Voss and Kunter 2020).

However, a recent study in Australia found that up to 34% of early career teachers showed high levels of emotional exhaustion (De Clercq et al. 2021), suggesting that it was crucial to emotionally prepare preservice teachers for their first years of teaching (Palomera et al. 2008), and that more research was needed in this area.

Interestingly, there is evidence that emotional competencies can help prevent burnout and anxiety symptoms in teachers (e.g., Martínez-Monteagudo et al. 2019; Mérida-López and Extremera 2017; Puertas Molero et al. 2019), likely because more emotionally competent teachers experienced less emotional exhaustion (Bardach et al. 2022; Yin et al. 2019). Consequently, prior research stressed the need to develop emotional competencies among preservice teachers (during the initial training) to prevent burnout (Corcoran and O'Flaherty 2022; Corcoran and Tormey 2012; Valente 2022).

1.1 | Emotional Competencies

There are two main theoretical models regarding emotional competencies, one of which sees it as a trait and another which views it as a set of abilities (Barchard et al. 2016). Trait models assume that emotional competencies include abilities such as emotional regulation and expression and that these are linked to personality traits such as optimism, assertiveness, impulsiveness, and empathy (Petrides and Furnham 2001). Ability models consider specific emotional competence such as the ability to appraise, express, regulate, and use one's own emotions and those of others (Salovey and Mayer 1990). To unify these models, Mikolajczak. (2009) proposed a model of emotional competencies that spans three levels: a knowledge level, meaning the knowledge about one's emotions, an ability level, referring to the ability to use emotional strategies, and a disposition level, which is the natural tendency to employ emotional strategies. The present study followed this tripartite model.

Emotional competencies have been negatively associated with stress and positively related to well-being in those undertaking internships in professions such as nursing or dietetic sciences (Frazier et al. 2020; Montes-Berges and Augusto 2007; Por et al. 2011; Rodríguez-Leal et al. 2023). Emotional competencies may, therefore, be a protective factor during stressful work experiences (Pekaar et al. 2019; Valente 2022). Unfortunately, preservice teachers showed low emotional competencies (Fernández-Molina et al. 2019), particularly when compared to in-service teachers (Chan 2008). One qualitative study (Grandpré and Messier 2021) showed that preservice teachers have difficulties to accurately understand, express, and manage their emotions. In the same vein, preservice teachers with higher intrapersonal emotional identification and understanding tended to experience less physical, psychological and cognitive symptoms of stress (García-Martínez et al. 2021). Preservice teachers with higher emotional competencies were more flexible to new contexts, making them more emotionally adaptable (Mansfield et al. 2016). As such, enhancing preservice teachers' emotional competencies might be related to reduced burnout symptoms in the early years of their careers (Chesnut and Cullen 2014; Vesely-Maillefer and Saklofske 2018). More

importantly, most of preservice teachers were still emotionally developing during their initial education (Braun 2011), suggesting that focusing on the training of their emotional competencies might be relevant for their well-being (Corcoran and Tormey 2012).

1.2 | Profiles of Emotional Competencies in Education

Studies using a person-centered approach for emotional competencies in education are rare (Koschmieder and Neubauer 2021), although the person-centered approach is useful in this area. Indeed, this approach allows for identification of subpopulations of teachers who share certain characteristics (Morin et al. 2017). Person-centered methods of analysis such as latent profile analysis (LPA) are well-suited to investigate emotional competencies, as research suggested that individuals' emotional abilities vary across dimensions (Keefer et al. 2012), with these different dimensions having distinct impacts on well-being (Extremera and Fernández-Berrocal 2006). For example, college students with weaker abilities to understand and regulate their emotions were more prone to mental health issues such as anxiety and depressive symptoms (Extremera and Fernández-Berrocal 2006), while stronger emotional competencies were thought to contribute to greater well-being (Joseph and Newman 2010; Mikolajczak et al. 2020).

Identifying profiles of distinct emotional competencies that has been linked to higher vulnerability towards stress and emotional exhaustion would help to inform tailored training programs for preservice teachers (Corcoran and O'Flaherty 2022; Palomera et al. 2008; Valente 2022). These teachers in training were confronted with several stressful events during their practicum, and individual variability in stress proneness may affect their success (Kokkinos and Stavropoulos 2016). Among in-service teachers, only one previous study has identified latent profiles of emotional competencies (Martínez-Monteagudo et al. 2019). In that study, four profiles emerged that were characterized by: (1) high emotional attention; (2) high general emotional competencies, comprising emotional attention, understanding, and regulation; (3) low general emotional competencies; and (4) low emotional attention mixed with high regulation. Authors found that teachers with a profile characterized by low levels of emotional regulation showed higher stress. This same profile and the profile characterized by low levels of emotional competencies showed the highest levels of emotional exhaustion, suggesting that lower emotional competencies are less adaptive regarding teachers' mental health (Martínez-Monteagudo et al. 2019). However, one limitation of this study lied in the fact that profiles were defined only by three facets of emotional competencies (Martínez-Monteagudo et al. 2019), including emotional awareness, which is not part of the consensual definition of emotional competencies (Brasseur et al. 2013; Pekaar et al. 2018; Salovey and Mayer 1990).

With respect to preservice teachers, one recent study investigated profiles of emotional competencies (Sözer Boz et al. 2023) and identified three profiles. The first profile "Introverted" was characterized by low intrapersonal emotional competencies, but high interpersonal emotional competencies. The second profile

"Less sensitive to others' emotions," was defined by moderate intra- and interpersonal emotional competencies. The third profile, "Extroverted" displayed moderate to high intra- and interpersonal emotional competencies. Results of this study further showed that a profile characterized by high intrapersonal emotional competencies and high understanding of interpersonal emotions tended to be associated with higher levels of well-being and social skills (Sözer Boz et al. 2023). These findings suggested that being in a profile with higher abilities to identify, understand, express, showing oneself emotions and understand others' emotions was more adaptive than the profile with lower emotional competencies. These findings corroborated prior results among college students showing that a profile characterized by higher emotional competencies was associated with higher subjective well-being (Bi and Li 2021; Oliveira et al. 2024). Yet, prior research on profiles of emotional competencies did not investigate the specific periods of preservice teachers' practicum, and the consequences of emotional competencies profiles on the levels of preservice teachers' stress and emotional exhaustion.

1.3 | Hypotheses

The first aim of this study was to identify distinct profiles of emotional competencies among preservice teachers. Drawing on previous variable- and person-centered studies on profiles of intrapersonal emotional competencies among in-service and preservice teachers (Gutiérrez Ángel 2020; Martínez-Monteagudo et al. 2019; Sözer Boz et al. 2023), we proposed the following hypotheses (Figure 1):

Hypothesis 1. *Three to four profiles of intrapersonal emotional competencies will be observed: (1) one profile characterized by overall high levels of emotional competencies, (2) one profile showing overall low levels of emotional competencies, (3) a third profile with high levels of emotional regulation, and (4) a fourth profile showing low levels of emotional regulation.*

Second, this study aimed to assess whether these profiles of emotional competencies show different patterns of associations with perceived stress, anxiety, and emotional exhaustion. Person-centered studies were mainly exploratory (Morin et al. 2018), however, it did not exclude the possibility of theory-based expectations. Relying on person- and variable-centered studies, literature in this area suggested that higher emotional competencies in teachers are generally linked to less stress, anxiety, and emotional exhaustion (Cece et al. 2022; Martínez-Monteagudo et al. 2019; Mérida-López and Extremera 2017; Siddiqui and Soomro 2019; Thomas et al. 2023; Yin et al. 2019). Thus, we predicted that:

Hypothesis 2. *Profiles characterized by higher levels of intrapersonal emotional competencies will report less perceived stress, anxiety symptoms, and emotional exhaustion.*

Hypothesis 3. *Profiles marked by lower intrapersonal emotional competencies will show higher levels of perceived stress, anxiety symptoms, and emotional exhaustion.*

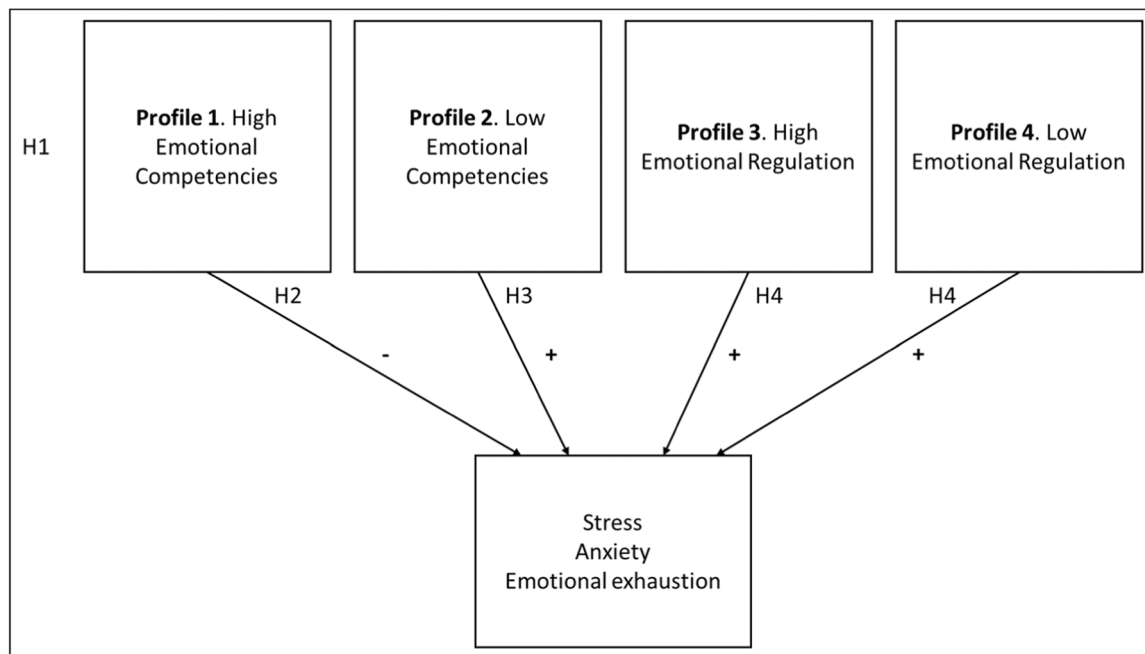


FIGURE 1 | Theoretical latent profile analysis model.

Of note, some studies suggested that being low in some emotional competencies and not in others, for example having low emotional regulation and moderate emotion identification, might cause lower well-being, and higher emotional exhaustion, depression, and stress reactivity (Davis and Nichols 2016; Martínez-Monteagudo et al. 2019; Oliveira et al. 2024). We therefore proposed that:

Hypothesis 4. *Profiles with mismatched levels of five intrapersonal emotional competencies will be associated with higher stress, anxiety, and emotional exhaustion.*

2 | Methods

2.1 | Participants

The final sample comprised 326 Belgian preservice teachers in their third and final year of bachelor's degree study to become primary school teachers. Age ranged from 19 to 43 years ($M = 22.36$ years; $SD = 3.75$). Most participants (89%) were women, a proportion similar to female primary school teachers in the French-speaking part of Belgium in 2021 (The French Community 2022). Participants came from 11 undergraduate colleges, located across the six French-speaking regions of Belgium: the capital, Brussels, and the five provinces of Wallonia. The standardized curriculum across these colleges ensured the equivalence of preservice teachers' initial training. No participant has been involved in formal training of emotional competencies as part of their initial education.

2.2 | Procedure

Cross-sectional data were collected during the winter of 2021–2022, at the end of the preservice teachers' practicum.

This practicum was the first of the final year in their 3-year bachelor's program. This program was offered by undergraduate colleges, combining theoretical courses in pedagogy, child psychology, and didactics with teaching experiences throughout the 3 years. During their first year, preservice teachers typically participated in a 1-week classroom observation of an in-service teacher, with no teaching responsibility required. In the second year, they completed a 2-week practicum, during which they assumed the teaching responsibilities of their cooperative teacher. Finally, in their third and final year, preservice teachers undertook two full-time practicums lasting 1 month each, fully taking on the responsibilities of their cooperative teacher, including lesson delivery, pupil assessment, and meeting the parents. Although preservice teachers assumed full responsibilities, they remained under the supervision of a cooperative teacher who supported them in developing their teaching skills. Preservice teachers were paired with a supervisor from their undergraduate college, responsible for assessing their teaching skills. Midway through the practicum, the college mentor provided feedback to support the preservice teachers' progress. At the end of the practicum, the cooperative teacher and the college mentor jointly evaluated the preservice teacher's teaching skills and assigned an overall grade reflecting their performance. Data collection was conducted in the weeks following the conclusion of this practicum.

The sampling method employed was convenient sampling (Golzar et al. 2022). Initially, researchers contacted 15 undergraduate colleges in Belgium offering bachelor's degrees in primary education. Eleven college teachers agreed to participate to the study. Subsequently, a researcher, independent of the preservice teachers' curriculum, presented the study during a seminar led by the participating college teacher. This seminar focused on their practicum experiences and was attended by third-year preservice teachers who had completed a practicum during the winter 2021–2022. The researcher invited preservice teachers to complete an online survey. This session was only

supervised by the researcher, and teachers from their curriculum did not participate in the session. Participants were neither paid nor credited for their participation. The participation was voluntary. After consenting to participate in the survey, preservice teachers filled out questionnaires on sociodemographic information, emotional competencies, perceived stress, anxiety, and emotional exhaustion. As part of a larger research project, preservice teachers also completed scale on mindfulness abilities. At the end of the session, the researcher gave a debriefing to the preservice teachers. Overall, 400 preservice teachers started the questionnaires, and 81.5% of them entirely completed the survey. Of those 400 participants, 74 dropped out at the beginning of the completion and were thus removed from the final sample.

Finally, it is relevant to note that during this academic year 2021–2022, preservice teachers were fully back on site in colleges after the COVID-19 lockdown. Primary schools were thus fully open at the time of data collection.

2.3 | Measures

Full scales used in this study are available in Supporting Information S1: Appendix A.

2.3.1 | Intrapersonal Emotional Competencies

Emotional competencies were measured with the Profile of Emotion Competence (Brasseur et al. 2013). The scale assesses five emotional competencies with five items for each: identification (e.g., “When something affects me, I immediately know what I’m feeling”), understanding (e.g., “My emotions appear without me understanding where they come from”), expression (e.g., “I can easily put words into what I am feeling”), regulation (e.g., “I find it hard to manage my emotions”), and utilization of one’s own emotions (e.g., “I try to learn from difficult situations or difficult emotions”). Macdonald’s omegas (ω) between 0.94 and 0.99 suggested good reliability except for emotion expression ($\omega = 0.61$). Participants rated their agreement on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Previous studies among in-service teachers have found acceptable internal consistency for each emotional competence (Gay and Genoud 2020).

2.3.2 | Perceived Stress

The short version of the Perceived Stress Scale (Cohen et al. 1983; Dupret and Bocéréan 2013) was used. This adapted version comprised four items evaluating preservice teachers’ perceived control over emotional events that happened during their practicum (e.g., “During your last practicum, how often did you find that difficulties accumulated to the point where you could not control them?”). Items are rated on a 5-point Likert scale of frequency, from 1 (never) to 5 (often). This short version showed good reliability in the present sample ($\omega = 0.98$), as well as in previous studies (Dupret and Bocéréan 2013).

2.3.3 | Anxiety

The anxiety subscale of the Hospital Anxiety Depression Scale (Bocéréan and Dupret 2014; Zigmond and Snaith 1983) was used to measure preservice teachers’ anxiety during practicum. This subscale comprises seven items rated on a 4-point Likert scale of frequency from 1 (never) to 4 (most of the time). An example item was “During the practicum, I sometimes experienced feelings of fear and my stomach was in knots.” The scale showed good reliability here ($\omega = 0.99$) and in a previous study of preservice teachers (Horgan et al. 2018).

2.3.4 | Emotional Exhaustion

Emotional exhaustion was measured using nine items from the Maslach Burnout Inventory (Bocerean et al. 2019; Maslach et al. 1996). Items were rated on a 6-point Likert scale of frequency, from 1 (never) to 6 (every day). An additional option “At least a few times a year” was not relevant for a practicum of 1 month so was removed. Items were contextualized in the practicum (e.g., “I felt emotionally drained by the practicum”). The reliability of this scale was good ($\omega = 0.99$), in line with a previous study of teachers in their first years of teaching ($\alpha = 0.90$; Goddard and Goddard 2006).

2.4 | Statistical Analyses

2.4.1 | Preliminary Analyses

As recommended by Pirsoul et al. (2021), exploratory structural equation modeling (ESEM) was used to calculate profiles of emotion competencies using the robust maximum likelihood estimator (MLR). Confirmatory factor analyses (CFA) were carried out on our measures of perceived stress, anxiety, and emotional exhaustion. After performing ESEM and CFA analyses, factor scores for a model with all five measures were saved to compute profiles. Factor scores are standardized units ($M = 0$, $SD = 1$) that allow for control of measurement errors (Meyer and Morin 2016).

2.4.2 | Main Analyses

We performed LPA using Mplus 8 (Muthén and Muthén 2017) with 5000 random sets of starting values, 1000 iterations, and retaining the 200 best solutions (Hipp and Bauer 2006). Model indicators’ variances were freely estimated (Peugh and Fan 2013). The LPA followed a stepwise procedure from 1 to 8 profiles.

To determine a suitable number of profiles, we first assessed the entropy index, of which a higher value indicates more precise classification of individuals to profiles (M.-C. Wang et al. 2017). However, as the entropy index can fail to identify the correct number of classes (Tein et al. 2013), we also used the Akaike Information Criterion (AIC), the Consistent AIC (CAIC), the Bayesian Information Criterion (BIC), and the sample-size adjusted BIC (ABIC). We also compared the adjusted Lo–

Mendell–Rubin likelihood ratio test (aLMR) and the Bootstrap Likelihood Ratio test (BLRT). A recent review suggested that four of these indicators are most effective, namely the CAIC, BIC, ABIC, and BLRT (Diallo et al. 2016). Thus, we used these indices to compare each profile solution (see Supporting Information S1: Table S1 in Appendix B). We also looked at the elbow plot (see Supporting Information S1: Figure S1 in Appendix B) to identify where goodness of fit indices plateaued (Nylund-Gibson and Choi 2018). The theoretical relevance of each profile was then analyzed, as substantive meaning is a crucial criterion for retaining the solution (Bauer 2022). Finally, associations between profiles and perceived stress, anxiety, and emotional exhaustion were computed using the auxiliary (DCON) specification (Asparouhov and Muthén 2014).

2.5 | Control Variables

To assess the influence of gender and age on the means of latent profiles, the BCH procedure was applied (Asparouhov and Muthén 2014; Vermunt 2010). This procedure determines whether control variables influence the means of the latent profiles. The results showed that, when gender and age were included in the model, the means remained equal across profiles ($X^2_{\text{gender}} = 34.27$, $p = 0.000$; $X^2_{\text{age}} = 9.83$, $p = 0.020$). These findings suggest that incorporating gender and age as control variables in the model was not required.

3 | Results

Descriptive statistics and correlations among variables are displayed in Table 1.

3.1 | Latent Profile Solutions

All scales showed good fit indices. Results of ESEM for emotional competencies and CFAs for perceived stress, anxiety, and emotional exhaustion scales are shown in Supporting Information S1: Table S2 in Appendix C. Adjustment indices for the model with all four measures together showed good fit (comparative fit index [CFI] = 0.92, Tucker Lewis index [TLI] = 0.91, root mean square error of approximation [RMSEA] = 0.043, standardized root mean square residual [SRMR] = 0.044).

To identify the best profile solution, we first assessed the elbow plot and noted that indices of AIC and ABIC reached a plateau around the three-profile solution. It is noteworthy that two of the four indices (i.e., the BIC and the CAIC) continuously increased instead of decreasing. With respect to the AIC and ABIC, we carefully examined solutions with three, four, and five profiles. The three- and five-profile solutions included at least one profile with less than 1% of individuals and another with more than 80%, which is not recommended (Spurk et al. 2020). As such these were not retained. We retained the four-profile solution after considering theoretical relevance and substantive interpretability (Bauer 2022). The solution is

TABLE 1 | Descriptive statistics and correlation matrix.

Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1. Gender											
2. Age	22.36	3.75	−0.131*								
3. Identification	3.44	0.75	−0.079	0.050							
4. Expression	3.11	0.85	−0.127*	0.035	0.032						
5. Understanding	3.07	0.86	−0.062	0.163**	0.121*	0.104					
6. Regulation	2.67	0.77	0.142*	0.056	0.016	0.012	0.043				
7. Utilization	3.68	0.72	0.100	−0.021	0.103	−0.002	−0.025	0.04			
8. Stress	2.44	0.85	−0.073	0.000	−0.206**	−0.118*	−0.212**	−0.028	0.105		
9. Emotional exhaustion	3.35	1.31	−0.075	0.024	0.047	−0.074	−0.071	−0.004	−0.103	0.025	
10. Anxiety	2.15	0.71	−0.049	−0.056	−0.160**	−0.131*	−0.212**	−0.041	0.101	0.803**	0.053

Note: $N = 326$. Correlations were based on factor scores to ensure the structure of the model. Gender was coded as 1 = men, 2 = women. Age is in years.

* $p < 0.05$; ** $p < 0.01$.

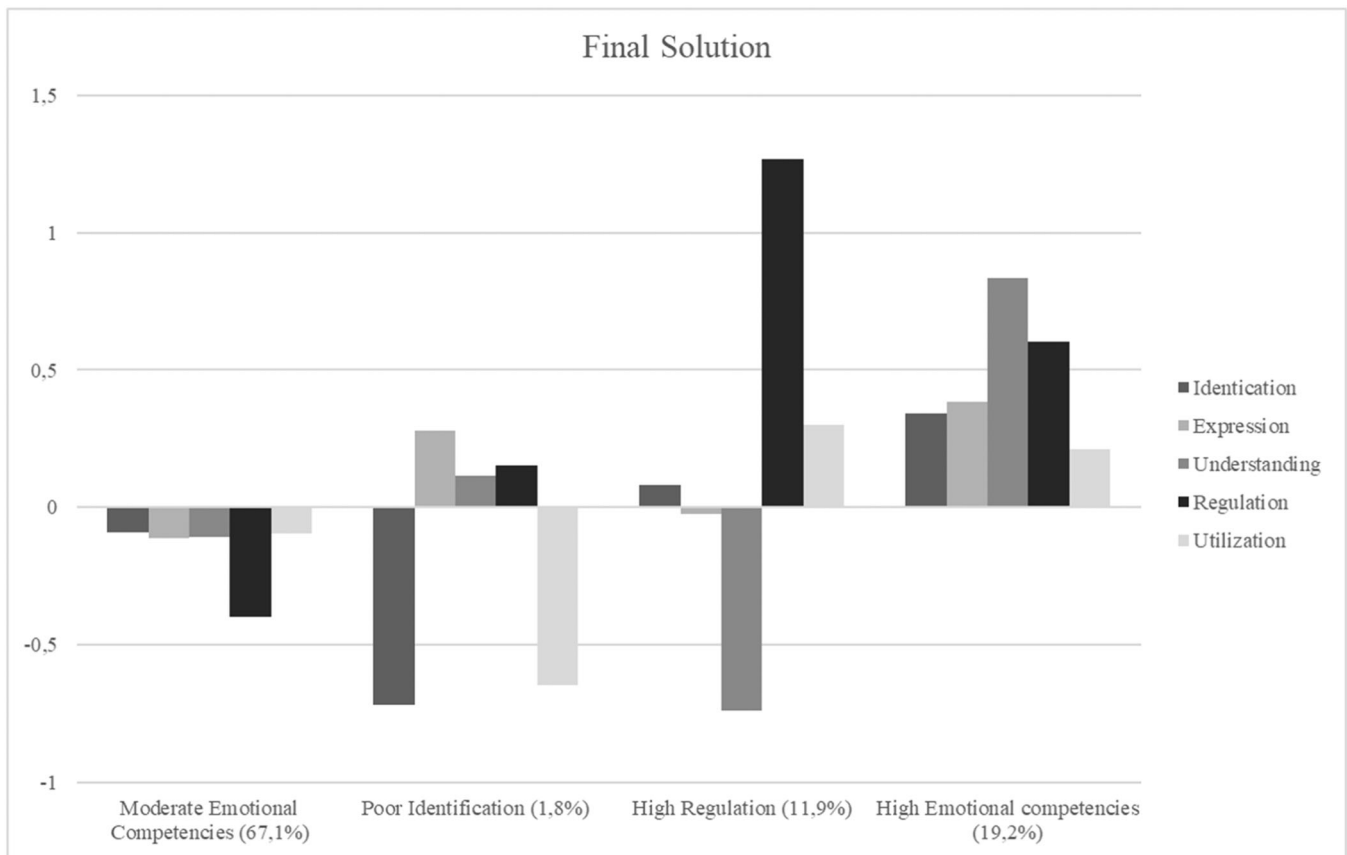


FIGURE 2 | Final LPA solution.

displayed in Figure 2. The entropy index (0.79) indicated good classification accuracy (Celeux and Soromenho 1996).

The four-profile solution indicated that members of Profile 1 reported slightly below-average levels of emotion identification, expression, understanding, and utilization, along with relatively low levels of emotion regulation. We named Profile 1 “*moderate emotional competencies*” as each emotional competence score was close to the mean. This profile included 67.1% of the sample. Members of Profile 2 reported low levels of emotion identification and utilization, and average levels of emotional expression, understanding, and regulation. This “*poor identification*” profile included 1.8% of the sample. The third profile was characterized by very low levels of emotion understanding, very high levels of emotion regulation, and moderate levels of emotional expression and utilization. This profile was named “*high regulation*” and comprised 11.9% of the sample. The members of the fourth profile reported high scores in all competencies and so this was named “*high emotional competencies*.” This profile included 19.2% of the sample.

3.2 | Outcomes of Profile Membership

Within-profile means of each outcome are reported in Table 2 and illustrated in Figure 3. Significant differences between profiles were found for perceived stress and anxiety but not for emotional exhaustion.

The “*poor identification*” and “*high regulation*” profiles showed the highest perceived stress. The “*moderate emotional*

competencies” profile did not significantly differ from the three other profiles in terms of association with perceived stress. The “*high emotional competencies*” profile showed the lowest levels of perceived stress and anxiety. The three other profiles did not significantly differ from each other in terms of anxiety.

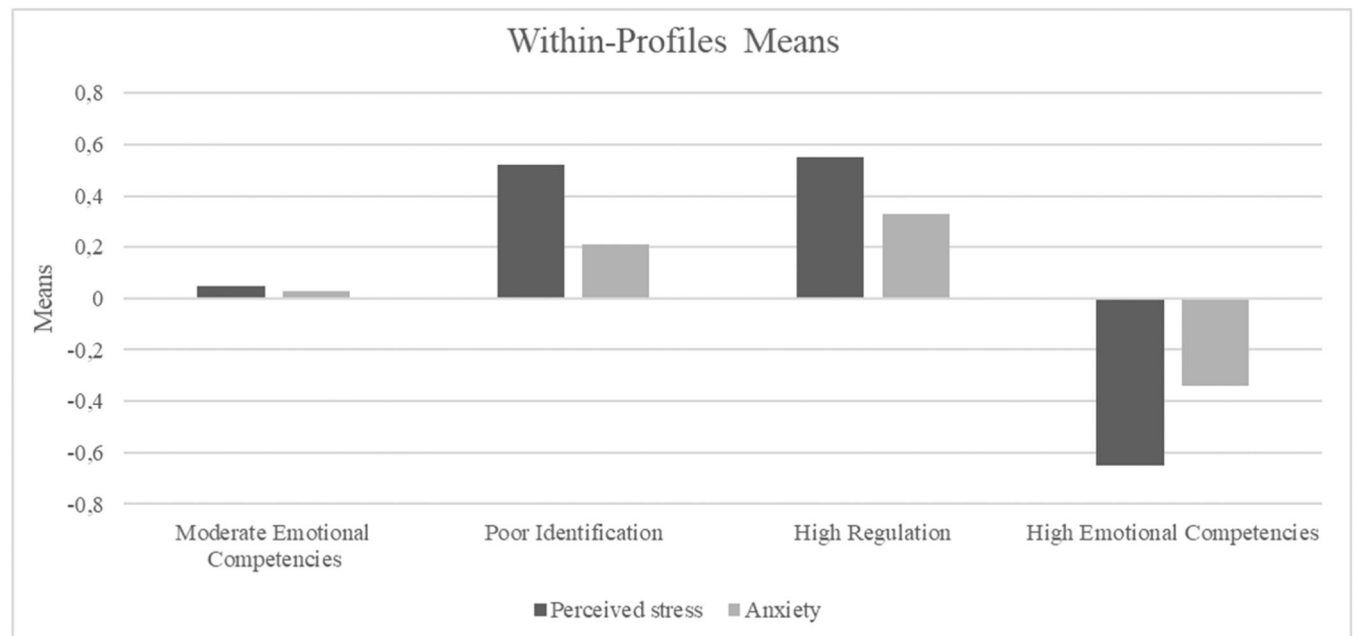
4 | Discussion

In this study, we adopted a person-centered approach to examine profiles of emotional competencies in a sample of pre-service teachers. We explored the associations between these profiles with perceived stress, anxiety, and emotional exhaustion during practicum. This study extended prior research showing that emotional competencies can be analyzed using composite profiles (Martínez-Monteagudo et al. 2019; Sözer Boz et al. 2023) and that emotional competencies are an important personal resource for teachers (e.g., Ju et al. 2015; Mérida-López and Extremera 2017). Moreover, the study outreached the limitations of previous research (Núñez-Regueiro et al. 2023; Sözer Boz et al. 2023) by investigating preservice teachers’ stress within the context of their practicum.

Our results uncovered four latent profiles of emotional competencies among preservice teachers: a profile named “*high emotional competencies*” (19.2%), a “*moderate emotional competencies*” profile (67.1%), a profile termed “*poor identification*” (1.8%), and a “*high regulation*” profile (11.9%). The “*high emotional competencies*,” the “*moderate emotional competencies*,” and the “*high regulation*” profiles were similar to profiles found

TABLE 2 | Differences between emotional competencies profiles.

Outcomes	Profile 1		Profile 2		Profile 3		Profile 4		Overall χ^2
	M	SD	M	SD	M	SD	M	SD	
Perceived stress	0.05	0.04	0.52	0.23	0.55	0.33	−0.65	0.08	72.97***
Anxiety	0.03	0.05	0.21	0.09	0.33	0.28	−0.34	0.07	40.36***
Emotional exhaustion	0.13	0.09	−0.15	0.24	−0.57	0.54	−0.36	0.18	7.54

*** $p < 0.001$.**FIGURE 3** | Within-profile means.

among in-service and preservice teachers (Martínez-Monteagudo et al. 2019; Sözer Boz et al. 2023), partially supporting Hypothesis 1.

The “*high emotional competencies*” profile showed high levels of all five emotional competencies, with emotional understanding being highest. This profile was similar to the high general emotional competencies profile identified among in-service teachers (Martínez-Monteagudo et al. 2019) and among preservice teachers (Sözer Boz et al. 2023). In addition, similarly to preservice teachers in our sample, in-service teachers’ emotional understanding was the highest intrapersonal competence in the “*high emotional competencies*” profile (Martínez-Monteagudo et al. 2019; Sözer Boz et al. 2023).

The “*moderate emotional competencies*” profile was characterized by average levels of emotional identification, expression, understanding, regulation, and use, with regulation being the lowest. Similar findings have been observed among college students (Pirsoul et al. 2022; Thomas and Heath 2022), perhaps indicating that preservice teachers have more in common with fellow students than with more experienced teachers when it comes to emotional competencies. Notably, Martínez-Monteagudo and colleagues’ (2019) did not identify a comparable profile among in-service teachers, suggesting that the development of emotional competencies extends beyond teachers’ initial training and evolves with professional

development. Future research should use longitudinal designs (repetitive measurement times) to explore how emotional competencies profiles among preservice teachers progress during career transitions (e.g., from initial training to first years of teaching), alongside the growth of their professional skills (Nolen et al. 2011).

This “*moderate emotional competencies*” profile accounted for the largest proportion of the sample, which was similar to other person-centered studies on preservice teachers and college students (Pirsoul et al. 2022; Sözer Boz et al. 2023; Thomas and Heath 2022). This pattern also aligned with previous variable-centered studies showing that preservice teachers had moderate levels of emotional identification, understanding, use, and regulation (García-Martínez et al. 2021; Thomas et al. 2023). These findings suggested that moderate emotional competencies might be the most prevalent pattern among college students.

The moderate levels of emotional competencies may also reflect the growing focus on emotions in teachers’ training (e.g., Audrin 2020; Audrin and Bressoud 2023; Letor 2007). In Belgium, where this study was carried out, preservice teachers were encouraged to discuss their emotional states during various courses of their training, especially during professional development seminars. These seminars allowed them to reflect on their experiences (Van Nieuwenhoven and Roland 2015),

which could simultaneously develop their emotional competencies of identification, understanding, and regulation, leading to more emotionally competent preservice teachers. Furthermore, the low emotional regulation observed in this moderate profile was in line with prior research showing that emotion regulation was the most difficult emotional competence for preservice teachers in primary education (García-Martínez et al. 2021; Gutiérrez Ángel 2020).

Regarding the two profiles with mismatched levels of emotional competencies, the “*high regulation*” profile was characterized by very low level of emotional understanding and very high emotional regulation. Such profile was consistent with a recent qualitative study that suggested preservice teachers have difficulties understanding their emotions (Grandpré and Messier 2021). On the contrary, the “*poor identification*” profile was unexpected. The pattern of this profile differed from prior results among preservice and in-service teachers (Martínez-Monteagudo et al. 2019; Sözer Boz et al. 2023). This profile was characterized by very low levels of emotional identification, contrarily to Sözer-Boz and colleagues’ (2023) findings, in which the three profiles showed moderate levels of emotional identification.

4.1 | Outcomes of Emotional Competencies Profiles

The four emotional competencies profiles showed differing patterns of association with perceived stress and anxiety, although not with emotional exhaustion. Results showed that the “*high emotional competencies*” profile was the most adaptive profile regarding perceived stress and anxiety, supporting Hypothesis 2. This profile showed the lowest scores in both psychological distress variables. This result was consistent with previous studies on in-service teachers which showed that having higher emotional competencies was protective against emotional exhaustion, stress, and anxiety (e.g., Cece et al. 2022; Gay and Genoud 2020; Martínez-Monteagudo et al. 2019), and that such profile was more adaptive regarding well-being (Sözer Boz et al. 2023).

The “*moderate emotional competencies*” profile, which made up the largest proportion of the sample, showed moderate levels of stress and anxiety, suggesting that for a considerable proportion of our sample (67%), average levels in the five emotional competencies might not reduce stress. This result partially supported our Hypothesis 3. Accordingly, Thomas et al.’s (2023) variable-centered study found among university students that average levels of emotional competencies were negatively associated with anxiety, while low and high levels of emotional competencies were positively associated with anxiety (Thomas et al. 2023). Our findings showed that preservice teachers in the “*higher emotional competencies*” profile displayed the lowest scores anxiety and stress. One explanation for this incongruence might lie in our focus on intrapersonal dimensions of emotional competencies, while Thomas and colleagues (2023) used a global score of emotional competencies (i.e., a score computed with intrapersonal and interpersonal dimensions of emotional competencies). Research found that using a global score of emotional competencies did not allow to disentangle the

specific effect of intra- and interpersonal emotional competencies (Martins et al. 2010). In addition, prior research found that having high scores of interpersonal emotional competencies was related to lower health condition, suggesting that being too other-oriented was not adaptive for individuals’ health, while intrapersonal emotional competencies were related to a better general health condition (Mikolajczak et al. 2015). Thus, further research should be conducted to disentangle the effects of intra- and interpersonal emotional competencies among preservice teachers.

Additionally, our results indicated that both the “*poor identification*” and “*high regulation*” profiles were associated with the highest levels of perceived stress during the practicum compared to the other profiles, suggesting a more maladjusted combination of emotional competencies for these two profiles. These results supported Hypothesis 4. Regarding the “*poor identification*” profile, higher levels of stress were consistent with prior literature showing that difficulties in identifying and defining emotions were related to mental health conditions such as anxiety (Berardis et al. 2008; Lenzo et al. 2020), and depression (Joormann and Gotlib 2006; Li et al. 2015). This result suggested that emotional identification is an important emotional competence for individuals (Kämpfe and Mitte 2010; Vergara et al. 2015), as being able to label our own emotions helps the individual to consider their current and past moods as well as their needs (Lischetzke and Eid 2017; Mikolajczak et al. 2020; Morie et al. 2022).

For emotional regulation, the “*high regulation*” profile showed an unexpected pattern marked by very low levels of emotional understanding. This profile was associated with the highest perceived stress and anxiety symptoms. On the one hand, emotion understanding has been considered a crucial competence for well-being (Castro et al. 2016) and has been associated with less psychological distress (Pitterman and Nowicki Jr 2004). Low levels of understanding might provide an explanation for the higher stress observed in members of this profile. On the other hand, higher emotion regulation has been usually related to lower emotional exhaustion, anxiety, and stress (Extremiera et al. 2003; Martínez-Monteagudo et al. 2019). A profile reflecting high emotional regulation would be expected to have perceived less stress, not more. An explanation might lie in the use of nonfunctional emotional regulation strategies, as some strategies were associated with psychological distress and psychopathology (Aldao et al. 2010; Marroquín et al. 2017). In-service teachers who used suppression as a regulation strategy were more emotionally exhausted, depersonalized, and reported more negative mental health (Extremiera et al. 2003). Conversely, problem-solving, emotion reappraisal, acceptance, and seeking social support as strategies were linked to better well-being (Marroquín et al. 2017). Insights from neuroscience showed distinct effects on cortical regions depending on the strategy used (Ochsner and Gross 2008). When using emotion reappraisal, activity in the amygdala and insula decreased over time, whereas it increased when using emotion suppression (Ochsner and Gross 2008). Therefore, the high stress observed in this profile might be due to a propensity to use dysfunctional emotion regulation strategies. As specific emotional regulation strategies were not measured in our study, future research should consider doing so.

More importantly, future research using qualitative interviews should be carried out to examine in more detail specific emotional regulation strategies used by preservice teachers during stressful moments of their practicum.

Regarding emotional exhaustion, as the overall chi-square was nonsignificant, we cannot draw conclusions on the association between profiles of emotional competencies and emotional exhaustion. However, when looking at comparisons between profiles, preservice teachers in the “*high emotional competencies*” profile scored significantly lower in emotional exhaustion than preservice teachers in the “*moderate emotional competencies*” profile. The other comparisons were not significant. This result differed from those of Martínez-Monteagudo et al. (2019) among in-service teachers. These authors found that in-service teachers with an emotional competencies profile characterized by high regulation, but moderate understanding were associated with lower levels of emotional exhaustion. This result suggested that high emotional regulation was sufficient to prevent emotional exhaustion, while our findings suggested that higher scores in the five intrapersonal emotional competencies were needed to reduce preservice teachers' emotional exhaustion. Future research is therefore necessary to better understand the association between preservice teachers' profiles of emotional competencies and emotional exhaustion during the practicum.

4.2 | Limitations and Future Directions

Despite its novel contributions, our study was limited by several factors. First, our sample was 89% female. Although this proportion was similar to that of female in-service teachers in the French-speaking part of Belgium (The French Community 2022), and that results of preliminary analyses found that it was not necessary to include gender in the models, our findings mainly reflected the emotional competencies of women. Some previous studies showed that men and women may differ in their emotional competencies (Brasseur et al. 2013), and their emotional competencies profiles (Pirsoul et al. 2022). Such gender differences may have been blurred by our imbalanced sample. Therefore, further research is needed to deepen gender differences and their consequences for occupational stress during the practicum. In addition, future studies should consider other relevant control variables that could be related to practicum stress or emotional exhaustion. For example, lower average grades (GPA) have been associated with higher scores in stress and burnout among college students (Nikodijevic et al. 2012; Shadid et al. 2020), and some studies have further suggested that stress negatively impact academic achievement (Travis and Bunde 2022). Additionally, GPA can be considered as an indicator of cognitive abilities, which have been positively related to emotional processing and emotional competencies (Cabello et al. 2016; Fernández-Berrocal and Checa 2016). Acknowledging these associations, future research on preservice teachers should consider including GPA as a relevant variable, potentially with a mediation effect in the relationship between emotional competencies and stress.

Second, we did not measure other factors that could influence preservice teachers' stress, anxiety, and emotional exhaustion. As protective factors, qualitative research has shown how a

positive relationship with a practicum supervisor can be beneficial (Caires et al. 2012; Danyluk 2013; Geng et al. 2015; Mairitsch et al. 2021; Spooner-Lane et al. 2009), while a negative relationship can be a substantial stressor (e.g., E. Cohen et al. 2013; Mairitsch et al. 2021). As a whole, this study did not measure organizational factors that might also enhance teachers' occupational stress (for a review, see Mijakoski et al. 2022). Factors contributing to preservice teachers' stress during practicum may include academic workload (Mairitsch et al. 2021; Núñez-Regueiro et al. 2023), lesson planning (Danyluk 2013; Geng et al. 2015), the socioeconomic status of the school (Neuenschwander et al. 2017), or practicum evaluation (Danyluk 2013). This evaluation assesses the preservice teacher's teaching skills at the end of the placement and is generally focused on areas such as instructional support, classroom organization, emotional support, or cognitive activation (Hamre et al. 2007; Praetorius et al. 2018) and was conducted jointly by the cooperative teacher and a college mentor. Some studies have investigated factors of stress among preservice teachers (Han and Takkaç Tuglar 2019; Núñez-Regueiro et al. 2023; Troesch et al. 2023), but they did not focus on the specific time of practicum or on the last year of teacher training. Future studies should consider conducting studies using a qualitative design to identify interpersonal and organizational stressors that preservice teachers experience during practicum. These qualitative interviews would allow researchers to explore the predictors of the different profiles of emotional competencies.

Third, we did not include interpersonal emotional competencies in our latent profiles due to a lack of adjustment of the scale. Preliminary analyses of the interpersonal subscale showed poor fit indices (CFI = 0.88; TLI = 0.82; RMSEA = 0.072; SRMR = 0.038). Nevertheless, studies found that interpersonal emotional competencies were relevant in teaching (Lopes et al. 2004). For teachers, higher interpersonal emotional competencies improved classroom interactions and promoted learning and the capacity to offer emotional support (Jennings et al. 2017). Enhancing teachers' interpersonal emotional competencies increased positive interactions between teachers and students and improved teacher sensitivity (Jennings et al. 2017). In preservice teachers, Chan (2008) showed that both intrapersonal and interpersonal emotional competencies predicted active coping strategies. Future studies in this area should consider investigating profiles that integrate intrapersonal and interpersonal competencies and the consequences for occupational stress.

A fourth limitation lies in the cross-sectional design of the study. Cross-sectional designs are valuable when starting new areas of research because of their efficiency to provide initial evidence (Spector 2019). However, this design does not allow for testing causality between variables, which makes it impossible to draw conclusions regarding the directionality of the relationships between our variables. This limitation suggested that profiles of emotional competencies could predict levels of stress and anxiety, but also the other way around, with higher stress or anxiety predicting lower levels of emotional competencies among preservice teachers (Kökçam et al. 2022). Therefore, future research should use longitudinal design to deepen the directionality of the associations between emotional competencies and preservice teachers' stress, anxiety, and

emotional exhaustion. More precisely, cross-lagged panel data, that is, repeated measures at several points in time, would allow future research to clarify associations (Finkel 1995).

Another limitation might be related to the length of the practicum in this study. Preservice teachers in the present study completed a 5-week, full-time practicum, which is comparable to some previous research (Campbell and Uusimäki 2006; Kokkinos and Stavropoulos 2016), but shorter than others (e.g., Chaplain 2008; Danyluk 2013; Fives et al. 2007; Mairitsch et al. 2021). For instance, some preservice teachers in Canada and in the United States spent approximately two and a half months (Danyluk 2013; Fives et al. 2007), while others in Austria or in the United Kingdom spent 4 months in practicum (Chaplain 2008; Mairitsch et al. 2021). Stress levels in all these studies appeared to be moderate throughout the period, except for Fives and colleagues' study (2007), where stress levels decreased after 1 month. From this standpoint, the reduction of stress could also be interpreted as the development of preservice teachers' teaching skills, which continue to evolve over an extended period (e.g., Boeve-de Pauw et al. 2022; Nolen et al. 2011). Thus, examining stress and exhaustion levels over a longer time frame (4 months; Legislative Decree Defining Initial Teacher Training 2019), using repeated measures over a longitudinal design could be a valuable direction for future research.

Lastly, it is important to acknowledge the impact of the COVID-19 pandemic might have on the preservice teachers' levels of stress related to the practicum in our sample. Specifically, the onset of the pandemic coincided with the beginning of our participants' training program (2019–2020). During their first 2 years of bachelor's degree, sanitary measures in Belgium mandated the closure of primary schools in cases of high COVID-19 transmission rates, resulting in the interruption of practicum periods for some preservice teachers. In their third year, when this study was conducted, Belgian authorities allowed the academic year to begin under normal conditions, without pandemic-related sanitary measures (e.g., all the pupils present in the class, no masks, no online teaching). Therefore, the practicum examined in this study represented the first in their curriculum unaffected by the pandemic and the first opportunity for them to experience normal teaching conditions as a teacher. These unique circumstances may have increased their stress and anxiety levels during the practicum. Accordingly, further quantitative research should replicate our study to better understand preservice teachers' stress, anxiety, and emotional exhaustion during practicum experiences.

4.3 | Implications for Practice

This study has valuable implications for practice. Our results showed that preservice teachers who were highly emotionally competent felt also less stressed and anxious during practicum, while more than two-thirds of the preservice teachers sampled had moderate or low emotional competencies. Our findings underlined the importance to develop each specific emotional competence to reduce preservice teachers' stress. Previous research already found that emotional competencies can be trained (for systematic reviews and meta-analyses, see Hodzic et al. 2018; Kotsou et al. 2019; Mattingly and Kraiger 2019). One

experimental study found a positive effect of training on preservice teachers' intrapersonal emotional competencies (Vesely et al. 2014), and another recent study found a positive effect of an emotional competencies training program on preservice teachers' emotional regulation (Schelhorn et al. 2023).

Regarding the structure of such training, a meta-analysis conducted by Hodzic and colleagues' (2018) suggested that targeting specific emotional competencies is the most effective way to develop them. Such interventions often included psychoeducation on emotions, the use of a personal diary, group discussions, and interactive participation such as role plays (Brackett and Katulak 2007; Dacre Pool and Qualter 2012; Hodzic et al. 2018; Nelis et al. 2011; Vesely et al. 2014). The program used by Nelis and colleagues' (Kotsou et al. 2011; Nelis et al. 2009, 2011) has been highlighted as a promising one (Campo et al. 2015). The training consisted of 15–18-h instruction, with follow-ups provided by email (Kotsou et al. 2011; Nelis et al. 2011). Sessions were organized on a weekly basis, enabling participants to apply the concepts covered during each session in their daily life via a personal diary (Nelis et al. 2009). The first five sessions focused on each specific intrapersonal and interpersonal emotional competence: understanding emotions, identifying emotions, listening to others' emotions, expressing emotions, managing emotions (emotional regulation and utilization), while the sixth session targeted increasing positive emotions. The training included short lectures, play roles, pair exercises, and group discussions (Kotsou et al. 2011; Nelis et al. 2011). These exercises can be adapted to the teaching context of their practicum, as suggested by previous studies on preservice teachers (e.g., Schelhorn et al. 2023; Vesely et al. 2014). For example, role plays could focus on managing both their own emotions and those of their pupils during classroom management, or on identifying emotions in interpersonal conflicts (e.g., with students, colleagues, parents). Similarly, using the personal diary could help preservice teachers incorporate emotional competencies into their teaching practice, especially after stressful events in practicum.

Trainings of emotional competencies have showed positive and stable effects 6 months after the intervention (Nelis et al. 2009, 2011), and one study found stable beneficial effects on stress, somatic complaints, cortisol after 1 year (Kotsou et al. 2011). Drawing on these prior studies, the implementation of emotional competencies training during the 3 years of teacher education could help novice teachers manage negative emotions during their professional transition. Beginning in the first year of preservice teachers' initial training would enable them to gradually develop and refine their emotional competencies throughout each practicum experience.

Furthermore, prior research indicated that individuals with low levels of emotional competencies benefit the most from training (Keefer et al. 2012), underscoring the importance of having at least average levels of emotional competencies (Davis and Nichols 2016). In our study, the “poor identification” and “high regulation” profiles (i.e., 13.7% of the sample together), characterized by low levels of emotional identification or understanding, could derive significant benefits from such training. A meta-analysis (Hodzic et al. 2018) suggested that interventions enhanced explicit knowledge of emotions, which not only

improved emotional understanding, but also facilitated the management of stress and emotions (Joseph and Newman 2010). Notably, the most prevalent profile in our sample, the “*moderate emotional competencies*” profile (67.1%), exhibited average to low levels across the five emotional competencies. Therefore, a significative proportion of the sample would benefit from targeted training during their initial education.

Finally, our findings suggested that emotional competencies may play a role in supporting future teachers during their practicum. These insights may also extend to other students who are required to complete internships as part of their education, such as nursing students at the college level (Mousa et al. 2017; Por et al. 2011; Ruiz-Aranda et al. 2014; Wang et al. 2016). Emotional competencies are also relevant for secondary students in technical and vocational education and training, as emotional competencies have been associated with less distress during adolescence (e.g., Furqani 2020; Gomez-Baya et al. 2017). Consequently, our results highlighted valuable key skills that school psychologists can help students develop in preparation for internships. These skills equip individuals to manage stress more effectively during these pivotal experiences.

5 | Conclusion

This study of preservice teachers found evidence of four distinct profiles of intrapersonal emotional competencies, identifying high emotional competencies, moderate emotional competencies, high regulation, and poor identification groups. Those in the high emotional competencies profile reported lower levels of stress and anxiety, while those in the high regulation and poor identification profiles reported higher levels of stress. Our findings contributed to a better understanding of the interplay between the five emotional competencies of identification, understanding, expression, regulation, and use among preservice teachers. They also implied a possible benefit of tailoring teacher training to individuals' emotional competencies to reduce stress during this period of education (Schelhorn et al. 2023; Vesely et al. 2014). Tailored training could help preservice students become more aware of their emotions and better regulate them, particularly in stressful teaching situations (Mikolajczak et al. 2020).

Author Contributions

Conceptualization: Sarah Dekeyser, Gaëtane Casens, and Vanessa Hanin. Methodology: Sarah Dekeyser, Gaëtane Casens, and Vanessa Hanin. Formal analysis and investigation: Sarah Dekeyser, Gaëtane Casens, and Vanessa Hanin. Writing, review and editing: Sarah Dekeyser, Gaëtane Casens, and Vanessa Hanin. Supervision: Gaëtane Casens and Vanessa Hanin.

Acknowledgments

This study was funded by the Fonds Spéciaux de la Recherche of the Université catholique de Louvain.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section.