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What makes school a happy place? Development and validation of a measurement scale for students

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Introduction: In addition to academic results, schools are increasingly mandated with promoting student happiness, contributing to their well-being, instilling a sense of belonging, and fostering the development of social and emotional skills. Thus, it is essential to have validated instruments to assess the overall happiness of schools. This article proposes a scale that assesses school happiness, as perceived by students.
Methods: Data was obtained through questionnaires administered to 2,452 students (for the exploratory factor analysis (EFA), data were collected from 1,242 respondents, while a separate sample of 1,210 participated in the confirmatory factor analysis (CFA). The model was tested using structural equation modeling techniques.
Results: The results made it possible to identify three main components: Supportive Relationships and School Climate (People), Learning Processes and School Experience (Process), Learning Environments and Inclusion (Place).
Discussion: The article discusses the development and validation of an instrument that can be applied to students as one of the means of assessing a school's general happiness level and identifying key aspects to improve to increase a school's level of happiness. Implications for future research on happy school evaluation are discussed, since schools will now have at their disposal tools that enable them to assess a happy school from the perspective of teachers, parents, and pupils.

KEYWORDS
happy schools, psychometric validation, scale development, student perceptions, well-being in education

1 Introduction

Happiness is one of the greatest human aspirations and, at the same time, a path that shapes the way we live and relate to each other (Oishi et al., 2020; Ribeiro and Santos, 2019). While happiness initially emerged as a subject of academic research, focused on studies and theories about well-being (much of what has been studied is compiled in the World Database of Happiness, directed by Ruut Veenhoven), today it has gone beyond the walls of the university to become an institutional concern (Costa and

Oliveira 2025), and receives attention from fields such as economics and sociology, thus going beyond psychology. In the corporate world, the creation of an Happiness Department allows the focus to be on employee job satisfaction, which will result in productivity (Knowles et al., 2019); having a positive environment, work-life balance, opportunities to learn new things, social responsibility practices, celebrations and days off are seen as practices that promote happiness at work (Costa and Oliveira, 2025; Wulandari et al., 2023); nowadays, companies from different fields of activity (education included) can assess happiness at work by using the "Job design happiness scale" (Dutschke et al., 2019), a tool designed to identify which aspects are scoring well or need to be improved in the work environments, just to cite one.

An important distinction between Eudaimonic and Hedonic well-being is at the core of the team's choice to carry out research on happiness. Considering the classical distinction, clarified by Deci and Ryan (2008), the hedonistic tradition defines Hedonic happiness as "the presence of positive affect and the absence of negative affect" (p. 1) – this is aligned with the notion of subjective well-being.

In contrast, the Eudaimonic perspective considers life satisfaction in a broader sense. Eudaimonia, "is concerned with living well or actualizing one's human potentials" (p. 2), being related to Aristotelis' philosophy and humanistic psychology, or, as Waterman et al. (2008, p. 42) put it "Eudaimonia, as a subjective state, refers to the feelings present when one is moving toward self-realization in terms of the developing one's unique individual potentials and furthering one's purposes in living.". These notions of happiness are not mutually exclusive, as some of the activities that lead to Eudaimonic happiness, will also lead to hedonic happiness. Nevertheless, despite some overlap, these are distinct perspectives. Hedonic happiness, and subjective wellbeing have been more frequently studied than eudaimonic well-being.

Our perspective, aligned with the one espoused by the UNESCO concerning Happy Schools (UNESCO, 2016, 2024) is more closely related to the Eudaimonic perspective, not focusing directly on immediate states of subjective well-being (state variable), but rather on a set of relatively stable elements in the school context that contribute to self-actualization, and therefore, a lasting sense of purpose. Indeed, many of the activities that lead to a "life well lived" are not without effort and even momentary distress. Study, or training for a sport, are among them. The happy school framework does not propose eliminating all effort and pain that may be present in school context, but instead it focuses on promoting good relationships, suitable environments, challenging and meaningful activities, that lead to eudaimonic happiness.

When it comes to schools, UNESCO's work (UNESCO, 2016, 2024) and OECD (2019) recognize well-being as one of the pillars of quality education. Well-being is simultaneously a right, an objective and a condition of quality education, as it underpins the comprehensive, equitable and sustainable development of individuals and societies; it should be understood as an essential element of quality education, as it is both a fundamental right and a necessary condition for students' academic and personal success. These institutions sustain that investing in happy schools and healthy educational environments not only promotes comprehensive and equitable development, but also enhances motivation, learning and the construction of more sustainable societies. Through the "Happy Schools" initiative, UNESCO places happiness at the center of educational transformation, framing and inspiring the study developed in Portugal and other countries, which seeks to operationalize and empirically validate this construct in the national context, in line with the international principles and guidelines promoted by that organization.

But why do we refer to well-being, when talking about happy schools? Before we get carried by a confusion of meanings, we need to consider the subtle difference between happiness and well-being. Although the terms are often used interchangeably, there are nuances of difference between them. For Field (2009), well-being is understood as a positive and dynamic mental state that emphasizes life satisfaction and personal strengths rather than mental illness. It involves developing one's potential, working productively and creatively, building positive relationships, contributing to the community, and achieving personal and social goals with a sense of purpose. Kneer and Haybron (2025) argue that individuals use the term happiness as a psychological concept and well-being as something broader, both of which are more sensitive to internal than external issues. The term well-being is more commonly accepted and used, translating as a state in which the individual feels healthy and happy, associating more easily with the idea of a happy life; however, the authors conclude that there is interpretative diversity between happiness and well-being and the terms associated with them. For them, individuals use the word "happy" as a term for well-being, sensitive to external factors such as health, social relationships and employment, albeit with less emphasis when compared to internal issues.

It is in this vein that we frame our perspective, considering that happiness is (also) built through external factors, in the sense that there is an interaction with different dimensions that also include values, as identified in the UNESCO Happy Schools Framework (2024), therefore placing our perspective in the aforementioned eudaimonic perspective. By focusing on the elements of the school environment that promote student wellbeing, we have chosen to use the term happiness in its broader sense. The focus is not as much on individuals' wellbeing, but rather on the external, largely malleable conditions, that affect it, within schools. Moreover, we understand happiness as a more stable construct – one may consider themselves happy, despite temporary pain, illness, or strife. Likewise, a happy school is not understood as an environment without effort or strife, but rather as a space where individuals have the right conditions to flourish.

This is also the perspective espoused in the UNESCO's Happy School Framework (2024), which argues that a happy school promotes not only academic performance but also personal flourishing, hence its crucial importance. The recent technical paper "Education for Human Flourishing" (OECD, 2025) continues this line of work. A healthy school environment contributes to a better relationship between students and school life (Lombardi et al., 2019) and to the healthy psychological development of young people (Baker et al., 2003; Courtney et al., 2023), as well as greater motivation, attention, and willingness to learn (Courtney et al., 2023). According to

Seligman et al. (2009), happiness-based interventions have been effective in enhancing classroom performance of students. Students who reported a high academic performance had better psychological well-being as compared to those with low academic grades, supporting a relationship between happiness and achievement (Gilman and Huebner, 2006).

There seems to be a positive, albeit modest, correlation ($r \approx 0.16$) between subjective well-being and academic performance (Bücker et al., 2018). As Huebner et al. (2014) emphasize, students' well-being is directly linked to their motivation, engagement, and resilience: consequently, these factors influence academic success and mental health (Huebner et al., 2014). Another study showed that life satisfaction and grades influence each other positively (Ng et al., 2015). Students experiencing greater well-being become more involved with school (Lombardi et al., 2019), which influences school environment (Fatou and Kubiszewski, 2018). When schools provide students with positive experiences, they see their students become more engaged with the school, which is associated with better academic performance (Rodríguez-Muñoz et al., 2021). Positive emotions linked to studying and academic psychological capital mediate the relationship between teacher-student relationships and academic performance (Carmona-Halty et al., 2024). This context validates the need to study students' perceptions of school happiness as a contribution to guide improvements to be implemented in schools, with the aim of contributing to students' mental health and success. In fact, the results of a Portuguese study coordinated by Gaspar de Matos et al. (2023) show that educational actors consider psychological health to be more important than knowledge, concerns and actions, regardless of their role in the school ecosystem, attesting to the need to pay attention to happiness in schools, interpreted as a set of factors that influence the well-being of students and other educational actors.

The measurement of school happiness is imperative for the understanding and promotion of students' well-being, and to inform and guide school improvement. Nevertheless, the absence of suitable instruments for evaluating school happiness impedes our capacity to comprehend and effectively intervene in this domain. As Gramaxo et al. (2023a) observe, the Portuguese literature (and, in effect, the literature as a whole) is deficient in the validation of measures to assess students' perceptions of happiness in school context. Consequently, the creation and validation of specific instruments is urgent to facilitate evidence-based educational strategies and support interventions that, according with (Rodríguez-Muñoz et al., 2021), can promote more positive and inclusive school environments.

The present study is relevant for three main reasons: its scientific, social and practical relevance. From a scientific perspective, a discernible gap exists within the *corpus* of literature concerning the analysis of school happiness using validated instruments from the eudaimonic perspective. The development of a specific scale would constitute a notable advancement in educational research, facilitating the systematic examination of how students perceive school happiness (Courtney et al., 2023; Huebner et al., 2014). We contend that the assessment of school happiness should consider multiple perspectives – students' perspectives being among the most relevant. Focusing exclusively on the perspectives of teachers (Dutschke et al., 2019) and Parents (Gramaxo et al., 2025), leaves a relevant gap that this study intends to help fill.

Whilst, for example, the studies by Long et al. (2012) and Tian et al. (2014) focused on validating the psychometric structure of school well-being and testing factor models (positive/negative emotions, school satisfaction, general perception of well-being), these instruments, in our point of view, lack the capacity to provide insights into the engagement of teachers, pupils and the educational community within schools; we believe we are on the cusp of creating instruments capable of generating data that enable immediate action by each school in response to the reported strengths and weaknesses, data which will support pedagogical decisions and guide improvements in the classroom and school climate.

The proposed instrument focuses on conditions for eudaimonic happiness rather than solely on individual subjective well-being. It therefore differs from other measures of school well-being, more notably the HBSC questionnaire, which is widely used in school well-being research (e.g., Kiuru et al., 2020) by measuring the aspects of the school that propitiate well-being, instead of how happy each individual is at school.

Furthermore, this scale originated from a qualitative study of factors that Portuguese students associate with happiness at school – it is therefore grounded in this context, and culturally adequate to Portuguese students (Gramaxo et al., 2023a). The original research leading to the happy school's framework originated from Asia (UNESCO, 2016), and multiple studies have shown that the relevance bestowed onto different aspects of the school environment is not culturally neutral (López-Pérez and Fernández-Castilla, 2018; Stearns, 2019). A more contextualized measure, that may cautiously be studied in other southern European contexts, was, therefore, needed.

From a social and educational standpoint, it is important to recognize that schools are not merely institutions for the transmission of knowledge; they are also spaces for the promotion of psychological well-being, inclusion and holistic development (UNESCO, 2024). Investing in school happiness has been demonstrated to have a positive impact on student motivation and engagement (Seligman et al., 2009), to encourage active participation, to reduce exclusion, and to enhance academic success (Gilman and Huebner, 2006), all of which sustain the social relevance of this study.

Consequently, the cultivation of a school environment characterized by contentment serves to foster the development of citizens who are endowed with a heightened degree of resilience and a propensity for collaboration. These qualities, in turn, exert a positive influence on the broader societal landscape. Therefore, the study's findings carry practical implications. The implementation of a validated scale within educational institutions would facilitate the identification of their strengths and areas for enhancement with respect to school happiness. This would provide valuable data to inform the development of innovative strategies, inclusive policies, and well-being programs (Rodríguez-Muñoz et al., 2021). Moreover, the results may inform the decision-making of school leaders and policymakers, thereby helping to create healthier and more sustainable educational environments.

Given the theoretical framework presented, highlighted the relevance of the construct of school happiness, its

multidimensional nature, and the need for psychometrically robust instruments for its assessment, considering an eudaimonic and organizational perspective, it is essential to empirically validate measures that operationalize this concept in an educational context. Although international initiatives, such as UNESCO's Happy Schools Framework (2024), have contributed to the conceptual clarification of the phenomenon, there is still a need for instruments that are adapted and validated for specific contexts. In this sense, the present study aims to present the results of exploratory and confirmatory factor analyses carried out with a view to validating a scale designed to measure school happiness, examining its internal structure, consistency, and adequacy to the empirical data collected.

2 Methods

2.1 Item development

The development of the initial questionnaire items was grounded in an in-depth literature review on student well-being and happiness in educational contexts, as well as insights from prior studies on school climate and positive psychology (Gramaxo et al., 2023a, 2023b; UNESCO, 2016, 2024). To ensure conceptual coverage, items were adapted and synthesized from empirical findings.

In a prior qualitative study, we've validated 2.708 answers from students who were asked what they believed contributed to a happy or unhappy school. Their perceptions were subject to content analysis and contributed to item development, and more information on this process can be find in Gramaxo et al. (2023a). The thematic focus included domains such as emotional well-being, supportive relationships, autonomy, meaningful participation, and school engagement. A preliminary pool of 53 items was formulated, aiming to reflect the multifaceted nature of happiness at school from the perspective of students.

2.2 Expert review and pilot testing

A preliminary version of the instrument was submitted to an expert panel comprising five specialists in educational sciences, psychology, and psychometrics. Experts assessed the relevance, clarity, and alignment of each item with the theoretical dimensions of school happiness. Based on their feedback, revisions were made to improve wording and ensure content validity. Subsequently, a pilot test was conducted with 20 students to evaluate the comprehensibility and practical application of the questionnaire. The pilot confirmed the clarity of instructions and item formulations, and minor modifications were implemented accordingly. The final version retained 44 items, each evaluated on a 5-point Likert scale ranging from 1 ("Strongly disagree") to 5 ("Strongly agree").

2.3 Participants and sampling

The participants were students attending Portuguese public and private schools, spanning primary to upper secondary education.

The selection of respondents (schools and pupils) was based on voluntary participation following an invitation (e-mail with brief overview of the study and link) sent to schools and pupils to take part in the study; pupil participation was subject to parental consent; pupils completed the study at a time that suited them best, and the schools were not responsible for administering or supervising the study (see Table 1).

A non-probabilistic convenience sampling method was used. For the exploratory factor analysis (EFA – sample 1), data were collected from 1,242 respondents from students aged between 9 and 18 years old, from 32 public/private schools concentrated in the central region of Portugal, but representing a variety of contexts. A separate sample of 1,210 participated in the confirmatory factor analysis (CFA – sample 2). All students are enrolled in mandatory education.

In terms of gender distribution, sample 1 included 53% female participants and 46% male participants, while 1% reported that they would rather not say and no participants selected the category "other". In the second sample, 50% identified as female and 44% as male, with 4% indicating that they would rather not say and 2% selecting "other". Overall, both samples show a relatively balanced gender distribution, with a slight predominance of female participants and greater gender diversity in sample 2 due to higher percentages in the non-disclosure and "other" categories.

Regarding age groups, both samples present a similar distribution pattern, with the majority of participants aged 13–15 years (58% in Sample 1% and 55% in Sample 2). Participants aged 6–10 years accounted for 18% in sample 1% and 17% in sample 2, while those aged 11–12 years represented 13% and 16%, respectively. The oldest group, aged 16–20 years, comprised 11% of Sample 1% and 12% of sample 2. These results indicate that early adolescence (13–15 years) constitutes the predominant age group in both samples, with the remaining age groups more evenly distributed and only minor differences observed between samples.

TABLE 1 Sample descriptive.

Demographic variable	Sample 1 (n = 1,242)	Sample 2 (n = 1,210)
Gender		
Male	46%	44%
Female	53%	50%
I would rather not say	1%	4%
Other	0%	2%
Age group		
6–10 years old	18%	17%
11–12 years old	13%	16%
13–15 years old	58%	55%
16–20 years old	11%	12%

2.4 Confidentiality and anonymity

To ensure data protection and participant confidentiality, no identifying personal information was collected. Participation was voluntary and anonymous, and respondents were informed about the study's objectives and ethical safeguards. The research adhered to national and institutional ethical standards and received formal approval from both the institutional Ethics Committee and the Portuguese Directorate-General for Education under the authorization number 1471700004.

3 Results

3.1 Exploratory factor analysis (EFA)

An exploratory factor analysis (EFA) was conducted on the initial pool of 44 items developed to assess school happiness, using Principal Axis Factoring with oblique (Oblimin) rotation, which allows for correlations between latent factors (Fabrigar et al., 1999). The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was excellent (KMO < 0.875), and Bartlett's test of sphericity was significant [$\chi^2(120) = 1{,}606.92$, $p < .001$], indicating that the data were suitable for factor analysis (Field, 2024). Based on the eigenvalue-greater-than-one criterion and inspection of the scree plot, four factors were extracted, accounting for 57.6% of the total variance, which aligns with the thresholds typically considered acceptable in psychological scale development (Costello and Osborne, 2005). Item loadings and communalities largely supported the factor structure, although five items (C1, C5, C6, C42, and C43) demonstrated weak loadings or insufficient communalities and were therefore excluded from the final model. Internal consistency was evaluated using Cronbach's alpha. The first three factors demonstrated excellent reliability, with α values of .960, .917, and .908, respectively. However, the fourth factor—comprising only two items—yielded a substantially lower reliability coefficient ($\alpha = .517$), falling below acceptable standards for internal consistency. Consequently, this factor was excluded from the final scale.

3.2 Confirmatory factor analysis

A confirmatory factor analysis (CFA) was performed using Partial Least Squares Structural Equation Modeling (PLS-SEM) to validate the three-factor measurement model derived from the exploratory factor analysis (EFA). The model exhibited strong internal consistency across all factors (Table 2). To validate the factor structure identified through the exploratory factor analysis, the confirmatory stage was conducted using PLS-SEM. Although covariance-based SEM is commonly used for confirmatory factor analysis, PLS-SEM was considered appropriate for the present study because the objective was primarily psychometric and prediction-oriented: to assess the reliability, convergent validity, and discriminant validity of a newly developed multidimensional measurement instrument, rather than to test a fully established theoretical model through covariance reproduction. This choice was also consistent with the developmental nature of the HSQ-S, which is intended as a

TABLE 2 EFA factor matrix and Cronbach's alpha.

Items	Factors			
	1	2	3	4
A2 Students and teachers are treated with respect, maintaining a good relationship.	.828			
A3 Students and teachers are treated with respect, respecting differences, regardless of nationality, religion, and identity.	.786			
A18 Overall, my teachers are enthusiastic.	.719			
A8 The school has good teachers.	.699			
A10 The classroom environment is conducive to learning.	.667			
A17 Overall, my teachers are friendly.	.661			
A29 I feel safe at school.	.654			
A9 The school environment is conducive to learning.	.629			
A16 Overall, my teachers support me.	.625			
A25 The school is clean.	.612			
A40 Overall, school teachers are generally happy.	.570			
A19 Bullying/violence among classmates at school is rare or non-existent.	.543			
A15 Most school assistants perform their duties well.	.513			
A21 Overall, my teachers explain the subject matter well.	.507			
A33 I am able to express my opinion.	.482			
A41 The school is well equipped (study materials, computers, etc.).	.458			
A44 the school has adequate green spaces.	.418			
A7 After school, I have time to do things I enjoy.		−.737		
A4 I have enough free time at school.		−.634		
A26 The lessons are fun, with games.		−.628		
A37 Overall, my teachers send the appropriate amount of homework.		−.607		
A39 I have outdoor classes, other than Sports.		−.592		
A30 The school promotes enough field trips.		−.590		
A27 The number of tests/examinations/ assessments is adequate.		−.579		
A11 The subjects are interesting.		−.560		
A12 At school, I learn important things for my future.		−.544		
A22 Lessons are dynamic and practical.		−.504		
A38 I develop my creativity and imagination at school.		−.490		
A14 The school has facilities for practicing sport.			.663	
A23 School provides extracurricular activities.			.647	
A13 The school has outdoor spaces.			.630	
A35 The school values sporting activities.			.625	

(*Continued*)

TABLE 2 Continued

Items	Factors			
	1	2	3	4
A36 the school has adequate green spaces.			.623	
A24 The school organizes cultural activities (parties, theatre, music, etc.).			.589	
A31 I carry out projects and/or group work.			.487	
A34 Students with physical or learning difficulties have sufficient support.			.443	
A20 Overall, my teachers use technology to teach.			.403	
A28 I feel pressure from oral presentations/tests/exams because I have to worry about getting good grades.				.768
A32 I study to get good grades.				.649
Cronbach's alpha	.960	.917	.908	.517

diagnostic and applied tool for schools, and with the use of ordinal Likert-type indicators in a large non-probabilistic sample.

Accordingly, covariance-based global fit indices such as CFI and RMSEA were not used as primary evaluation criteria, since PLS-SEM does not estimate model parameters by minimizing the discrepancy between the observed and model-implied covariance matrices. Instead, the confirmatory evaluation focused on the reliability and validity of the reflective measurement model, following current PLS-SEM reporting guidelines. The three-factor model showed adequate psychometric quality: Cronbach's alpha ranged from .891 to .960, rho_A from .894 to .961, composite reliability (rho_C) from .917 to .964, and AVE from .579 to .648, exceeding the recommended thresholds for internal consistency and convergent validity. Discriminant validity was assessed primarily through the heterotrait–monotrait ratio (HTMT), which is recommended for variance-based SEM; all HTMT values ranged from .811 to .841 and were below the conservative .85 threshold, supporting the empirical distinctiveness of the three dimensions. As a complementary approximate fit index for PLS-SEM, the SRMR was also inspected, revealing a very good value of 0.050 (Hair, Risher, Sarstedt, and Ringle, 2019). However, consistent with PLS-SEM guidelines, this index was interpreted cautiously and treated as complementary to the assessment of reliability, convergent validity, and discriminant validity.

Convergent validity was assessed at the measurement-model level using the Average Variance Extracted (AVE), as recommended for reflective constructs in PLS-SEM. The AVE values were .645 for Supportive Relationships and School Climate, .648 for Learning Processes and School Experience, and .579 for Learning Environments and Inclusion, all exceeding the recommended .50 threshold and therefore indicating that each latent construct explains more than half of the variance of its indicators. The Heterotrait-Monotrait ratio (HTMT) values were all below the conservative threshold of 0.85 (HTMT < .821, .811, and .841), indicating that the constructs are empirically distinct (Henseler et al., 2015). Additionally, the Fornell-Larcker criterion was validated since the square root of its AVE was higher than the correlations between other constructs (see Table 3). The CFA results confirm that the three-factor model provides a reliable and valid representation of the school happiness construct. Nevertheless, we acknowledge that this form of convergent validity refers to the internal convergence of the indicators within each construct. The present study did not include an additional external measure of student well-being, school satisfaction, or happiness; therefore, convergent validity in the sense of correlations with established well-being scales could not be examined in this dataset. This is now recognized as a limitation of the study. Future research should assess the association between the HSQ-S and established measures of student well-being, life satisfaction, school satisfaction, or psychological flourishing, with the expectation of positive but not redundant correlations, given that the HSQ-S focuses on the school conditions that promote eudaimonic happiness rather than on individual subjective well-being alone.

3.2.1 Factor 1 – supportive relationships and school climate (people)

The first factor, composed of a large number of items with high loadings (e.g., C2, C3, C10, C16, C17, C18, C21, C25, C29, C40), reflects the quality of interpersonal relationships, perceived support within the school environment, and a sense of safety. These items reflect students' perceptions of being treated fairly, receiving help when needed, and being part of a respectful and caring school community, in line with the Happy Schools Framework (UNESCO, 2024). The strength and consistency of these indicators (e.g., loadings mostly >.80 and Cronbach's $\alpha = .960$) suggest that this factor captures the core dimension of school happiness: students feeling good, supported, and engaged. This construct can be interpreted as *Supportive*

TABLE 3 Fornell-Larcker criterion.

Factors	Supportive relationships and school climate	Learning processes and school experience	Learning environments and inclusion
Supportive relationships and school climate	0.803		
Learning processes and school experience	0.855	0.805	
Learning environments and inclusion	0.852	0.760	0.761

relationships and School Climate, as it encompasses both emotional and relational elements that foster belonging and positivity, aligning with literature on the protective and enabling role of a positive school climate in student happiness and adjustment (Akyürek, 2024).

3.2.2 Factor 2 – learning processes and school experience (process)

The second factor centers on items such as C4, C11, C12, C22, C27, C38, and C41, which brings together variables focused on pedagogical organization, classroom dynamics, creativity, meaningful learning, and student well-being—all directly framed within the Process pillar of the Happy Schools Framework (UNESCO, 2024). In addition, by promoting engaging methods and supporting balance (free time, reduction of excessive workload), this category also aligns with the pillars of people (motivation, empowerment) and principles (well-being, educational quality), while touching on the place pillar through the presence of outdoor learning.

With solid internal consistency ($\alpha = .891$) and strong outer loadings (e.g., C22 = .853; C38 = .820), this factor reflects the social and relational infrastructure that supports student well-being. It is therefore labeled *Learning Processes and School Experience*.

3.2.3 Factor 3 – learning environments and inclusion (place)

The third factor includes items such as C13, C14, C20, C23, C24, C31, C34, C35, and C36. It was defined based on the articulation between two dimensions of UNESCO's Happy Schools Framework (2016): Place, which encompasses the physical spaces and resources that the school provides for learning, socializing, and well-being (such as green areas, outdoor spaces, and sports facilities), and Processes, which concern pedagogical practices, extracurricular, cultural, and sports activities, as well as strategies for inclusion and the use of technology. By bringing these variables together, this category reflects how the school creates both physical and educational conditions to foster meaningful learning experiences, promote student participation, and ensure their well-being, in line with the guiding principles of happy schools (UNESCO, 2024).

The loadings indicate a cohesive structure (most items >.70), and the AVE (.579) supports convergent validity. This factor captures students' perceptions of the physical, cultural, and pedagogical environment of the school, including infrastructure, activities, teaching methods, and inclusiveness. We propose the label *Learning Environments and Inclusion*, reflecting the importance of school resources, opportunities, and support.

4 Discussion

From a diagnostic perspective, the HSQ-S should be interpreted as a multidimensional school self-evaluation instrument rather than as a clinical screening tool. Its purpose is not to diagnose individual students' psychological well-being, but to identify how students perceive the school conditions that support or hinder eudaimonic happiness. The three dimensions provide a diagnostic profile of school happiness: Supportive Relationships and School Climate identifies relational and emotional conditions associated with respect, safety, teacher support, and belonging; Learning Processes and School Experience captures students' perceptions of meaningful, engaging, balanced, and motivating learning experiences; and Learning Environments and Inclusion reflects the perceived adequacy of physical, cultural, technological, extracurricular, and inclusive resources. Thus, the questionnaire enables schools to classify their results by dimension, distinguishing areas of relative strength from areas requiring improvement. Higher scores indicate that students perceive the school as providing favorable conditions for happiness and flourishing, whereas lower scores suggest domains were targeted pedagogical, relational, organizational, or infrastructural interventions may be needed. Because normative cut-off points have not yet been established, this classification should be used descriptively and diagnostically, based on global, dimensional, and item-level mean scores, allowing schools to prioritize action plans and monitor changes over time.

4.1 Supportive relationships and school climate (people)

The first construct found can be interpreted as *Supportive Relationships and School Climate*, as it encompasses interpersonal relationships and the emotional environment of the school, serving as the basis for well-being, motivation, and educational success.

Students greatly value their ties with teachers and colleagues (Gramaxo et al., 2023a, 2023b, 2025; Lombardi et al., 2019; OECD, 2013); consequently, this factor encompasses student/teacher relationships and the respect-based relationship, in line with the argument that teacher support is strongly related to school satisfaction (Danielsen et al., 2009; Huebner et al., 2014; Kuurme and Heinla, 2020), and student's achievement (Brandisauskiene et al., 2021). The lack of supportive and respectful relationships can increase anxiety and discomfort among pupils, leading to a sense of disengagement from school and undermining their sense of belonging. Without the proper motivation to learn, engagement with tasks tends to decrease, resulting in more superficial learning.

Giving students the opportunity to express their opinions provides them with opportunities to explore and articulate their perspectives more fully; giving them time to reflect on the issues has a positive impact on creating an environment where students are more willing to express their opinions, and also prepares them to respond to questions that solicit their opinions (van Balen et al., 2022). Being unable to express one's opinion can lead to a decline in self-esteem, engagement and participation, and can also hinder the development of students' critical thinking and independence.

With regard to praising success and progress, the reward-learning structure in knowledge acquisition suggests that extrinsic rewards can serve as an entry point for initial student engagement, facilitating the activation of the positive feedback loop associated with internally rewarding learning experiences; however, once intrinsic motivation is established, continued reliance on external incentives may interfere with this process,

potentially undermining long-term engagement and reducing the enjoyment of learning for its own sake (Skipper and Douglas, 2012).

This element includes the sense of safety needed to build a happy school. Promoting safety in the school environment is a fundamental requirement for effective learning. Empirical evidence shows that experiencing bullying compromises not only students' social and emotional well-being, but also their academic performance, significantly affecting specific areas of the curriculum, such as mathematics, as reported by OECD (2023). In a school with a negative school climate, conflicts and disruptive behaviour increase, whilst respect diminishes. In such an environment, bullying and social exclusion thrive.

4.2 Learning processes and school experience (process)

The factor *Learning Processes and School Experience* brings together variables focused on pedagogical organization, classroom dynamics, creativity, meaningful learning, and student well-being—all directly framed within the Process pillar of the UNESCO's Happy Schools Framework (2024). In addition, by promoting engaging methods and supporting balance (free time, reduction of excessive workload), this category also aligns with the pillars of people (motivation, empowerment) and principles (well-being, educational quality), while touching on the place pillar through the presence of outdoor learning.

Having free time emerged as an important variable for a happy school. Meaningful leisure time can empower adolescents, enhancing both health and academic outcomes while contributing to the reduction of health inequalities (Bälter et al., 2023). Previous studies focused on parents' perspectives of what constitutes a happy school had already highlighted this aspect as crucial (e.g., Gramaxo et al., 2025). Lack of free time can lead to fatigue and stress among pupils, who may miss out on opportunities for personal and social development.

Learning and access to knowledge are also integral to a happy school. Prior knowledge is a form of power, insofar as the learning that occurs in school constitutes a crucial foundation for subsequent stages of educational development (Etzel et al., 2025). At school, students learn content, strategies and skills that they will use in their future lives (Avdiu et al., 2024). At the same time, high-stakes testing contributes to significant test anxiety, particularly among at-risk students, leading to cognitive impairment, reduced academic performance, and increased psychological difficulties; thus, it is crucial for educational actors and mental health professionals to address this issue through ongoing research and intervention (Scott et al., 2018), therefore, aspects related to teaching and evaluation practices were retained in this scale. Weak foundations in learning can jeopardise future educational pathways. This same weakness can lead to a lack of preparedness for academic and professional challenges. Inappropriate assessment practices can increase anxiety and stress, which in turn can hinder academic performance and affect pupils' cognitive functioning and psychological well-being.

With respect to the relationship between happiness and creativity, Diržytė et al. (2021) found that there are statistically significant associations between the two constructs. In relation to creativity and academic achievement, results indicate that there is a modest but significantly positive association (Gajda et al., 2017). Teachers do indeed have an important role to play in developing creative learning environments to foster students' creativity. Teachers may encounter barriers such as a school culture that hinders creativity, perceptions of a "culture of performativity", time and resource constraints to enhance creativity, or lack of support from colleagues (Davies et al., 2014). These aspects are expressed in items such as A38 ("*I develop my creativity and imagination at school.*"). Failing to encourage creativity can lead to a reduced ability to solve problems, and may also hinder the transfer of knowledge to new contexts.

With regard to the possibility of learning outdoors, the literature indicates that nature-specific outdoor learning has measurable socio-emotional, academic and well-being benefits and should be incorporated into the school experience of all children, taking into account their local context (Mann et al., 2022). Different learning contexts and opportunities are also reflected in the UNESCO's Happy Schools Framework (2024) and are represented in the present scale.

Regarding homework, school level can influence how the time spent on homework relates to academic performance (Guo et al., 2021), although, based on our study, students refer to the homework load as a negative aspect. An excessive workload of homework and assessments can cause anxiety (Liang et al., 2025). This factor also draws attention to the number of assessment tasks that students undergo, as well as the pressure associated with them, an aspect to be considered in a happy school; the literature tells us that older students feel anxiety at times of assessment (Gaspar de Matos et al., 2023; Gramaxo et al., 2025). Assessment comes to be seen as a source of pressure rather than a tool for learning; this scrutiny of knowledge can give rise to a fear of making mistakes and failing (Ghaleb, 2024).

4.3 Learning environments and inclusion (place)

The definition of the category "Learning Environments and Inclusion" integrates items that involve both the physical spaces and resources of the school (place) and the educational and cultural dynamics developed (process). This combination directly reflects the central pillars of UNESCO's Happy Schools Framework (2024), which values safe, welcoming, and stimulating environments, combined with creative and inclusive pedagogies. By also reinforcing aspects related to supporting inclusion and school culture, the category is linked to the pillars of people (empowerment, trust) and principles (ethical values, well-being), being somewhat transversal to that model.

The variables that make up this factor have aspects in common related to the school's resources and physical conditions (outdoor spaces, green spaces, sports facilities, support); they refer to educational and cultural opportunities (extracurricular activities, cultural activities, sports, projects, group work) and also teaching practices (use of technology). In other words, they

encompass both infrastructure and resources as well as educational and cultural dynamics.

This aspect also highlights the use of technology; technology can be seen, not only a knowledge provider but also a means to support co-creation of information, a mentor, and an assessor (Haleem et al., 2022), helping and complementing teachers' work.

Extracurricular activities are important in a happy school since they show a positive association with both soft skills and cognitive abilities (Feraco et al., 2023). The events organized by the school allow us to celebrate the culture and values that the school transmits, contributing to their happiness (UNESCO, 2024). Project-based learning is a methodology that reduces stress, worry and pressure for students: they are encouraged to apply the knowledge they have acquired in the classroom to real-world circumstances (Kaur, 2024). Altogether, these aspects constitute hallmarks of joyful and engaging pedagogies – criterion 5 of this model.

Well-being and social inclusion can be significantly improved when the quality of the parent-teacher relationship and school accommodations are satisfying (Guillemot et al., 2024), highlighting once again the importance of parent-teacher relationships (Gramaxo et al., 2023b, 2025) – supportive and collaborative relationships - criterion 1 of the Happy Schools Framework (UNESCO, 2024) also includes this important relationship at its core. One can argue that, without appropriate adjustments and close cooperation with families, pupils with special needs become more vulnerable, which exacerbates inequalities and undermines equity in access to education.

Exposure to green school grounds supports children's overall well-being, including physical, mental, social, and emotional health, and is particularly associated with reductions in behavioural difficulties such as hyperactivity and inattention (Bell and Dyment, 2008; Vanaken and Danckaerts, 2018) – the importance of a green school environment is also referenced in the Happy Schools Framework and previous works by the research team (e.g., Gramaxo et al., 2025).

As a whole, this instrument is a contribution to the measurement of eudaimonic happiness of schools, from an organizational perspective, and from the point of view of one of schools most relevant stakeholders – students.

4.4 Limitations and suggestions for future studies

The main limitation of this study lies in the use of non-probabilistic samples. Although large, they caution the generalization of findings at a national level, as potential sampling bias cannot be entirely ruled out. Broader applications of the scale with more diverse groups could provide deeper insights into students' perceptions of happiness across the country. At the same time, the study's value in offering a culturally grounded perspective on school happiness in Portugal also raises concerns about its transferability to other contexts. While the instrument may be cautiously adapted in Southern and Western European countries, its direct use in different educational systems and cultural environments is not advisable, as differences in what is valued as a fundamental element for school happiness are likely to occur. Future research should therefore focus on adjusting the scale to varied contexts and on conducting cross-cultural comparisons. Longitudinal designs would also be valuable to examine how school happiness develops over time, both in response to deliberate interventions and to external changes. At present, the research team is working on integrative studies involving multiple stakeholders, which are expected to enrich understanding by offering a more comprehensive and context-sensitive view of school happiness, ultimately supporting practical and policy-oriented initiatives. Additionally, further research on the interplay between school climate, well-being, happiness, and academic performance in Portuguese schools will help clarify the phenomenon and its broader educational implications.

A further limitation concerns external convergent validity. Although the PLS-SEM results support convergent validity through AVE values above .50, the study did not include an independent established measure of student well-being, school satisfaction, or happiness. Therefore, it was not possible to examine whether the HSQ-S correlates with other validated instruments assessing related constructs. This should be addressed in future studies by testing the HSQ-S alongside established well-being and school satisfaction measures, allowing researchers to examine its convergent, criterion-related, and nomological validity.

5 Conclusions

The present study led to the presentation of an instrument – the Happy School Questionnaire – Student's version (HSQ-S) - developed and validated with two non-probabilistic samples of children and youths in Portuguese mandatory education.

School happiness is an indicator that goes beyond academic performance: it involves emotional well-being, positive interpersonal relationships, motivation to learn, and a healthy school climate (UNESCO, 2024). Measuring school happiness allows us to monitor the impact of the pedagogical practices implemented and identify areas for improvement; it also allows us to identify the degree of involvement of the educational community and reinforce the sense of belonging among educational actors.

The creation of a tool that measures school happiness offers schools the opportunity to diagnose their strengths and areas for improvement; based on the diagnosis, data is collected to support planning aimed at defining improvement strategies (e.g., implementation/reinforcement of cooperation activities, creation of collaborative projects and well-being programs). The compiled data provides information to be shared with the educational community; in addition to evaluating the school, these data raise awareness and demonstrate the school's commitment to the happiness of educational actors and their future. Assessing school happiness allows the impact of strategies promoting a happy school to be monitored.

Together with the parents' version (Gramaxo et al., 2025) and the professionals' version (Dutschke et al., 2019), we have completed the "triangle" of instruments that allow us not only to evaluate a happy school from the perspective of families, students and teachers, but also to work towards the daily

construction of a happy school, where students and teachers are happy, contributing, hopefully, to a happier world.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

The studies involving humans were approved by the ethics committee of the Laboratory of Distance Education and eLearning of the Universidade Aberta - Portugal, and authorized by the Ministry of Education, Science and Innovation. The studies were conducted in accordance with the local legislation and institutional requirements. Written informed consent for participation in this study was provided by the participants' legal guardians/next of kin.

Author contributions

PG: Conceptualization, Data curation, Investigation, Methodology, Project administration, Supervision, Writing – original draft, Writing – review & editing. AD: Formal analysis, Investigation, Methodology, Writing – original draft, Writing – review & editing. MA: Investigation, Methodology, Writing – original draft, Writing – review & editing. GD: Conceptualization, Investigation, Methodology, Project administration, Writing – original draft, Writing – review & editing. FS: Funding acquisition, Investigation, Methodology, Project administration, Writing – original draft, Writing – review & editing.

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Supplementary material

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