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Effects of grade retention in lower secondary education on students' self-concept, self-esteem, goal orientations, and school career

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Abstract

Grade retention is one of the most discussed and controversial educational measures, and yet, it is still widely applied in many countries. Research investigating the effects of grade retention on students' psychosocial variables presents mixed findings, partly due to the variables assessed, methodological issues, and the length of the studies. This study aimed to analyse both the short to medium and longitudinal effects of grade retention in grades 7 or 8 on Portuguese students' academic self-concept, self-esteem, goal orientations, and school career. Data were collected continuously over a 3-year span (once a year) and, again, 3 years after the third wave. After matching 477 students on several pretreatment variables using inverse probability treatment weighting with time-varying treatments (i.e., retention), our analytical sample consisted of 85 promoted students, 33 students retained in grade 7, and 32 students retained in grade 8. Our results showed that retained students did not differ from their promoted peers in self-esteem and goal orientations in the short, medium, or long term. The exception was for an increase in the academic self-concept of retained students, but only in short term. Finally, considering students' school career, grade retention was not predictive of further retention.

KEYWORDS
academic self-concept, achievement goals, grade retention, matching methods

Practitioner points

- Retained students exhibited lower levels of academic self-concept, self-esteem, and goal orientations even before retention.
- The potential advantages of grade retention, particularly in terms of academic self-concept, tend to vanish in the long run.
- Grade retention in lower secondary education did not predict retention in secondary education.

1 | INTRODUCTION

In many education systems, grade retention is the main measure to ensure that low-achieving students acquire the necessary academic knowledge and competencies for the respective grade levels (Allen et al., 2009). This practice is notably prevalent in European countries such as Belgium, Luxembourg, Germany, Spain, and Portugal, where over 20% of students have experienced grade retention at least once during their school career (Organisation for Economic Co-operation and Development, 2020).

Recent reviews, however, discourage the use of grade retention due to its adverse impact on students' academic and nonacademic outcomes (Allen et al., 2009; Goos et al., 2021; Valbuena et al., 2021). Nevertheless, research addressing the effects of grade retention on psychosocial outcomes and school career still renders controversial findings (Goos et al., 2021; Valbuena et al., 2021; Van Canegem et al., 2021). Moreover, recent studies recommend considering grade retention as a dynamic, time-varying event rather than a one-time fixed intervention (Moser et al., 2012; Vandecandelaere et al., 2016). It is acknowledged that longitudinal studies that neglect the time-varying nature of grade retention may yield biased estimates of its effects as they compare retained students with (supposedly) continuously promoted students who were retained later (Vandecandelaere et al., 2016).

Hence, the present study examines the effects of grade retention during lower secondary education on students' self-concept, self-esteem, goal orientations, and their subsequent secondary school career. In this study, we estimate grade retention effects using quasi-experimental methods that consider the time-varying nature of grade retention (Valbuena et al., 2021; Vandecandelaere et al., 2016).

1.1 | Grade retention effectiveness

Grade retention, also known as grade repetition, is the practice of holding students back in the same grade level at the end of the school year, generally due to poor achievement (Allen et al., 2009; Jimerson, 2001). The rationale behind this practice is to provide struggling students with more time to master the curriculum and enhance their academic competencies (Hong & Yu, 2008; Smith & Shepard, 1988; Wu et al., 2010). Furthermore, grade retention is thought to create more academically homogeneous classrooms, facilitating classroom instruction, and the support provided for students (Dupriez et al., 2008; Nunes et al., 2018; Smith & Shepard, 1988).

Opponents of grade retention, however, argue that grade retention can be a stigmatizing experience that significantly impacts students' competence beliefs, motivation, school engagement, and peer relationships (Demanet & Van Houtte, 2016; Goos et al., 2013; Mathys et al., 2019; Pagani et al., 2001). Moreover, grade retention entails substantial economic and societal costs for students, their families, and the broader education system and society (Ehmke et al., 2010; Goos et al., 2021; Valbuena et al., 2021).

Given its associated costs, educators and researchers have sought to evaluate grade retention effectiveness by investigating the impact on academic and nonacademic outcomes. Recent reviews of research conducted over the past two decades regard grade retention as an ineffective practice, since the negative or neutral effects observed outweigh any potential benefits identified (Allen et al., 2009; Goos et al., 2021; Jimerson, 2001; Valbuena et al., 2021).

Furthermore, these reviews suggested that potential differences between studies might be related to the specific outcome being assessed (e.g., academic achievement vs. psychosocial and school career outcomes; Allen et al., 2009; Goos et al., 2021; Valbuena et al., 2021). The impact of grade retention on students' psychosocial and school career outcomes has received relatively little attention and has produced inconclusive findings (Jimerson, 2001; Martin, 2011; Valbuena et al., 2021).

1.2 | The effects of grade retention on psychosocial outcomes

The literature concerning grade retention is based on several arguments in favor and against this practice. These arguments consistently report the psychosocial consequences of grade retention, emphasizing its potential effects on students' competence beliefs, motivation, and engagement. Furthermore, previous studies have demonstrated that early adolescents often identify grade retention as one of the most stressful life events they could experience due to the negative psychological and emotional experience associated with it (Anderson et al., 2005; Jimerson & Ferguson, 2007; Martin, 2011). Given this, it is reasonable to expect that grade retention affects students' psychosocial outcomes in various ways.

Notwithstanding this, empirical studies on the effects of grade retention on psychosocial variables have been less consistent, suggesting both benefits and adverse impact on these outcomes (Goos et al., 2021; Jimerson, 2001; Valbuena et al., 2021). These differing findings may be attributed to various factors, including the grade at which retention occurred (Giano et al., 2022), the length of the assessment of the outocmes (short or long term; Ehmke et al., 2010; Goos et al., 2013; Hwang & Cappella, 2018; Klapproth et al., 2016; Martin, 2011; Peixoto et al., 2016; Van Canegem et al., 2021; Wu et al., 2010), the establishment of an appropriate comparison group of nonretained students (Hong & Yu, 2008; Martin, 2011), and how psychosocial variables are measured or operationalized. Additionally, many studies investigating psychosocial outcomes often indiscriminately consider a broad set of affective components of learning and other general social and emotional behaviors and attitudes (Goos et al., 2021), which poses challenges in developing a comprehensive theoretical framework to explain the effects of grade retention on students' psychosocial outcomes. Since the psychosocial outcomes examined in this study are different in nature, we will elaborate on the effects of grade retention on these outcomes from a comprehensive perspective by integrating different theoretical frameworks.

The impact of grade retention on students' self-representations and motivation can be explained within the framework of Social Identity Theory (Tajfel, 1983; Tajfel & Turner, 2004; Wetherell, 1996). This theory posits that self-representations are influenced by the group to which individuals perceive themselves as belonging and that people strive to maintain their self-esteem and cultivate a positive self-concept. According to Social Identity Theory (Tajfel, 1983; Tajfel & Turner, 2004; Wetherell, 1996), when social identity is threatened, individuals can use one of the following strategies to preserve their identity (Tajfel & Turner, 2004): individual mobility, that involves attempting to join a group with higher status (e.g., high achievers); social competition, that involves competing with the highest status group on the dimensions on which its higher status is based, and social creativity, that involves the reinterpretation of the threatening situation in such a way that unfavorable comparisons become favorable. This last strategy can entail (a) redefining the view of the group to which students belong by, for example, changing the

comparison group to a group of lower achieving students; (b) reversing the value scale of the characteristics that lead to unfavorable comparisons; or (c) finding a new value dimension where the comparisons can be positive (Peixoto & Almeida, 2010; Robinson & Tayler 1986; Wetherell, 1996).

Robinson and Tayler (1986; Robinson et al., 1990) expanded upon this theoretical framework within the school context to explain the weak relationship between students' achievement and self-esteem, and the positive relationship between students' underachievement and school devaluation. In their studies, Robinson and Tayler (1986) suggested that, for underachieving students, being "socially creative" might be the only strategy attainable. They hypothesized that the first social creativity strategy, which involves changing the comparison group, would be unattainable for underachieving students, given their low level of achievement. In addition, the authors asserted that devaluing school-related activities and seeking alternative dimensions where underachieving students can find advantages in comparisons with higher-achieving students would be more accessible to them (Robinson & Tayler, 1986: Robinson et al., 1990). However, considering the significant role of interactions with others in reshaping self-perceptions, as also suggested by the authors (Robinson & Tayler, 1996), students, whenever possible, seek to make comparisons with their peers to derive positive meaning from their self-perceptions. For retained students, this opportunity is given during the retention year when they join a new class and can benefit from comparing themselves to their younger classmates.

Group comparison dynamics within the social comparison perspective (Festinger, 1954) have been cited to explain grade retention effects. In particular, the big-fish-little-pond effect (Marsh et al., 2008) is frequently mentioned to elucidate the relationship between grade retention and students' academic self-concept (Kretschmann et al., 2019; Marsh, 2016; Marsh et al., 2017). According to this framework, students form their academic self-concept (i.e., their perception of competence in academic domains; Shavelson et al., 1976) by comparing their academic-related accomplishments with those of their classmates. This often results in a higher self-concept in classrooms with lower average achievement and a lower self-concept in classrooms with higher average achievement (Kretschmann et al., 2019; Marsh et al., 2008). In the case of retained students, they might adjust their competence beliefs by considering their new peers as the reference group (Marsh, 2016; Marsh et al., 2017). Consequently, they might feel more competent and exhibit a higher academic self-concept in comparison to their younger and academically less experienced peers (Kretschmann et al., 2019; Marsh, 2016; Marsh et al., 2017).

Empirical studies examining the impact of grade retention on students' academic self-concept have only partially confirmed this perspective, particularly in the context of short-term gains. Longitudinal studies that employed a matched group of promoted students have demonstrated short-term benefits in lower secondary students' academic self-concept (Lamote et al., 2014) and math self-concept (Ehmke et al., 2010; Marsh et al., 2017). However, these differences tended to dissipate as students progressed in school (Klapproth et al., 2016; Kretschmann et al., 2019; Lamote et al., 2014; Marsh et al., 2017). On the other hand, both the longitudinal study of Kretschmann et al. (2019), and the retrospective and cross-sectional studies of Martin (2011) and Van Canegem et al. (2021) have shown negative or nonsignificant effects of grade retention on students' academic self-concept in lower secondary and secondary education. As Kretschmann et al. (2019) pointed out, grade retention effects on students' self-concept could not be entirely explained by the transition to a "smaller pond" (p. 10), and that the feeling of failure and the stigma of being a repeater might persist throughout students' school career. Based on these assumptions, we hypothesized that retained students will present higher levels of academic self-concept during the retention year, but this positive effect will vanish in the long run (H1).

Retained students may perceive themselves as having failed their main mission: to succeed in school. This situation can trigger feelings of being less competent and capable in comparison to their peers who were promoted (Goos et al., 2013; Jimerson, 2001; Kretschmann et al., 2019; Martin, 2011; Van Canegem et al., 2021; Xiang & Chiu, 2022). Moreover, their classmates and teachers may label them "repeaters" or "slow learners" (Martin, 2011; Mathys et al., 2019), leading to the stigmatization of these students within the school and classroom contexts (Demanet & Van Houtte, 2016; Lamote et al., 2014; Wu et al., 2010). Several studies support these assumptions by demonstrating that retained students form fewer friendships after retention (Demanet & Van Houtte, 2016), are

less accepted by their classmates (Wu et al., 2010), present more disruptive behaviors (Pagani et al., 2001) and are more likely to be victimized (Van Canegem et al., 2022).

Students' self-esteem, which encompasses an overall evaluation of one's self-worth (Harter, 1999), may be negatively affected by the internalization of the label "repeater", and by the personal feeling of having failed. In line with this, some studies have found that retained students presented lower levels of self-esteem immediately after being retained (Mathys et al., 2019; Peixoto et al., 2016) and several years following retention (Martin, 2011). Conversely, other studies found nonsignificant effects of grade retention on students' self-esteem (Hwang & Cappella, 2018; Nascimento & Peixoto, 2012; Peixoto & Almeida, 2010). While these findings may initially seem contradictory, they suggest a complex phenomenon. Negative personal feelings resulting from the experience of grade retention appear to persist over time (Anderson et al., 2005; Jimerson & Ferguson, 2007; Martin, 2011). Simultaneously, in an attempt to cope with this adverse experience and protect their self-worth, retained students may exhibit negative behaviors and attitudes toward school and academic-related activities. This can manifest, for instance, in attributing less importance to school-related tasks and subjects, as suggested by Peixoto and Almeida (2010), and by Robinson and Tayler (1996; Robinson et al., 1990), considering the strategy of reversion the value scale of unfavorable characteristics. Therefore, we hypothesized that no significant differences will be identified between retained and promoted students regarding self-esteem (H2), given the lower importance attributed to academic self-concept manifested by retained students compared to their peers (H3).

The striving for protecting the feelings of self-worth also reflects on students' achievement goals (i.e., students' reasons for engaging in academic-related activities; Anderman & Johnson, 2002), as predicted by the self-worth theory (Covington, 1992). In this context, students' experiences of success determine whether they pursue task-oriented, ego-oriented, or avoidance-oriented goals to maintain their self-acceptance levels. As a result, after the experience of school failure, retained students, may lower their expectations, and disengage from or avoid school-related tasks (De Castella et al., 2013; Covington, 2000; Nascimento & Peixoto, 2012; Peixoto & Almeida, 2010; Peixoto et al., 2016, 2017).

The effects of grade retention on students' achievement goals have been relatively understudied. However, the few studies addressing this motivational approach consistently indicate that retained students were less task-orientated not only after being retained (Martin, 2009; Nascimento & Peixoto, 2012; Peixoto et al., 2016, 2017), but even before, by anticipating retention (Kretschmann et al., 2019). Task orientation is considered the most valuable goal orientation, defined by the goal of engaging in an academic task for learning and gaining competence, rather than external rewards (Anderman & Johnson, 2002; Skaalvik, 1997), and it is closely linked with achievement (Kaplan & Maehr, 2007; Skaalvik, 1997). On the other hand, retained students presented higher levels of avoidance orientation (Nascimento & Peixoto, 2012; Peixoto et al., 2016), meaning that retained students are more oriented to avoiding learning situations (Skaalvik, 1997). Regarding the goal orientations of engaging in learning activities to outperform others and to demonstrate competence over others (i.e., ego orientations; Anderman & Johnson, 2002; Kaplan & Maehr, 2007; Skaalvik, 1997), studies have shown no differences between retained and promoted students either before (Kretschmann et al., 2019) or after being retained (Nascimento & Peixoto, 2012; Peixoto et al., 2016). Considering these findings, we hypothesized that differences between retained and promoted students would be identified on their goal orientations (H4). Specifically, retained students would demonstrate lower levels of task orientation (H4a) and higher levels of avoidance orientation (H4b). In regard to ego orientations (self-enhancing and self-defeating orientations), we would not expect differences between the groups of students (H4c).

1.3 | The effects of grade retention on students' school career

Investigating the impact of grade retention on students' later school career provides critical information regarding the long-lasting effects of grade retention, contributing to unravel its economic and social costs. Retained students have often revealed negative educational trajectories (Goos et al., 2021; Valbuena et al., 2021) and, particularly,

grade retention has consistently been associated with high-school dropout, being among its highest risk factors (Gubbels et al., 2019; Raffaele Mendez et al., 2015).

The effects of grade retention on later retention have been investigated to a lesser extent. Generally, it is believed that teachers tend to retain students only once to avoid exacerbating the age gap between retained students and their classmates (Moser et al., 2012; Nunes et al., 2018). Nevertheless, while this may apply to primary education (Goos et al., 2013; Moser et al., 2012; Nunes et al., 2018), some studies have shown that grade retention is associated with an increased likelihood of being retained in secondary education (Geng & Rockoff, 2017; Raffaele Mendez et al., 2015). In this study, we explore the long-lasting effect of grade retention on students' secondary school grade retention, hypothesizing that retained students will present higher probability of being retained in secondary education (H5).

1.4 | Grade retention in Portugal

The Portuguese education system comprises 12 years of compulsory education (Eurydice, 2022) and is organized into basic (grades 1–9) and secondary education (grades 10–12). Basic education is divided into three consecutive cycles: the first cycle lasts from grades 1–4, the second from grades 5 and 6, and the third from grades 7–9. Basic education is uniform in its structure, which is the case in countries such as Spain, Italy, or France (Dupriez et al., 2008). This uniform structure presents challenges in addressing students' heterogeneity in terms of academic competencies. As a result, grade retention is the primary measure applied to low-achieving students and is often the only measure considered in legislation (Dupriez et al., 2008; European Commission, 2020).

According to the current Portuguese legislation, grade retention should only be used as an "exceptional measure" when promoting the student to the next grade would compromise the acquisition of new learnings (Decree-Law No. 55/2018, 55/2018, 2018). This legislation is similar to that in force at the start of the data collection for this study in 2012/2013 school year (Conselho Nacional de Educação, 2015). At that time, grade retention was already considered an exceptional measure with a pedagogical purpose, and its application was mainly based on students' achievement: students were retained when their grade marks were below 3 (on a scale from 1 to 5) in three school subjects (e.g., Portuguese, Math, and another compulsory subject; Conselho Nacional de Educação, 2015). Despite this recommendation, grade retention remained a relatively common practice, especially in the third cycle of basic education, where the grade retention rates were around 16% during the school year 2012/2013 (Conselho Nacional de Educação, 2020). More recent statistics, however, show a downward trend, with a 6% rate recorded for the 2018/2019 school year. Considering the international context, recent data shows that Portuguese retention rates are still among the highest in European countries (Organisation for Economic Co-operation and Development, 2020): in the 2018 cycle of the Program for International Student Assessment (PISA), 27% of 15-year-old students reported having been retained at least once during their school career, a number significantly above the OECD average of 11% (European Commission, 2020; Organisation for Economic Co-operation and Development, 2020).

In summary, despite the exceptional measure ascribed to grade retention and the downward trend, schools and teachers continue to rely on grade retention as a tool to address students' heterogeneity and low achievement. In addition, these rates may also reflect a positive belief shared by educators in the benefits of grade retention, on the one hand, and the difficulty in finding alternative tools and measures to avoid grade retention, on the other (European Commission, 2020; Goos et al., 2021; Santos et al., 2023).

1.5 | The present study

Considering the theoretical background and empirical findings previously mentioned, which establish a clear relationship between grade retention and students' psychosocial outcomes (Hwang & Cappella, 2018;

Klapproth et al., 2016; Kretschmann et al., 2019; Lamote et al., 2014; Martin, 2011; Mathys et al., 2019; Peixoto et al., 2016, 2017), in this study, we had the primary goal of investigating grade retention effects on academic self-concept, self-esteem, and goal orientations during lower secondary education (i.e., grades 7–9). Recognizing the time-varying nature of grade retention (Vandecandelaere et al., 2016), we estimated grade retention effects for students who were (a) retained in 7th grade, (b) retained in 8th grade, and (c) continuously promoted.

We selected these grade levels as the stigma of being a "repeater" and the psychological mechanisms mentioned earlier may have more pronounced at this age (Demanet & Van Houtte, 2016; Giano et al., 2022; Mathys et al., 2019). In addition, we selected psychosocial variables directly related to students' learning and achievement (Kaplan & Maehr, 2007; Marsh, 2016; Peixoto & Almeida, 2010; Skaalvik, 1997), taking into consideration understudied variables, as students' self-esteem, and goal orientations. As already mentioned, the following hypotheses were formulated:

H1: Retained students will present higher levels of academic self-concept during the retention year, in comparison to their promoted peers, but this will vanish afterward.

H2: Retained and promoted students will demonstrate similar levels of self-esteem.

H3: Retained students will attribute lower levels of importance to academic self-concept, in comparison to their promoted peers.

H4: Retained students will present lower levels of task orientation (H4a), higher levels of avoidance orientation (H4b), and equal levels of self-enhancing and self-defeating orientation (H4c), when compared with their promoted peers.

Second, using a smaller sample of students who were followed during their secondary education (i.e., from 9th grade to 12th grade), we aimed to investigate the longitudinal effects of grade retention, considering students' school career through subsequent grade retention. In addition, we explored the long-term effects of grade retention, assessing the psychosocial outcomes 3 years after the third wave of data collection. This aim was considered only in exploratory terms, given the small number of observations. Considering the previous empirical findings on students' school career (Geng & Rockoff, 2017; Mendez et al., 2015) and on the long-term effects of grade retention (Goos et al., 2021; Hwang & Cappella, 2018; Klapproth et al., 2016; Kretschmann et al., 2019; Lamote et al., 2014; Martin, 2011; Peixoto et al., 2016), the following hypotheses is formulated:

H5: Retained students will be more likely to be retained during secondary education in comparison to their promoted peers.

H6: Retained students will present lower levels in self-concept, self-esteem, importance attributed to academic self-concept, task orientation, and higher levels of avoidance orientation.

2 | METHOD

2.1 | Participants

The data for this study were gathered as part of a 3-year longitudinal research project spanning from 2012/2013 to 2014/2015, investigating the development of affective components of learning in two groups of middle school students who were in the 5th and 7th grades at the beginning of the project. The study took place in 12 schools in

the Lisbon region and involved three waves of data collection (Y1 to Y3) conducted annually during the middle of the school year (March to May).

Initially, there were 1807 students in the study. However, 448 students were excluded because they were either absent during the first data collection or had already repeated a grade, which could have complicated the analysis of grade retention effects.

This study specifically utilized data from the 7th-grade cohort ($N = 552$). Of these, 75 students were excluded due to absence during the second and third data collection points or because they had changed schools. This left a sample of 477 students, with an average age of 12.35 (SD = 0.55) at Y1 (7th grade). About 48% of these students were boys. Regarding grade retention, 33 students were retained in 7th grade, and 40 were retained in 8th grade. No differences between dropout and participating students were found in most of the background variables (i.e., gender, parental education, and school context) except for students' age, $t(545) = 2.71$, $p = .007$. These differences are, however, small: the mean age for dropout students was 13.56 and for participating students was 13.35, as mentioned above.

In the 2017/2018 school year, a smaller study with a new wave of data collection (W4) was conducted when students were between the 10th and 12th grades (i.e., 3 years after Y3). Data in all four measurement points were available for 31 students (11 retained; 18 boys) from five schools. It is important to note that the participation rate for this data point was low, likely due to the time gap between Y3 and W4 data collection. Additionally, student school mobility at these grade levels is also very likely, since students often change schools after the 9th grade. As a result, the data from W4 were only analyzed in exploratory terms.

2.2 | Measures

2.2.1 | Independent variable

Grade retention

Grade retention was obtained for each academic year from school records and was operationalized as 0 = student was not retained and 1 = student was retained. Based on this information, for the outcome analyses, students were assigned to one of three groups (1 = never retained, 2 = retained in 7th grade, 3 = retained in 8th grade).

2.2.2 | Outcome variables

Self-concept and self-esteem

Students' academic self-concept, self-esteem, and importance attributed to academic self-concept were measured using the Self-concept and Self-esteem Scale for Adolescents (Peixoto & Almeida, 2010). Self-concept is considered as a specific evaluation of different domains of competence, whereas self-esteem is regarded to an overall assessment of one's self-worth. This scale consists of 51 items distributed across 10 subscales, assessing nine specific academic and nonacademic domains of self-concept and self-esteem. Academic self-concept was derived from three dimensions, including academic competence (e.g., "Some students are fast in doing their schoolwork"), language competence (e.g., "Some students find it very easy to write"), and math competence (e.g., "Some students feel they are good at math"). Students rated their agreement with the statements using a 4-point response scale ranging from 1 ("Completely different from me") to 4 ("Exactly like me"). Self-esteem (e.g., "Some students are happy with themselves most of the time") and importance attributed to academic self-concept (e.g., "Some students believe that it is important to be a good student") were also assessed using the same 4-point response scale. Scores in each subscale were averaged, where higher scores indicated higher academic self-concept, self-esteem, and importance attributed to academic self-concept. The scales exhibited good internal consistency, with Cronbach's

alpha values ranging from .78 for importance attributed to academic self-concept in Y1 to .87 for academic self-concept in Y3, demonstrating the reliability of the measure.

Goal orientations

Students' achievement goal orientations were assessed using the Goal Orientations Scale (Pipa et al., 2016). This scale comprises 24 items and uses the abovementioned 4-point response scale to assess four types of goal orientations within the academic context: (a) task orientation (e.g., "For some students, it is important to learn new things at school"), (b) self-enhancing ego orientation (e.g., "Some students always try to do better than their classmates"), (c) self-defeating ego orientation (e.g., "In class, some students try not to make a fool of themselves when the teacher asks questions"), and (d) avoidance orientation (e.g., "At school, some students like to do as little as possible"). Cronbach's alpha ranged from .78 in task orientation at Y1 and .91 in self-defeating orientation at Y3, revealing good internal consistency of these measures. Scores on each dimension were also averaged, and higher scores represented higher levels in each goal orientation.

2.2.3 | Covariates

The existing literature consistently reveals that several individual and contextual factors significantly increase students' likelihood of grade retention. Considering this, researchers have recommended the use of individual and contextual factors when estimate its effects. Specifically, in terms of individual factors, students' demographic and family background variables, such as gender, age, and socioeconomic status, have consistently been identified as factors that increase the likelihood of grade retention (Demanet & Van Houtte, 2016; Klapproth & Schaltz, 2015; Kretschmann et al., 2019; Nunes et al., 2018; Pereira & Reis, 2014). Students' academic variables, including prior achievement, reasoning, and subject-specific competencies, have been found to play a significant role in students' retention probability (Kretschmann et al., 2019; Mathys et al., 2019; Nunes et al., 2018; Pereira & Reis, 2014). Finally, school-related factors, such as the socioeconomic composition and grade retention rates of the student body, were also identified as being linked to the likelihood of grade retention (Cordero Ferrera et al., 2014; Demanet & Van Houtte, 2016; Klapproth & Schaltz, 2015; Pereira & Reis, 2014). The following section provides detailed information regarding the covariates considered in this study.

Students' gender

Gender was operationalized as a dichotomous variable where 0 = female and 1 = male.

Students'age

Students provided their age at the time of data collection.

Parental education

Students were asked to provide information regarding their mother and father's highest level of education. Parental education resulted from averaging both scores.

Students' achievement

We used information regarding students' school marks in Portuguese and Math subjects for each year. School marks in each school term were obtained from students' records and then averaged. The grading scale ranged from 1 to 5, with school marks below 3 indicating that students have not met the standards for a particular subject, and thus, have failed the subject. In contrast, school marks of 3 or above indicated that students demonstrated an increasingly adequate to outstanding understanding of the school subject.

School retention composition

The proportion of existing retained students in each school was obtained through official records every year (Ministério da Educação/Direcção Geral de Educação, n.d.).

Students' math reasoning

In Y1, students' math reasoning was measured by asking the students to complete a series of 24 sequences (Almeida & Lemos, 2007). Students received 1 point for each correct answer, and scores were summed to obtain an index for math reasoning. The internal consistency for this measure was α = .89.

2.3 | Procedures

2.3.1 | Data collection

Schools from the Lisbon area were contacted to be part of the research project. The project and its procedures were reviewed and approved by the Directorate-General of Education. Parental consent was required for participation, and students' assent was obtained. Students were informed about the aims of the study, and confidentiality was assured. Trained researchers administered the outcome measures in a classroom session and other measures relevant to the broader study. Data collection occurred every year, between March and May, except for grade retention and achievement measures, which were retrieved from students' records during and at the final of the school year.

For collecting the fourth measurement point, schools were contacted once again to participate, and a new parental consent was sent to students' parents. Students who participated in this phase also provided their assent, and ethical approval was obtained for this smaller study as well.

2.3.2 | Data analysis

Handling missing data

The mean level of missing information in the original sample for both covariates and outcome variables were 2.5%, ranging from 0.42% to 8%. To overcome this issue, and since the propensity score technique requires completed datasets, we imputed missing information through Multiple Imputation by Chained Equation Modelling using the MICE package in R (van Buuren & Groothuis-Oudshoorn, 2011). Using this procedure, we generated five complete datasets (10 predictive model iterations per data set). Subsequent analyses were executed in each imputed data set, and estimates were then pooled (Rubin, 1987).

Group comparison strategy

In this study, we aimed to estimate the effects of an intervention: grade retention. This is particularly challenging for ethical reasons since randomly assigning students to grade retention, and a promotion group is unfeasible. Thus, to counter selection bias and produce reliable estimates for treatment effects, we used propensity score methods (Austin, 2011) to reduce bias between retained and promoted students in pretreatment covariates.

Of the different propensity score methods, we chose inverse probability treatment weighting with time-varying treatments (Austin & Stuart, 2015; Vandecandelaere et al., 2016). This method accommodates the possibility that students could be retained at various time points. It facilitates the utilization of all observations by weighting subjects based on their respective groups. Treatment subjects were assigned a weight of 1, while control subjects received weights based on the inverse of the probability of receiving the treatment (Austin & Stuart, 2015; van der Wal & Geskus, 2011). The balance between treated and comparison subjects across covariates was deemed

acceptable when the following criteria were met: (a) standardized mean differences (SMD) in the covariates were below 0.25, (b) variance ratios ranged from 0 to 2, and (c) graphical inspection revealing no significant concerns (Stuart, 2010; Vandecandelaere et al., 2016). Given that students were retained at different time points, the balance between groups was assessed at Y1 for promoted students and 7th-grade repeaters and at both Y1 and Y2 for promoted students and 8th-grade repeaters (Vandecandelaere et al., 2016).

As for the covariates, we selected variables that were associated either with the treatment or the outcomes (Allen et al., 2009; Kretschmann et al., 2019). Fourteen variables were included, encompassing students' background information (e.g., age, gender, parental highest educational level, math reasoning), school characteristics (e.g., school retention composition), and baseline measurements of outcome variables. The selection of these variables was theoretically and empirically grounded (e.g., Demanet & Van Houtte, 2016; Klapproth & Schaltz, 2015; Kretschmann et al., 2019; Nunes et al., 2018; Pereira & Reis, 2014).

The steps for establishing the comparison group were based on Vandecandelaere et al. (2016) and were as follows. Initially, we fit a logistic regression estimating the probability of being retained at Y1 as a function of pretreatment covariates. This step allowed us to consider only at-risk students with some probability of being retained and avoid overweighting (Austin & Stuart, 2015). Thus, we restricted our analytic sample to those students with at least a 1% probability of being retained, with an examination of results using varying cut-off probabilities. Remarkably, the results remained consistent, whether using a 1% or 5% cut-off probability, in line with Vandecandelaere et al. (2016). Subsequently, we applied the inverse probability treatment weighting using the ipw package in R (van der Wal & Geskus, 2011), taking into account the probabilities derived from the logistic regression. The obtained weights were utilized in the outcome analyses.

Outcome analysis

The analysis of outcomes was grounded in a same-age comparison, where retained students were compared to their continuously promoted 7th-grade peers. To test H1 to H4, weighted regression models were employed for each outcome variable, with categorical variables for the wave (i.e., Y1 to Y3) and students grouping variable (i.e., promoted students, 7th-grade and 8th-grade repeaters), as well as their interaction. Moreover, variables from the weighting procedure were included in the regression models, as per Stuart's recommendation (2010), to minimize any residual differences. All variables were grand mean-centered.

Considering W4 outcomes, we conducted a logistic regression model to explore the effects of grade retention on students' school career (i.e., subsequent grade retention). Additionally, individual regression models were applied to each psychosocial variable to estimate the long-term effects of grade retention. Given the limited number of observations, we did not include any additional covariates in these models.

3 | RESULTS

3.1 | Group balance

Before conducting the outcome analysis, we thoroughly examined potential selection bias in the background variables and baseline outcome measures by employing inverse probability treatment weighting with time-varying treatments. The analysis indicated that a more satisfactory balance could be achieved by implementing a cut-off of a 1% probability of being retained, resulting in a reduced analytical sample of 85 promoted students, 33 retained students in 7th grade, and 32 retained students in 8th grade. Descriptive statistics for the background variables at Y1 and the outcome variables across the initial 3 years of data collection (Y1 to Y3) can be found in Table 1. Additionally, Table 2 displays the SMD between the promoted and retention groups.

The comparison between promoted students and retained students in 7th grade at Y1 revealed larger differences in the background variables before weighting, particularly in parental education ($d = -.87$), math

TABLE 1 Descriptive statistics for the variables under study.

Variable	Year	Promoted		Retained 7th		Retained 8th	
		M	SD	*M*	SD	*M*	SD
Background variables Y1							
Boys		48%		52%		56%	
Age		12.40	0.63	12.60	0.75	12.30	0.47
Parental education		10.30	2.78	8.45	2.76	8.03	3.50
Math reasoning		13.30	4.83	11.70	4.79	11.80	4.58
School retention composition		26.70	11.1	27.80	10.6	29.80	12.3
Portuguese achievement		2.49	0.53	2.21	0.42	2.34	0.48
Math achievement		2.24	0.48	2.15	0.51	2.22	0.42
Outcome variables							
Academic self-concept	1	2.11	0.35	2.00	0.42	2.05	0.39
	2	2.12	0.38	2.19	0.34	1.93	0.29
	3	2.13	0.36	2.27	0.36	2.10	0.31
Self-esteem	1	2.48	0.55	2.40	0.48	2.40	0.46
	2	2.56	0.44	2.55	0.42	2.50	0.40
	3	2.52	0.46	2.56	0.38	2.53	0.43
Importance academic self-concept	1	2.20	0.26	2.15	0.28	2.24	0.21
	2	2.12	0.26	2.12	0.23	2.16	0.20
	3	2.08	0.26	2.06	0.21	2.10	0.25
Task orientation	1	2.67	0.37	2.56	0.37	2.77	0.36
	2	2.60	0.38	2.55	0.38	2.52	0.29
	3	2.53	0.36	2.51	0.34	2.54	0.37
Self-enhancing orientation	1	2.39	0.53	2.30	0.53	2.40	0.48
	2	2.17	0.49	2.12	0.60	2.20	0.45
	3	2.19	0.47	2.18	0.48	2.25	0.61
Self-defeating orientation	1	2.13	0.60	2.16	0.62	2.19	0.62
	2	2.05	0.61	1.88	0.56	2.02	0.64
	3	1.99	0.65	1.98	0.63	1.98	0.60
Avoidance orientation	1	2.14	0.50	2.13	0.51	2.04	0.46
	2	2.25	0.50	2.08	0.48	2.25	0.38
	3	2.32	0.48	2.27	0.53	2.28	0.38

reasoning (SMD = −0.80), Portuguese achievement (d = −1.75), and math achievement (d = −1.56). After weighting, the SMD significantly decreased for most variables, ranging between 0.05 and 0.21. However, parental education (SMD = 0.39) and students' age (d = −.30) remained imbalanced after weighting. In the baseline measures of the outcome variables before weighting, significant differences were observed in academic self-concept (d = −1.08) and

TABLE 2 Standardized mean differences before and after weighting.

	Promoted[a] versus retained 7th[b] Y1		Promoted versus retained 8th[c] Y1		Promoted versus retained 8th[c] Y2	
	Before weighting	After weighting	Before weighting	After weighting	Before weighting	After weighting
Boys	0.08	0.08	0.10	−0.16	0.10	−0.00
Age	0.35	−0.30	−0.15	0.13	−0.17	0.14
Parental education	−0.87	0.39	−0.64	0.61	−0.65	−0.05
Math reasoning	−0.80	0.09	−0.52	0.25	−0.52	−0.12
School retention composition	0.01	−0.17	0.23	−0.29	0.23	−0.26
Portuguese achievement	−1.75	0.21	−1.07	0.33	−1.40	0.39
Math achievement	−1.56	0.05	−1.42	0.04	−1.28	0.05
Academic self-concept	−1.08	0.08	−0.81	0.23	−1.19	0.23
Self-esteem	−0.33	−0.02	−0.24	0.20	−0.14	0.12
Importance academic self-concept	−0.48	0.25	−0.01	−0.18	−0.16	−0.10
Task orientation	−0.52	0.10	0.01	−0.16	−0.59	0.10
Self-enhancing orientation	−0.18	0.16	0.06	−0.10	−0.08	−0.27
Self-defeating orientation	0.13	0.08	0.34	−0.08	0.17	−0.05
Avoidance orientation	0.26	0.09	−0.04	0.14	0.40	−0.09

[a] $n = 85$.

[b] $n = 33$.

[c] $n = 32$. Negative standardized mean differences indicate lower scores for retained students.

task orientation (d = −.52). After weighting, these differences, along with those in the other baseline variables, were substantially reduced, with all SMD values falling below 0.25.

Similar results were obtained when comparing promoted and retained students in 8th grade. Parental education variable exhibited some residual imbalance after weighting at Y1 (d = .61), but balance was attained by Y2 (d = −.05). As for Portuguese achievement, slight imbalances persisted after weighting (d = .33 for Y1 and d = .39 for Y2), although it's noteworthy that the preweighting differences were originally above 1. In the case of math reasoning and math achievement, preweighting SMD's were significantly large (d = −.52 for Y1 and Y2 in math reasoning; d = −1.42 for Y1 and d = −1.28 for Y2 in math achievement). However, postweighting, these disparities were significantly reduced (d = .25 for Y1 and d = −.12 for Y2 in math reasoning; d = .04 for Y1 and SMD = 0.05 for Y2 in math achievement). In the remaining background variables, differences were already below 0.25 before weighting and remained largely unchanged or decreased after weighting. As for the outcome measures, larger preweighting SMD values were observed in academic self-concept (d = −.81 for Y1 and d = −1.19 for Y2), task orientation (d = −.59 for Y2), and self-enhancing orientation (d = .34 for Y1). After weighting, all these SMD values fell below the 0.25 threshold (d = .23 in academic self-concept; d = .10 in task orientation; d = −.08 in self-enhancing orientation). The differences in the remaining outcome measures were already below 0.25 before weighting and remained below this threshold.

3.2 | Grade retention effects in academic self-concept (H1), self-esteem (H2), importance attributed to academic self-concept (H3), and goal orientations (H4)

Our first aim was to investigate the effects of grade retention on academic self-concept, self-esteem, and goal orientations during lower secondary education. Several regression models were computed, and the results are summarized in Table 3 and visually depicted in Figure 1. Information on the regression coefficients for both outcome variables and the associated covariates and controlling variables are available in the supplementary material.

Considering academic self-concept (H1), we observed that students retained in 7th grade experienced an increase in academic self-concept over the years, reaching statistical significance in Y3 (b = 0.20, SE = 0.09, p = .030), as illustrated in Figure 1a. This group substantially enhanced their perception of academic competence during the retention year (Y2) and maintained this positive trajectory in the following year. Conversely, students retained in 8th grade had lower levels of academic self-concept both before and after retention, although these differences were not statistically significant.

As for self-esteem (H2), both promoted and retained students exhibited similar and stable trajectories across the years, as shown in Figure 1b. In terms of the importance attributed to academic self-concept (H3), promoted students experienced a slight decline over the years (b = −0.09, SE = 0.04, p = .004 for Y2, and b = −0.10, SE = 0.04, p = .004 for Y3). Among the retention groups, the results were not statistically significant, yet Figure 1c shows that these students also presented downward trajectories, which appeared to stabilize after retention (i.e., from Y2 onwards).

Regarding the development of goal orientations, all groups experienced a decline in task orientation (H4a) from Y1 to Y2 (see Figure 1d), with statistical significance observed only for promoted students (b = −0.09, SE = 0.04, p = .043). After Y2, the task orientation of promoted and retained students in 8th grade remained stable. In contrast, students retained in 7th grade exhibited a slight decline in their task orientation in the year following the retention year (Y3), as shown in Figure 1d, although these differences were not statistically significant.

For avoidance orientation (H4b), a similar upward trajectory was observed for both promoted and retained students in 8th grade from Y1 to Y3, reaching significance in Y3 for promoted students (b = 0.13, SE = 0.05, p = .013). Additionally, the avoidance orientation of retained students in 7th grade was maintained during the retention year, but in the year following, a steeper increase, although nonsignificant, was noted for this group, as illustrated in Figure 1g.

TABLE 3 Regression coefficients of grade retention on psychosocial outcomes.

	Promoted			Retained 7th			Retained 8th		
	Y1	Y2	Y3	Y1	Y2	Y3	Y1	Y2	Y3
Academic self-concept	2.13*** (0.06)	−0.01 (0.05)	0.01 (0.08)	−0.08 (0.08)	0.16 (0.09)	0.20* (0.09)	−0.09 (0.08)	−0.03 (0.08)	−0.02 (0.08)
Self-esteem	2.50*** (0.05)	0.08 (0.05)	0.02 (0.06)	−0.02 (0.10)	−0.03 (0.11)	0.07 (0.13)	−0.10 (0.10)	0.01 (0.10)	0.13 (0.10)
Importance self-concept	2.20*** (0.03)	−0.08** (0.03)	−0.10** (0.03)	−0.07 (0.06)	0.08 (0.06)	0.02 (0.07)	0.05 (0.05)	−0.02 (0.06)	−0.03 (0.06)
Task orientation	2.67*** (0.04)	−0.09* (0.04)	−0.08 (0.06)	−0.04 (0.09)	−0.03 (0.10)	−0.09 (0.11)	0.05 (0.08)	−0.09 (0.09)	−0.06 (0.10)
Self-enhancing orientation	2.40*** (0.05)	−0.25*** (0.06)	−0.16* (0.06)	−0.05 (0.12)	−0.01 (0.13)	−0.02 (0.15)	0.01 (0.10)	0.08 (0.11)	−0.06 (0.12)
Self-defeating orientation	2.12*** (0.05)	−0.07 (0.05)	−0.17** (0.06)	0.01 (0.14)	−0.22 (0.16)	−0.01 (0.16)	0.14 (0.11)	−0.09 (0.12)	−0.14 (0.12)
Avoidance orientation	2.12*** (0.05)	0.11 (0.05)	0.13 (0.05)	−0.02 (0.12)	−0.08 (0.11)	0.14 (0.13)	−0.02 (0.10)	0.06 (0.11)	0.08 (0.10)

Note: Standard errors are in parenthesis. Y1 = 7th-grade, the year of retention decision for 7th-grade repeaters; Y2 = 8th-grade for promoted students, the retention year for 7th-grade repeaters, the year of retention decision for 8th-grade repeaters; Y3 = 9th-grade for promoted students, the year after the retention year for 7th-grade repeaters, the retention year for 8th-grade repeaters.

*$p < .05$; ***$p < .001$; **$p < .01$.

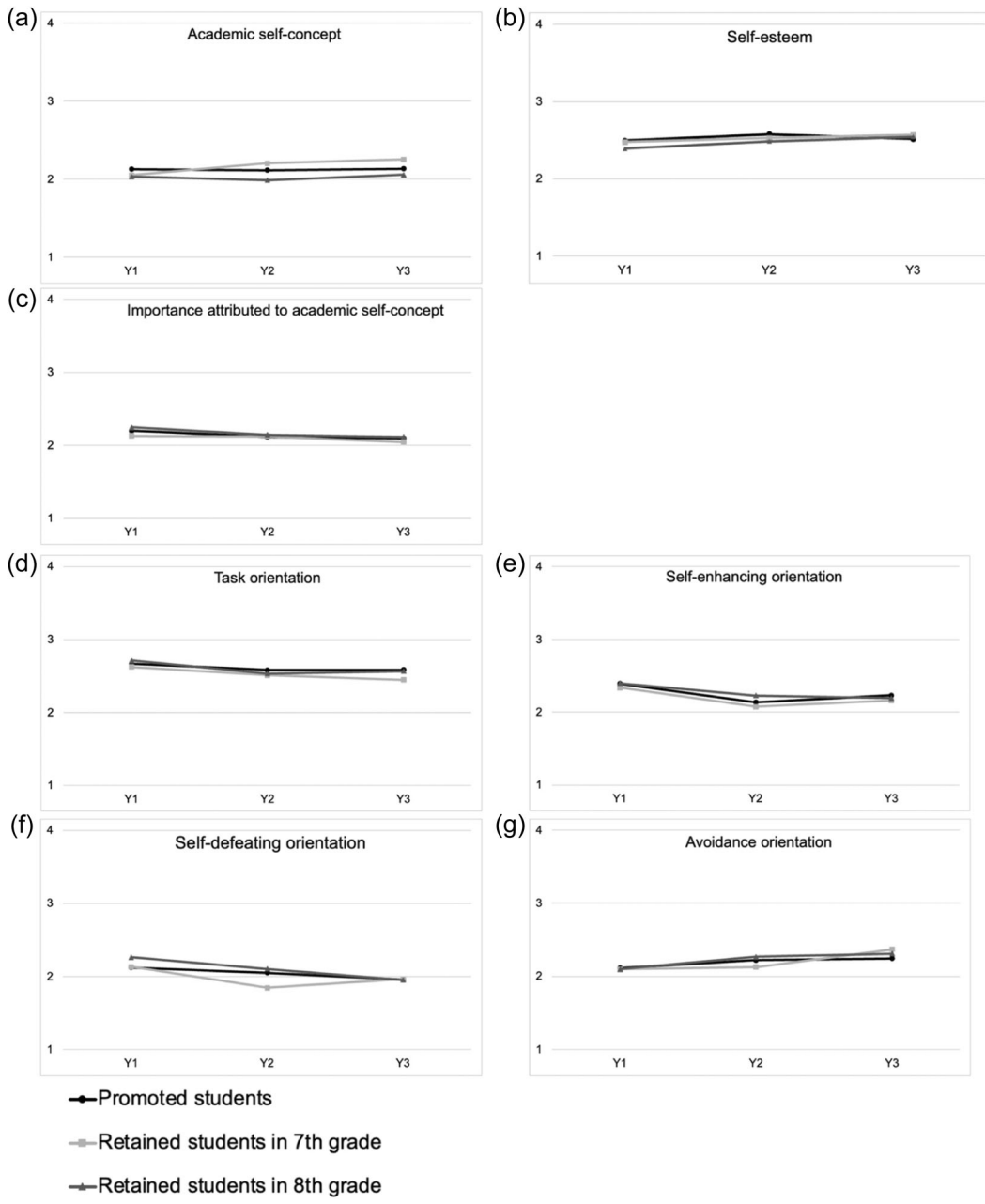

FIGURE 1 Graphical illustration of the development of the outcomes over time for promoted students, retained students in 7th grade and retained students in 8th grade.

For self-enhancing orientation (H4c), a steeper decline was identified from Y1 to Y2, but this decline was statistically significant only for promoted students (b = −0.26, SE = 0.06, $p < .001$). In Y3, both retained students in 7th grade and promoted students showed a slight recovery in their levels of self-enhancing orientation, though without reaching the levels seen at Y1. However, this recovery was statistically significant solely for promoted students (b = −0.16, SE = 0.06, $p = .015$; see Figure 1e).

Finally, in terms of self-defeating orientation, promoted students experienced a downward trajectory from Y1, with significance reached in Y3 (b = −0.17, SE = 0.03, p = .004). Students retained in 8th grade exhibited higher levels of this orientation, but also experienced a decline during the year of retention and the following year. A steeper decline was observed in students retained in 7th grade (see Figure 1f) from the year of retention (Y1) to the retention year (Y2). Furthermore, this group of students slightly increased their self-defeating orientation in Y3, reaching similar levels to the other groups. Nevertheless, these differences were nonsignificant.

3.2.1 | Long-term effects of grade retention (H5 and H6)

Addressing our second exploratory aim of examining the long-term effects of grade retention, we initially assessed the likelihood of subsequent grade retention (H5). The results showed that being retained did not increase the likelihood of subsequent grade retention (b = 1.15, SE = 0.94, p = .220). Furthermore, in relation to the long-term effects of grade retention (H6), as detailed in Table 4, regression analyses indicated nonsignificant effects of grade retention on the W4 outcomes, despite the presence of negative estimates.

4 | DISCUSSION

4.1 | Effects of grade retention on students' psychosocial and school career outcomes

This study investigated the effects of grade retention in lower secondary education on psychosocial outcomes across three school years by employing matching procedures through inverse probability treatment weighting with time-varying treatments (Austin & Stuart, 2015; Vandecandelaere et al., 2016). Our approach allowed us to reduce preretention differences between promoted and retained students and followed the recommendations of previous meta-analyses of using quasi-experimental methods (Allen et al., 2009; Goos et al., 2021). Finally, this study also explored the long-term effects of grade retention on students' psychosocial variables and school career, considering students' further grade retention. The design of this study, along with its outcomes was remained understudied in Portugal, a country with a considerable culture of grade retention, especially in secondary education (Conselho Nacional de Educação, 2020).

Overall, our results demonstrated similar trajectories for both retained and promoted students, suggesting that retained students would have developed (at least) similar self-esteem and motivational orientations if promoted instead of being retained (Hwang & Cappella, 2018; Klapproth et al., 2016; Kretschmann et al., 2019; Lamote et al., 2014; Martin, 2011). In addition, the long-term results suggested the long-lasting effects of grade retention (Anderson et al., 2005; Jimerson & Ferguson, 2007), as retained students systematically scored lower in most of the outcomes or higher in undesirable outcome (e.g., avoidance orientation).

Considering the first aim of the study, our findings partially support the first hypothesis, as students retained in the 7th grade presented an upward trajectory of academic self-concept (H1) in the 2 years following retention (i.e., Y2 and Y3). This finding is in line with previous studies (Ehmke et al., 2010; Ehmke et al., 2017; Marsh et al., 2017), where retained students outperformed their peers in academic self-concept during the repeating year, as a result of the placement in a new context with younger and less experienced classmates. As predicted by the big-fish-little-pond effect, retained students may benefit from grade retention, due to the change of reference group to younger and less experienced classmates (Marsh, 2016; Marsh et al., 2017; Marsh et al., 2008). Nevertheless, the group of 8th-grade repeaters showed consistently lower levels of academic self-concept. One explanation for these differences may be that 7th-grade repeaters, and their parents and teachers, attribute their experience of underachievement (grade retention) to external causes, i.e., the transition to a new cycle, which might attenuate the adverse effects of grade retention. For retained students in 8th grade, the negative results may suggest that grade

TABLE 4 Means, standard deviations, and regression coefficients for the longitudinal (W4) effects of grade retention.

	Promoted students[a]		Retained students[b]		
	M	SD	*M*	SD	*b*
Academic self-concept	2.96	0.49	2.68	0.35	−0.28 (0.17)
Self-esteem	3.08	0.54	2.77	0.65	−0.30 (0.22)
Importance academic self-concept	3.30	0.72	3.12	0.35	−0.18 (0.23)
Task orientation	3.38	0.48	3.18	0.48	−0.19 (0.18)
Self-enhancing orientation	2.39	0.75	2.25	0.35	−0.14 (0.24)
Self-defeating orientation	1.78	0.67	2.27	0.98	0.49 (0.23)
Avoidance orientation	2.02	0.66	2.21	0.51	0.20 (0.23)

[a]$n = 20$.

[b]$n = 11$, standard errors are in parenthesis.

retention is accompanied by lower perceptions of academic competence, suggesting a feeling of personal failure (Alexander et al., 2003; Goos et al., 2013; Jimerson, 2001; Kretschmann et al., 2019; Martin, 2011; Van Canegem et al., 2021; Xiang & Chiu, 2022).

Regarding students' self-esteem, our results align with our second hypothesis, as we found similar trajectories between retained and promoted students (H2). However, contrary to our expectations, promoted students showed a slight decrease in the importance they attributed to academic self-concept compared to their retained peers (H3) and, thus, our results do not support the third hypothesis. Nevertheless, it's worth noting that the levels of importance placed on academic self-concept by retained students consistently remained lower across the years. Altogether, these results may reflect students' strategies to protect and maintain their feelings of self-worth, which involve diminishing the value attributed to school-related activities, particularly by attributing less importance to academic competence (Harter, 1999; Nascimento & Peixoto, 2012; Peixoto & Almeida, 2010; Peixoto et al., 2016, 2017; Robinson & Tayler, 1986).

Concerning students' goal orientations, our findings did not entirely support our hypotheses. Although retained students consistently displayed lower levels of task orientation and higher levels of avoidance orientation (H3), these differences did not reach statistical significance. Additionally, we observed slightly different trajectories for self-enhancing and self-defeating orientation, with steeper declines noted for promoted students (H4). Moreover, these observed trajectories appear to align with the explanations mentioned earlier. On one hand, the experience of grade retention may indeed evoke feelings of failure and shame (De Castella et al., 2013; Covington, 2000). Consequently, in an attempt to protect feelings of self-worth, retained students might adopt negative academic behaviors and attitudes by lowering their expectations and disengaging from or avoiding school-related tasks (De Castella et al., 2013; Covington, 2000). While research on the effects of grade retention on these motivational variables is still limited, our findings are, broadly, in line with those of prior studies (Nascimento & Peixoto, 2012; Peixoto & Almeida, 2010; Peixoto et al., 2016, 2017).

This study also highlights a noteworthy result. Retained students scored lower on most of the self-perception and motivational variables even before being retained (i.e., Y1 for 7th-grade repeaters and Y2 for 8th-grade repeaters). These findings corroborate those found from Kretschmann et al.'s (2019) study, where more significant differences between retained and promoted students were found before retention took place. As suggested by Kretschmann et al. (2019), these findings illustrate that students, while anticipating the possibility of grade retention, may engage in negative self-evaluations, including feelings of failure, even before the retention itself.

In addition, it is worth noting that for all the variables considered, the scores of both groups of students are considerably low, especially in comparison with previous studies using similar Portuguese samples (e.g., Peixoto

et al., 2017). These findings revealed some weaknesses of social promotion, challenging the view that social promotion *alone* would be an effective alternative for retention. Instead, we argue that support must be given to *all* struggling students over and beyond their retention history (Goos et al., 2013; Valbuena et al., 2021).

As regard to the second aim of the study of estimating long-term effects of grade retention and contrary to our predictions, the results did not demonstrate that grade retention increases the chances of subsequent grade retention (H5), as found in previous studies (Geng & Rockoff, 2017; Raffaele Mendez et al., 2015). A tentative explanation would be the fact that these results refer to students' upper secondary education, which has a different organization and different grade retention standards and regulations. Moreover, the low participation rate in this longitudinal study may provide useful insights regarding students' school career. We hypothesise that, since grade retention is associated with an increase in students' mobility to different schools or alternative school tracks (Geng & Rockoff, 2017; Goos et al., 2013; Raffaele Mendez et al., 2015), it might be the case that students that were further retained changed schools between Y3 and W4.

Finally, concerning goal orientations, as our findings failed, once more, to reach significance, we cannot say that our results entirely support our hypothesis that stated retained students would present lower levels in self-concept, self-esteem, importance attributed to academic self-concept, task orientation and highest levels of avoidance orientation (H6). Nevertheless, the results revealed that, indeed, retained students demonstrated lower levels on these variables. These findings, despite being only exploratory, are in line with previous studies investigating the long-term effects of grade retention on students' self-concept, self-esteem, and goal orientations, revealing, once more, that the positive effects of grade retention tend to vanish along the way (Goos et al., 2021; Hwang & Cappella, 2018; Jimerson, 2001; Martin, 2011; Wu et al., 2010).

In conclusion, our findings appear to challenge common beliefs associated with grade retention. First, our results contradict the notion that the threat of grade retention serves as a motivation for students to work harder (Belot & Vandenberghe, 2014). Retained students scored lower on task and self-enhancing goal orientations and higher on self-defeating and avoidance orientations, suggesting that repeating all school subjects may actually harm their motivation (Goos et al., 2013; Hong & Yu, 2008), thus challenging the pursuit of task orientation.

Additionally, our results do not provide strong support for the 'gift of time' concept concerning grade retention (Hong & Yu, 2008; Smith & Shepard, 1988; Wu et al., 2010), as retained and promoted students displayed similar trajectories across the years in most variables. Furthermore, our findings contradict the idea that retained students would benefit from being placed in a classroom with less experienced students, where positive self-beliefs may emerge from comparisons with these peers. Although our results did indicate a positive effect on retained students' academic self-concept, this effect was only evident for one group of retained students and, moreover, it diminished in the long run. Thus, the small benefits observed were very short-lived, since no differences were found between retained and promoted students as they progressed to upper secondary education (Goos et al., 2021; Hwang & Cappella, 2018; Jimerson, 2001; Martin, 2011; Wu et al., 2010).

These findings may suggest that losing their peer group, who moved on to the next grade level, constitutes a more significant experience for retained students. This experience may trigger negative self-feelings, resulting from lower acceptance among their new classmates and the establishment of fewer relationships (Demanet & Van Houtte, 2016; Goos et al., 2013; Jimerson, 2001; Kretschmann et al., 2019; Martin, 2011; Pagani et al., 2001; Van Canegem et al., 2021; Wu et al., 2010; Xiang & Chiu, 2022).

5 | LIMITATIONS AND FUTURE DIRECTIONS

Despite the contributions of this study, our findings must be interpreted in light of its limitations. First, our sample is considerably small, and thus, our findings should be generalized with caution. The limited sample size may have also hindered our ability to achieve statistical significance in certain results and to conduct more complex analyses due to reduced statistical power. Studies investigating grade retention often deal with sample size issues (e.g., Klapproth

et al., 2016; Kretschmann et al., 2019) because it typically focuses on a specific subset of students, which corresponds to a smaller group of the school population. This issue is particularly relevant in longitudinal studies, which are more susceptible to sample attrition and missing responses.

Second, it's important to address some aspects regarding our measurement waves. We gathered data in the middle of the school year, which offers some advantages for pretreatment data, as noted by Kretschmann et al. (2019). However, it's crucial to acknowledge that we were unable to estimate the immediate short-term effects of grade retention, as seen in the study by Mathys et al. (2019), who collected data at the beginning of the retention year. Additionally, there are variations in the timing of our preretention and postretention measurements for different groups of retained students. Specifically, for 7th-grade repeaters, we have one preretention measurement point and two postretention measurement points, while for 8th-grade repeaters, we have two preretention measurement points and only one postretention measurement point. Furthermore, our long-term data exhibits time gaps, which have hindered our ability to investigate grade retention effects within a single comprehensive model. It is advisable for future studies to address these design challenges and strive for consistent and continuous measurement points for each retention group.

Third, in our study, we did our best to employ matching methods, as strongly recommended in previous reviews (Allen et al., 2009; Goos et al., 2021; Valbuena et al., 2021). However, it should be acknowledged that the limited number of baseline variables and covariates collected hindered the matching of promoted and retained students and contributed to sample reduction. Collecting important information related to grade retention could be challenging for studies using original and longitudinal data, given the volume of the data needed (Goos et al., 2021; Moser et al., 2012), but also given the sensitivity of the data (e.g., students' household situation) to be collected. Nevertheless, regardless of the methodological approach, collecting such information would be essencial, since grade retention has been consistently associated with some students' particular characteristics and contexts (Demanet & Van Houtte, 2016; Klapproth & Schaltz, 2015; Kretschmann et al., 2019; Nunes et al., 2018; Pereira & Reis, 2014).

A fourth limitation that should be noted is that we were unable to employ multilevel models in our data analysis, due to the small number of observations for each school. Since we are investigating a phenomenon within a school context, multilevel modelling is strongly advisable (Marsh, 2016). Additionally, we were unable to examine the effects of the school context, specifically, the proportion of repeaters in the school, on the relationship between grade retention and psychosocial outcomes. Previous studies have demonstrated that the composition of retained students in a school also impacts students' psychosocial outcomes (Demanet & Van Houtte, 2016; Hong & Yu, 2008; Pipa & Peixoto, 2022; Van Canegem et al., 2021). Hence, we recommend that future studies consider this moderating variable when assessing the effects of grade retention.

Finally, a significant portion of our results may be attributed to students' feelings of failure, the stigma associated with grade retention, and the diminishing value placed on academic-related tasks and activities. However, a more comprehensive understanding of these mechanisms would benefit from specific empirical support. To achieve this, we recommend that future research take into account some related variables, such as students' peer relationships (e.g., Demanet & Van Houtte, 2016; Pagani et al., 2001). Additionally, we suggest the collection of qualitative data through interviews with retained students to gain vivid insights into their perspectives and experiences related to grade retention (Anderson et al., 2005).

6 | CONCLUSION

Based on the results of this longitudinal study, which predominantly reveal minimal effects of grade retention, we could not support grade retention. As some authors have previously emphasized, in light of the economic, time, and societal costs associated with grade retention, its utility as a potentially beneficial intervention for students should be underpinned by consistently positive findings (Allen et al., 2009; Goos et al., 2021; Jimerson, 2001;

Valbuena et al., 2021). Regrettably, this study, along with the majority of high-quality studies, does not align with such expectations, as it tends to yield neutral outcomes in relation to grade retention (Allen et al., 2009; Goos et al., 2021; Valbuena et al., 2021).

In addition, we can only advocate for promoting students to the next grade level with additional interventions, given that at-risk promoted students also exhibited significantly lower scores on psychosocial outcomes. Instead, we encourage educators and policymakers to explore alternative interventions and practices for students facing academic challenges. A wide range of interventions and practices, encompassing parental engagement, reading programs, extended instructional time, peer or one-to-one tutoring, summer schools, and curriculum flexibility, have proven to be cost-effective in addressing students' learning difficulties (Higgins et al., 2022; Valbuena et al., 2021). Furthermore, based on the findings of this study, we recommend that these interventions also take into account students' self-concept and motivation to prevent them from experiencing grade retention (Higgins et al., 2022; Smith et al., 2022).

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

Data is available on request from the corresponding author due to privacy restrictions.

ETHICS STATEMENT

This study was approved by the Directorate-General of Education and by Ispa-Instituto Universitário's Ethical Committee (D/011/01/2019).

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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