A critical review of positive education: challenges and limitations

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Abstract

Positive education has gained increased interest and attention in the last decade. Born as an applied movement within positive psychology, positive education aims to introduce a positive approach to education to aid schools in promoting happiness, improving learning and performance, and reducing mental health problems among children and adolescents. Whereas relatively new, positive education has made notable progress and bears enormous potential. However, the movement still presents vulnerabilities and limitations that need addressing. With a focus on critical and supporting literature, this integrative review explores and brings together some of the most pressing challenges that positive education faces today. Tackling these vulnerabilities would positively contribute to the ongoing advancement of the movement.

1 Introduction

In the last decade, happiness education has attracted increasing interest among psychologists, educators, parents, and educational institutions worldwide (Allen et al., 2017). A rising number of academic and popular movements has called for the need to incorporate more holistic and positive approaches to education to respond to growing student disengagement, high underperforming rates, and the escalating prevalence of mental health problems in children and adolescents (Kern & Wehmeyer,

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2021a). The field of positive education has played a prominent role in this regard, becoming a momentous movement within positive psychology and educational science (Allison et al., 2020; Chodkiewicz & Boyle, 2017; Duan et al., 2020; Layard & Clark, 2015; Seligman & Adler, 2018).

1.1 What is positive education?

Positive education PosEd has been defined in a number of different ways. Seligman and colleagues (2009), for instance, have described it as a positive movement in "education for both traditional skills and for happiness" (p. 293); Oades and colleagues (2011), as "the development of educational environments that enable the learner to engage in established curricula in addition to knowledge and skills to develop their own and other's wellbeing" (p. 432); and Noble and McGrath (2015), as an applied field that "[integrates] the core principles of positive psychology with the evidence-informed structures, practices, and programs that enhance both wellbeing and academic achievement" (p. 4). Although no single definition of PosEd has been yet established, more consistent across these and other definitions is the claim that promoting emotional wellbeing among youths is a desirable goal by itself as well as an essential path to mental illness prevention, better learning, and greater academic success (Bernard & Walton, 2011; Noble & McGrath, 2008, 2015; Oades et al., 2011a, b; Waters & Loton, 2019; White & Murray, 2015).

Also consistent is the focus on the applied nature of the movement (Oades et al., 2011a, b; Waters & White, 2015; White & Kern, 2018). PosEd would not aim at introducing a new paradigm of education as much as implementing in schools those positive psychological interventions that have previously worked in the contexts of therapy (Calhoun & Tedeschi, 2006; Linley & Burns, 2010), organizations (Lyubomirsky et al., 2005) or the army (Seligman, 2011; Seligman & Fowler, 2011). Besides these interventions, PosEd draws from its own and other larger-scale initiatives delivered in the school contexts of the U.K., the U.S., and Australia. These include the Social and Emotional Aspects of Learning program (SEAL), with an emphasis on emotional intelligence and optimism (Hallam, 2009); the Social and Emotional Learning programs (SEL), similar to SEAL and applied worldwide (McKown, 2019; Zins & Elias, 2007); the Penn Resiliency Program (PRP), with an emphasis on resilience and character strengths, and amply applied to the U.S. army (Reivich et al., 2011); the BREATHE program, with an emphasis on mindfulness and self-control (Broderick & Metz, 2009); the Geelong Grammar School Project (GGS), the first full implementation of positive psychology interventions to an entire school (Hoare et al., 2017; Seligman et al., 2009); or the St. Peter's College initiative, another example of implementation of positive psychology interventions throughout an educational institution (White & Murray, 2015).

PosEd's perspective on education, while not entirely novel, can be nevertheless characterized by two distinctive features. The first feature is that, contrary to "traditional" or "remedial" approaches to schools, PosEd would aim at expanding education from its focus on repairing negative and dysfunctional behavior (e.g., bullying, burnout, dropouts, failure, addiction) to a focus on promoting positive and optimally functional behavior (e.g., resilience, self-esteem, hope, creativity, authenticity, grati-

tude, achievement, Durlak et al., 2011; Norrish & Vella-Brodrick, 2009). Nurturing what is right with students instead of what is wrong would provide a triple educational benefit: (1) to reduce depression and other mental health conditions among school-age children and adolescents; (2) to improve school and academic learning and performance, and (3) to promote happiness and satisfaction with life among the youth (Kern & Wehmeyer, 2021b; Keyes, 2009; Seligman et al., 2009). A series of school-applied studies on hope (Green et al., 2007), gratitude (Froh et al., 2009), resilience (Bernard & Walton, 2011), mindfulness (Kallapiran et al., 2015), character strengths (Madden et al., 2011), positive self-concepts (Bracken, 2009) or emotional intelligence (Buckley & Saarny, 2009) suggest positive effects of PosEd interventions on those three aspects (see also Gilman et al., 2009; Norrish, 2015; Waters & Loton, 2019; White & Kern, 2018).

Relatedly, the second feature is that PosEd commonly works on the precept that wellbeing is not only synergistic with better learning and higher school achievement (Seligman et al., 2009a) but that wellbeing might also precede these outcomes (Duckworth & Seligman, 2005; Duckworth et al., 2010). The underlying explanation is twofold: on the one hand, positive emotions would facilitate the accumulation of early successes that would set the tone for subsequent successes (Judge & Hurst, 2008), thus explaining why individuals would "do good by feeling good" instead of the other way around (Catalino & Fredrickson, 2011; Fredrickson, 2013); on the other hand, contrary to negative emotions, which would narrow cognitive processes and mainly foster critical and analytical thinking, positive emotions would enable a broader array of thinking possibilities and problem-solving skills, including creative thinking, holistic thinking, and innovative thinking (Seligman et al., 2009; Fredrickson & Joiner, 2002).

1.2 Expansion, evolution, and challenges of the movement

Since Seligman and colleagues (2009) declared PosEd as an entity in and of itself, the movement has expanded and evolved (Kern & Wehmeyer, 2021a). In addition to an expanding body of academic publications, school-based interventions, and approaches supporting wellbeing, PosEd has grown in tandem with the emergence of numerous institutions, associations (e.g., Positive Education Schools Association, PESA), and international networks (e.g., International Positive Education Network, IPEN) aimed at disseminating the movement's outcomes and calling for policymakers worldwide to implement PosEd in their respective national education systems. As late as 2018, more than seventeen countries had already joined positive education initiatives (Seligman & Adler, 2018).

PosEd has also evolved in the past decade. This evolution has run parallel to changes in the field of positive psychology, whose development has been described as three distinctive yet interrelated waves. These waves have focused on the study and promotion of positive phenomena (1st wave), the critical consideration of the divide between "positive" and "negative" (2nd wave), and the need to go beyond the individual to embrace more complexity (3rd wave) (Lomas et al., 2020; Lomas & Ivtzan, 2016). Critical works and reviews on positive psychology and PosEd have played an essential role in moving the discipline and the movement forward in the

last years. For instance, criticism from outside the movement has drawn attention to a series of limitations concerning PosEd and some of its highest-profile constructs (i.e., optimism, resilience, mindfulness, emotional intelligence), including theoretical and methodological shortfalls (Cabanas & González-Lamas, 2021; Martin & McLellan, 2013; Davidson & Kaszniak, 2015; Kristjánsson, 2012), lack of replicability and comparative studies (Loinaz, 2019), and the modest impact of some programs and interventions (Humphrey et al., 2010; Coyne, 2016; Gong & Jiao, 2019). Other studies have emphasized the individualistic and ideological biases of PosEd (Binkley, 2011, 2014; Cabanas & Illouz, 2019; Cabanas, 2018), the alignment of the movement with entrepreneurial values (Brunila, 2012; Brunila et al., 2021), and the psychological vulnerability that PosEd might instill in students (Ecclestone, 2012; Ecclestone & Hayes, 2009; Egido, 2018).

Criticism has not been only external: PosEd supporters have also pointed out similar theoretical and methodological limitations within the movement (Waters, 2011; White, 2016; Waters & Loton 2019). On this issue, some researchers have emphasized that whereas PosEd has made significant improvements and bears an enormous potential to introduce positive changes in education, the movement still presents unresolved problems and limitations that should be adequately addressed (Kern & Wehmeyer, 2021b; White & Kern, 2018; Ciarrochi et al., 2016). Whereas many of these limitations and problems have been noted and acknowledged (Shankland & Rosset, 2017; Waters & Loton, 2019), studies aimed at bringing these weaknesses together are nevertheless lacking. To fill this gap, the present review seeks to examine both the critical and the supporting literature to provide a synthesis of the pending vulnerabilities and challenges affecting the movement.

1.3 Objectives and scope of the review

PosEd is a relatively recent movement within positive psychology and educational science, so "clarity around what positive education is and does and boundaries around what should and should not be included [are] yet to be determined" (Kern & Wehmeyer 2021a, p. 5). The scope and areas covered by the movement have also expanded since it first appeared. Reviewing PosEd is thus a challenging task.

Some reviews have been nevertheless performed in the last years with different degrees of systematicity (Waters, 2011; Waters & Loton, 2019; White, 2016), shedding light on the movement's benefits, achievements, and potential. However, except for Kristjánsson's work (2012), publications aimed at reviewing PosEd from a more critical perspective are largely missing. Kristjánsson's paper (2012) addressed philosophical and historical concerns surrounding PosEd and highlighted conceptual and empirical challenges related to the ambiguity of the movement's aim, the lack of clarity around core concepts such as happiness or positive traits, and the need for more specific interventions that went beyond the personal and small-group level. Some of these critiques have been addressed in the past years (Kern & Wehmeyer, 2021b), but others remain to be tackled.

What are these remaining challenges? This is the question this review aims at answering. For this purpose, the present study does not intend to provide a balanced view of the movement but rather highlight and examine its weaknesses. These include

scientific limitations and ideological issues pointed out by the supporting and critical literature. Since critical studies on the matter are so far fragmentary and scattered, this review also aims to bring these critiques together to provide a comprehensive picture of the principal challenges that the movement faces today. It is worth noting that given the wide range of areas covered by PosEd, the review concentrates only on examining works that are explicitly framed as pertaining to the movement and that target specific outcomes such as learning, performance, and health in school and academic contexts. Due to length limits and following the results yielded by the bibliographic search, the review also focuses on a restricted number of positive concepts used and promoted by the movement, such as emotional intelligence, resilience, and optimism, excluding others such as hope, gratitude, or character strengths.

2 Method

The research methodology of this paper followed Torraco's (2005) guidelines for an integrative literature review using JSTOR and ScienceDirect databases (see also Cabanas, 2019). An integrative literature review is a form of bibliographic search aimed at locating, reviewing, and synthesizing representative literature on a specific topic or field of inquiry through the combination of systematic research with the authors' expertise on the subject. In line with the review's main objective, the bibliographic search was carried out in four different yet interrelated stages (see Fig.1).

2.1 Stage 1

The first stage had a general scope and aimed at retrieving PosEd's general works and studies explicitly framed as such and targeted learning, performance, and health outcomes. Consequently, the first stage was conducted with the word 'positive education' (in the title or abstract) in conjunction with 'achievement,' 'performance,' 'attainment,' 'learning,' 'health,' and 'school' (in the text). The same search was subsequently performed by replacing the word 'positive psychology' (in the title or abstract). Research papers, books, book chapters, and reports were allowed in the search. Additionally, the time frame applied in this stage was 2009–2020, as PosEd's start date is commonly attributed to Seligman's and colleagues' 2009 publication in 2009.

Also important was to determine what items to include as representative of PosEd and which to exclude. The primary obstacle in this regard is the lack of a common and consistent definition of the movement —itself a criticism highlighted by critics and supporters alike, as later commented. Multiple definitions for PosEd have been proposed in the last decade (White, 2016), and a vast array of constructs and processes have been studied in the field (Waters & Loton, 2019). Therefore, this first stage only included items explicitly framed as PosEd and/or positive psychology in the works reviewed in this study. The main limitation of this strategy is that it runs the risk of missing some relevant items. The main advantage is that it prevents non-relevant and unrelated information, hence minimizing potential biases such as self-
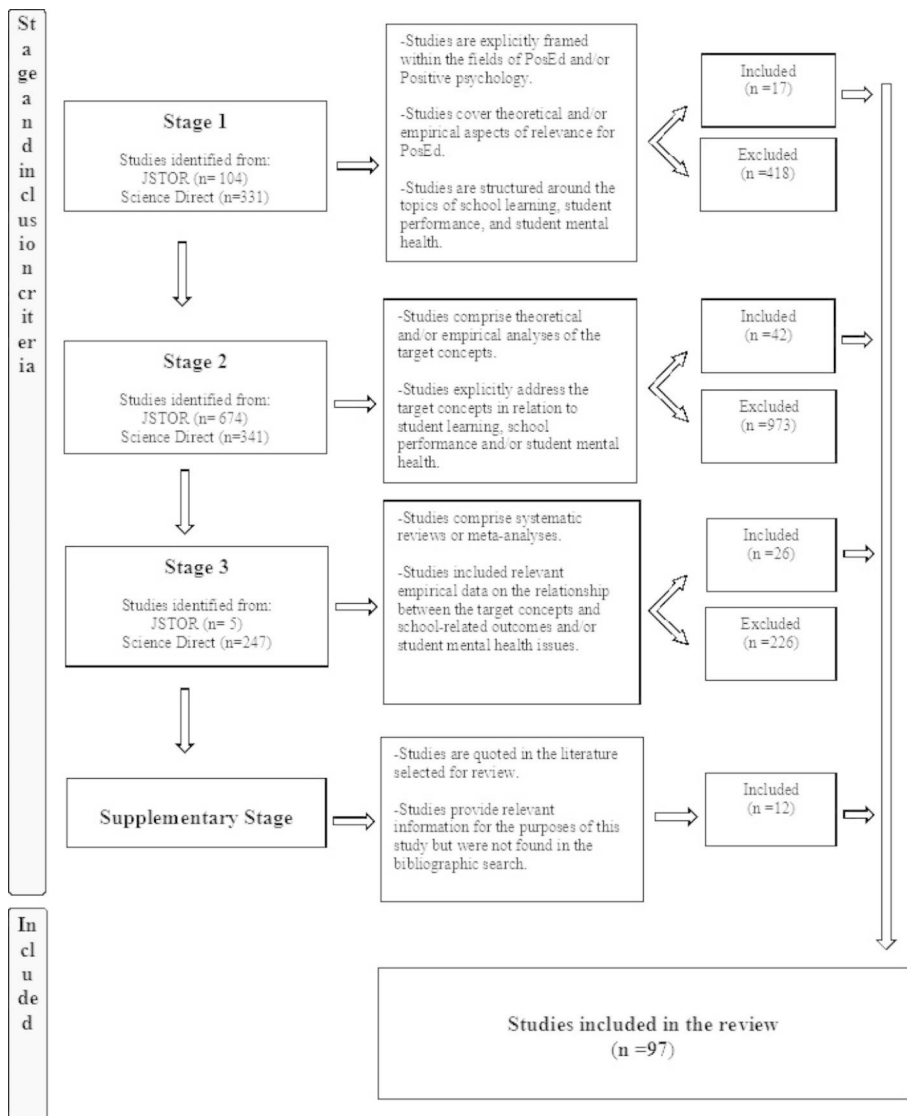
Fig. 1 **Flow chart of the bibliographic search**
 Graphics program used: Microsoft WORD

confirmatory biases or the inclusion of false positives. Given the aim of this review, such a strategy was regarded as the most appropriate to follow.

To qualify for inclusion at this first stage, items had to meet the three following criteria: (1) they were explicitly framed within the fields of PosEd and/or positive psychology (e.g., items were authored by researchers self-described as positive educators and/or positive psychologists; items explicitly stated to pertain to one or both fields); (2) they covered theoretical and/or empirical aspects of relevance for PosEd (e.g., items addressed theoretical strengths, pointed out empirical limitations,

or raised methodological concerns); (3) they were structured around the topics of school learning, student performance, and student mental health (including factors such as stress, anxiety, and wellbeing). The search yielded 435 results (JSTOR: 104; ScienceDirect: 331). All the abstracts were independently screened and judged by the authors of this paper, and diverging assessments were discussed until a consensus was reached. Duplicates between databases were also removed. A total of 17 items were therefore selected in this first stage. The small number of studies here selected is because most items did not meet the third criterion. Such a result is consistent with Waters and Loton's (2019) study, which observed that "only one-sixth of positive education studies included school-related or academic outcomes" (p. 38).

2.2 Stage 2

Since PosEd is a relatively new movement within positive psychology, it continues to draw from concepts and interventions that the discipline has applied to schools and other contexts in the last two decades (Seligman & Adler, 2018; Duan et al., 2020). In the previous stage, it was noticed that important positive psychological interventions based on positive concepts and skills such as emotional intelligence, resilience, or optimism currently included within PosEd were not labeled "positive education" at the time of publication but were more commonly referred to as positive psychology interventions (PPI) in schools (Waters, 2011; Hoare et al., 2017). In this regard, stage 2 aimed to search for positive psychology studies in school settings that targeted learning, performance, and health outcomes based on key positive concepts used and promoted in PosEd. Considering the vast myriad of positive concepts studied under the umbrella of positive psychology in the school context (Froh et al., 2011; White & Kern, 2018), the search focused on positive concepts that in the previous stage were found to be most frequently mentioned (Shankland & Rosset, 2017; Hoare et al., 2017; Seligman et al., 2009; Waters & Loton, 2019), are currently relevant (Kern & Wehmeyer, 2021b), relate to the targeted outcomes of the study, and continue to have some controversy around them according to both supporting and critical literature. These positive concepts were: 'resilience,' 'mindfulness,' 'optimism,' 'emotional intelligence,' 'strengths' and 'self-esteem.'

Separate searches were therefore conducted for each of these concepts (in the text) in combination with 'positive psychology' (also in the text) and 'education' (in the title or abstract). Since the focus at this stage was on these concepts rather than on PosEd, the time frame used was wider: 2000–2020. The search in this stage yielded 1015 results (JSTOR: 674; ScienceDirect: 341). To qualify for inclusion at this stage, items had to meet the two following criteria: (1) they comprised theoretical and/or empirical analyses of the target concepts (e.g., items provided a theoretical reflection on the concept or tested an intervention based on it); and (2) they explicitly related the concept to student learning, school performance and/or student mental health issues. As in the previous stage, abstracts were independently screened and judged by the authors of this review, and diverging assessments were discussed until a consensus was reached. Duplicates between databases were removed. 42 items were included in this second stage.

2.3 Stage 3

We conducted a third search related to stage two with a specific focus on systematic reviews and meta-analyses. Following the rationale of the previous stage, the same time frame (2000–2020) was applied here. Independent searches were also performed based on the terms 'resilience', 'mindfulness,' 'optimism,' 'emotional intelligence,' 'strengths,' and 'self-esteem' (in the title or abstract). For each concept, the search was conducted in two steps: first, in combination with the terms 'education' and 'systematic review' (in the title or abstract), and second, in combination with 'education' and 'meta-analysis' (in the title or abstract). The search yielded 252 items (JSTOR: 5; ScienceDirect: 247).

The inclusion criteria used at this stage were the following: (1) items were systematic reviews or meta-analyses; (2) the analysis included relevant empirical data on the relationship between the concept and school-related outcomes and/or student mental health issues. Again, abstracts were independently reviewed by the authors of this paper, and differing assessments were discussed until agreement was achieved. No duplicates between databases were found. A total of 26 studies were included in this stage. Finally, it is worth mentioning that eleven studies included in stage 2 were cited in the 26 studies selected in this stage at least one time. However, since the review aims to provide a synthesis of the appointed vulnerabilities of the movement rather than a meta-analysis of the data, these studies were not removed from the analysis.

2.4 Supplementary bibliographic search

A supplementary bibliographic search in a fourth stage was carried out based on the citations from the items obtained through the three previous stages. The aim was to detect potentially relevant research articles, books, and book chapters overlooked in the previous stages. A total of 12 additional items were included for analysis in this stage.

3 Results

Altogether, 97 items have been reviewed in this paper. These items were distributed as follows. According to the source, there are 55 research papers, 22 systematic reviews and meta-analyses, 9 books, 6 book chapters, and 3 reports. According to the journals' main subject, 37 research papers were published in scientific journals of psychology, 13 in scientific journals of education, 20 in scientific journals of educational psychology, and 7 were published in other scientific journals. According to the publication date, 10 out of the 97 items were published in 2000–2005, 24 items were published in 2006–2010, 38 items were published in 2011–2015, and 25 were published in 2016–2020. All the items included for analysis in this review are marked with an (*) in the References section.

Based on the analysis, the present review was organized as follows. The first section, 'Limitations raised within the movement,' focuses on the limitations found in

the supporting literature on the field. Three main clusters of weaknesses were here identified and discussed: (1) unclear conceptual framework and the decontextualized nature of the movement, (2) pending methodological and empirical challenges, and (3) limited efficacy of certain key interventions. The second section, 'Scientific short-falls and ideological biases,' tackles critical literature and the main challenges posed by this literature. Three main types of criticism were identified and examined in this section: (1) conceptual and methodological weaknesses, (2) empirical limitations and mixed efficacy of interventions, and (3) ideological biases. The paper concludes with a brief personal remark on the status and future of the field.

4 Limitations raised within the movement

Some important limitations have been pointed out within the ranks of PosEd itself in the last few years that are still challenging for the movement. Three different yet interrelated clusters of problems were identified: (1) unclear framework and the decontextualized nature of the field, (2) pending methodological and empirical challenges, and (3) limited efficacy of key interventions.

4.1 Unclear framework and the decontextualized nature of the movement

Experts such as White & Kern (2018) have noted that while PosEd has shown a positive educational impact, the movement can be ineffective or harmful if limitations are not acknowledged. The authors also point out that the field should incorporate a more sophisticated discourse on pedagogy, avoid overgeneralizations, and provide more specific guidance for teacher practice in intervention programs (see also Chodkiewicz & Boyle, 2017). The authors also argue the need for more conceptual clarity and a unified framework that convincingly brings positive psychology, educational knowledge, and pedagogical practice together. Similarly, Thomas et al. (2016) highlight that PosEd's lack of conceptual clarity has led the field towards "a fragmented approach to implementation that is inconsistent with current best-practice knowledge" (p. 507, see also Waters & Loton 2019; Waters, 2011; White, 2016).

Other authors such as Ciarrochi et al. (2016) have warned about the decontextualized nature of the field. According to these authors, most positive psychological interventions are "content-focused," i.e., presume that increasing positive mental and emotional content and diminishing negativity is inherently good, regardless of the context. Following Ciarrochi et al's analysis, "content-focused" positive interventions would suffer from three substantial problems so far unsolved. First, these interventions are often presented as universal and individual-oriented solutions for a myriad of challenges within education—from academic underachievement and disengagement to mental illness or bullying—, thus ignoring critical external factors that might contribute to explaining dysfunctional behavior and instead frame problems as deficiencies of students themselves (see also Lomas et al., 2020; White & Kern, 2018). Such a view would tend to underestimate the role of the context in explaining dysfunctional behaviors and prompt students to blame themselves for their difficulties (Ciarrochi et al., 2016).

A second problem suggested is the tendency of positive psychology interventions to disregard the importance of negative thoughts and feelings. Minimizing the role of unpleasant inner experiences, the authors claim, risks these interventions being misguided and end up being detrimental in terms of mental health prevention and the development of effective coping strategies (see also Lomas & Ivtzan 2016) — whereas this is a still-pending challenge for PosEd, as well as for positive psychology at large, it is worth noting again that a more critical consideration of the overemphasis on the positive has been taken recently (Lomas et al., 2020; Kern & Wehmeyer, 2021a). The third problem considered by Ciarrochi et al. (2016) is that positive interventions might set unrealistic standards for happiness, which, paradoxically, could undermine wellbeing and lead to disappointment, hence producing the very opposite effects that these interventions aim to achieve.

As an alternative to the dominant "content-focused approach" in PosEd, Ciarrochi et al. (2016) suggest what they call a "context-focus approach." This latter approach would connect positive interventions to specific environments and overcome some of the limitations that PosEd continues to have. Similar proposals have more recently been put forward by Allison et al. (2020). Moreover, Ciarrochi et al. (2016) point out that PosEd has not only privileged content over context but also the individual over the collective. In this regard, the authors propose a Systems Informed Positive Psychology (SIPP) perspective for PosEd, that is, a more collectivistic approach that allows the field to move away from its individualistic focus (Allison et al., 2020) — later in this paper we shall address PosEd's individualistic bias in more detail.

4.2 Pending methodological and empirical challenges

A series of methodological and evidentiary challenges in the field have been emphasized, as well. For example, in a systematic review of school-based positive psychology interventions, Waters (2011) points out that whereas these interventions moderately work towards increasing students' wellbeing and academic performance, the results should nevertheless be taken with caution. According to Waters, a non-negligible number of interventions solely relied on self-reports, were only evaluated in their pilot stages, used small samples, and failed at using random assignment and control groups. In a more recent review, Waters and Loton (2019) stress that several of these limitations remain unsolved. They also raise concerns about generalizability issues and replicability problems. In this regard, the authors note that only 29% of PosEd studies include proper experimental designs, only 13% of positive constructs have been studied 10 or more times (see also Froh et al., 2011), or that "the cumulative evidence needed to establish the generalizability of many positive education interventions is [still] missing" (Waters & Loton, 2019, p. 2).

Another point put forward by Waters to explain problems of generalizability is that most PosEd interventions had only been implemented in isolated classrooms or through pastoral care initiatives (Waters, 2011; Noble & McGrath, 2015). An example of this is St. Peter's College, an all-boys K-12 school in Adelaide, South Australia, which introduced positive education in 2011. Subsequent assessments have suggested beneficial effects on self-reported wellbeing, school engagement, and satisfaction with the program, especially among at-risk students (White & Murray, 2015).

Nevertheless, the idiosyncratic setting and cultural environment of colleges such as St. Peter's college (e.g., High-class, Christian, Anglo-Saxon, boys-only) would limit the generalizability of PosEd results to other school settings and environments.

Similar methodological and empirical weaknesses have been noted regarding more specific PosEd interventions in the field. Gillham and colleagues (2006) reported that, whereas successful, the positive effects of the Penn Resiliency Program (PRP) on factors such as school performance or health ranged from moderate to inconclusive and varied considerably across studies, with the most potent positive effects only found in those interventions carried out by members of the PRP team or in those closely supervised by them. It has been suggested that the overall moderate and heterogeneous results yielded by resilience-based interventions may be due to small samples, poor research designs, and the low number of random controlled trials (RCT's) conducted during these interventions (Boman et al., 2009). These limitations have been more recently pointed out by Waters and Loton (2019), who noted that only 65% of resilience-based interventions tested whether positive outcomes were due to improved resilience skills instead of other factors related to interventions, such as the teacher-student relationship, bonding with classmates around personal topics, or enjoying the material.

4.3 Limited efficacy of key interventions

Analogous shortcomings have been pointed out apropos of strength-based and mindfulness-based interventions, both key constructs in the movement (Kern & Wehmeyer, 2021b). Regarding the former, recent reviews suggest that whereas some strength-based interventions have proved efficient in increasing students' engagement, creativity, hope, and love of learning (Madden et al., 2011; Seligman, 2011), studies that further support their efficacy remain scarce (Waters & Loton, 2019). Their impact on academic performance also remains ambiguous. In this regard, Shoshani and colleagues (2016) reported that strength-based programs could result in an average gain of 7% in standardized academic performance tests. In contrast, Marques and colleagues (2011) found no significant difference in academic achievement between experimental and control groups over time. For its part, a meta-analysis of school-based mindfulness interventions carried out by Kallapiran and colleagues (2015) concluded that these interventions help improve stress, anxiety, and depressive symptoms but warned that positive results should be interpreted with caution. Among the limitations, the authors stressed that one-third of the reviewed studies were rated as poor quality, overall results were heterogeneous, and the confidence interval range used in most of them was significantly broad. The authors also pointed to publication bias as "another important limitation" (p. 193).

PosEd's flagship programs such as the Geelong Grammar School (GGS) project have not escaped internal "buts," either, especially regarding some evidentiary deficits and theoretical hurdles. For instance, in their implementation of the GGS project, Seligman and colleagues (2009) stated that although their impression was that the initiative "was enormously successful," they "have no systematic data" to support such claim (p. 304), suggesting that more studies assessing the program's efficacy were therefore needed. Nevertheless, whereas the GGS project is often cited as a model

for PosEd (Norrish, 2015; O'Connor & Cameron, 2017), more scientific studies that support its effectiveness (Norrish, 2015) and generalizability (Chodkiewicz & Boyle, 2017) would be needed.

5 Scientific shortfalls and ideological biases

Since PosEd started in 2009 (Seligman et al., 2009), critical commentators from different disciplines have questioned the basis of the movement (Brunila, 2012; Cabanas & Illouz, 2019; Cabanas, 2018; Ecclestone, 2012; Ecclestone & Hayes, 2009; Egido, 2018; Kristjánsson, 2012; Binkley, 2011, 2014) and some of its central constructs (Coyne, 2016; Davidson & Kaszniak, 2015; Gong & Jiao, 2019; Cabanas & González-Lamas, 2021; Gorard et al., 2012). An examination of the critical literature is next provided. As in the previous section, we identified three main clusters of problems commonly addressed to PosEd and its close related concepts and interventions: (1) conceptual and methodological weaknesses, (2) empirical deficits and the low efficacy of interventions, and (3) ideological biases.

5.1 Conceptual and methodological weaknesses

As Miller (2008) pointed out, research evidence is only as good as the assumptions underlying the concepts, terms, and relationships being tested. In the absence of a consistent definition of what is and what is not, PosEd's theoretical ambiguity and eclecticism negatively affect the movement on methodological and empirical levels. Such inconsistency goes beyond PosEd's nebulous and heterogeneous nature and extensively affects some of its core positive concepts. Examples of this are the concepts of mindfulness and emotional intelligence, widely used within the field (Kern & Wehmeyer, 2021b).

Regarding the former, the plethora of meanings and the lack of consensus around mindfulness has been extensively analyzed, among others, by Van Dam and colleagues (2018), who warn about the "current confusion" and manifold interpretations of the term: "there is neither one universally accepted technical definition of 'mindfulness' nor any broad agreement about detailed aspects of the underlying concept to which it refers (p. 38, see also Chiesa 2013; Gethin, 2011; Hanley et al., 2016; Mikulas, 2011). The authors also point out the consequences of the semantic ambiguity for empirical and clinical studies of mindfulness, including insufficient construct validity and difficulties in operationalizing and measuring the concept, and emphasize that "mindfulness research is especially vulnerable" to "methodological issues" (Van Dam et al., 2018, p. 42; see also Kreplin et al., 2018).

Relatedly, the efficacy of mindfulness-based interventions has also been challenged by several studies claiming that the widespread use of these interventions in clinical and educational practice is premature (Coyne, 2016; Davidson & Kaszniak, 2015; Dimidjian & Segal, 2015; Farias & Wikholm, 2015; Barker, 2014; Goyal et al., 2014; Greenberg & Harris, 2012), if only because numerous existing interventions have so far been insufficiently tested: only 30% of research using mindfulness-based interventions have moved beyond Stage 1 (intervention generation/refinement);

barely 9% of research included active control groups; and roughly 1% of all research has been conducted outside research contexts (Coyne, 2016; Van Dam et al., 2018).

Emotional intelligence is another loosely defined concept (Humphrey et al., 2007; Gong & Jiao, 2019). In their extensive review, Matthews and colleagues (Matthews et al., 2004) argue that there is no clear, consensual definition of emotional intelligence and stress that the multitude of qualities covered by the concept at times can appear overwhelming: "the range and scope of definitions that currently exist within the literature make inevitable comparisons between the science of emotional intelligence and the allegory underlying the Tower of Babel" (p. 180). The authors identify eight different conceptualizations of emotional intelligence (e.g., temperament, adaptiveness, acquired skill, insightful self-awareness, right person-fit environment) that also differ between authors, approaches, and assessment techniques. Similarly, other studies note that emotional intelligence is a term "bereft of any conceptual meaning" (Zeidner et al., 2002), a problem that remains unresolved and that negatively affects any intervention based on the concept (see also Barchard 2003; Zeidner et al., 2004).

Conceptual ambiguity lies behind the heterogeneous results of emotional intelligence studies in the past few years. In their recent meta-meta analysis, Gong and Jiao (2019) grouped studies of emotional intelligence into broad models: mixed emotional intelligence models, which consider the construct as both a malleable ability and a personality trait, and ability emotional intelligence models, which address the construct as a malleable cognitive ability independent from personality. The authors found that the effect sizes of emotional intelligence studies in both models appeared not only to be highly heterogeneous and generally modest (β average$=0.16$ for ability emotional intelligence studies, and β average$=0.272$ for mixed emotional intelligence studies), but also that effect sizes in mixed emotional intelligence studies had significantly decreased over the last two decades. According to the authors, the explanation for this decline is that the effect sizes in the original studies were generally overestimated, pointing out three main reasons for such a decline: first, a possible overlap between mixed emotional intelligence and general factors of personality (e.g., optimism); second, the increasing use of more objective methodologies than self-reports to measure emotional intelligence, and growing awareness of the "dark side" or adverse effects of emotional intelligence. The authors conclude by recommending reconsideration of the definition of mixed emotional intelligence.

5.2 Empirical limitations and mixed efficacy of interventions

With a more robust conceptualization, empirical limitations regarding other PosEd concepts such as self-esteem, optimism, and resilience are also worth considering. For example, in their comprehensive review of the concept of self-esteem, Baumeister and colleagues (Baumeister et al., 2003) found modest correlations between self-esteem and school performance (r range$=0.10$—0.33, depending on the study). They also found that some interventions aimed at boosting self-esteem could even have a counterproductive impact on academic performance, the reduction of depression, and the prevention of unhealthy behavior such as smoking, drug abuse, teen pregnancy, or obesity. Based on the results, the authors argue against the presumed causal link between self-esteem and school attainment, pointing out that the former should be

understood more as the result of higher attainment than the reverse (Baumeister et al., 2003, p. 38; see also Gorard et al., 2012; Gutman and Shoon,2013). Other comprehensive meta-analyses (Sowislo & Orth, 2013) have suggested an also modest and non-causal yet more significant and consistent relationship over time between self-esteem and variables such as depression (β= -0.16) or anxiety (β= -0.08), so the debate about the effects of self-esteem on mental health remains open (see also Orth & Robins 2013).

Relatedly, other studies point out that nurturing positive self-concepts might not only feel artificial but could also be detrimental for underachieving students who might feel responsible for things that are not under their control or who might believe that they are more competent than they are —which may end up promoting the same depressive feelings that these interventions seek to resolve in the first place (Craig, 2007; Ecclestone, 2012; Ecclestone & Hayes, 2009; Gorard et al., 2012). In the same line, other studies suggest that in practice little is gained from nurturing positive self-concepts to improve school outcomes when the real underlying difference seems to stem from actual competence rather than from beliefs about competence (Martin & McLellan, 2013).

This suggestion resonates with more recent reviews of the notion of "self-assessment." For example, Andrade (2019) argues that non-formative self-assessments, that is, self-assessments that are not accompanied by specific feedback for subsequent adjustment and correction, are not very useful from a pedagogical perspective. As she points out, this is especially the case with global self-assessments of one's overall ability (e.g., self-esteem, positive self-concept), whose focus on the self (e.g., "I am a good student," "I am bad at math") rather on specific tasks (e.g., "I did not solve most of the algebra problems") have a limited influence on learning. For their part, less critical approaches have also drawn similar conclusions. For instance, in their extensive meta-analysis, Valentine and colleagues (2004) reviewed over 200 studies on the relationship between positive self-concepts and academic achievement, concluding that whereas "findings are consistent with the view that self-beliefs can influence academic achievement (…) the overall estimated relations between self-beliefs and subsequent achievement, controlling for initial achievement, is not large (β=0.08)" (p. 126–127). However, the influence varied depending on the specificity of self-beliefs: those pertaining to specific academic domains represented a more important influence on achievement (β=0.12) than those pertaining to global or general beliefs about the self (β=0.06).

Finally, some key interventions in PosEd such as the Penn Prevention Program (PPP) and the Penn Resilience Program (PRP) have also been scrutinized critically, yielding a very mixed picture. Regarding the PPP, Spence and Shortt (2007), for instance, pointed out that several studies that administered the program in schools produced modest effects on the reduction of depressive symptoms among adolescents. The authors also emphasize that since these interventions focus on isolated individuals, they tend to overlook the modulatory effects that the context plays in the etiology of the very same problems and virtues that these programs seek to solve and enhance, respectively. Another problem highlighted by these authors is that these interventions tend to treat "youths" as a relatively homogeneous, universal group of people, neglecting the fact that interventions may be beneficial for some individuals

but not others —a point suggested by other critical works on PosEd (Gorard et al., 2012; Gutman & Schoon, 2013; Humphrey et al., 2010). Similar critiques have been addressed to the PRP. This positive psychology initiative has also been extensively criticized for its limited effect on performance and the prevention of mental health problems, as well as for its methodological shortfalls —including design problems, lack of pilot-testing and control groups, or significant revisions of and improvisations due to weak impact (Britt et al., 2016; Brown, 2015; Eidelson & Soldz, 2012; Friedman & Robbins, 2012).

Generally speaking, the review conducted in this paper notes that more robust methodological designs able to establish clear relationships between students' optimism, resilience, or emotions and school/academic performance are still needed. An interesting exception to this comes from the relatively recent longitudinal study by Pekrun and colleagues (2017) on the effects of positive and negative emotions on academic performance in mathematics. These authors tested a reciprocal model of emotion and achievement in a sample of 3,425 students in Germany. Results showed that, whereas moderate, positive emotions such as pride and enjoyment predicted end-of-year grades (β range=0.11 to 0.13) and vice versa (β=0.11). Nevertheless, contrary to PosEd' common claims, the authors also showed that negative emotions were stronger predictors of students' academic achievement than positive emotions. For example, whereas positive and negative emotions similarly predicted end-of-the-year grades (β range=0.11 to 0.13 and β range= -0.08 to -0.14, respectively), negative emotions were better predictors (β range= -0.06 to -0.07) than positive emotions (β=0.01, non-significant) of math performance when standardized math tests were used.

5.3 Individualistic bias

A great deal of the critical literature on the topic has focused on concerns other than the scientific ones, also worth noting here. Amongst them stand out the criticisms raised against the individualistic bias underlying the movement. Authors such as Cabanas & Illouz (2019), for example, have argued that PosEd should be viewed as symptomatic of a long-standing tradition of therapeutic pedagogies built upon the precept that psychological factors are more fundamental facilitators of, and barriers to, school achievement than sociological or contextual ones (see also Cabanas & González-Lamas 2021; Binkley, 2014; Ecclestone & Hayes, 2012). More specifically, the authors argue about the tendency of PosEd to play down the importance of socioeconomic and other contextual factors in learning and achievement (see also Ciarrochi et al., 2016; Cabanas, 2018).

On the one hand, this bias would impact research by affecting what topics are given preference and which are not, thus partly explaining why cultural and social factors commonly receive limited attention in PosEd literature. In this regard, Waters and Loton (2019) reported that only 2 of the 75 PosEd studies reviewed were conducted in collectivistic countries, pointing out that the lack of cross-cultural research in the field was concerning. Relatedly, the individualist bias might also distort research and intervention outcomes by introducing self-confirmatory issues. Gorard and colleagues (2012) showed that the positive association between constructs like self-effi-

cacy, self-esteem or self-control, and educational outcomes "tend to disappear when high-quality contextual data is available" (p. 10). Such criticism is consistent with other works that argue that the importance of social and contextual factors (e.g., family income, parental involvement, gender and race, school environment, educational policies) tend to outweigh individual ones in explaining mental health, learning, and achievement among the young (Chowdry et al., 2011; Duncan & Magnuson, 2005; Sirin, 2005).

On the other hand, the individualistic bias would also affect the content of school interventions and influence those receiving them. In this regard, Trask-Kerr and colleagues (2019) showed that 88.36% of the students who went through a PosEd program interpreted success and prosperity in individual rather than collective terms in contrast with the 35.59% of the comparison group students, much more likely to invoke economic, political and social equality issues. Relatedly, PosEd's eclectic aim at applying to schools "what works" in the contexts of therapy, organization, or the army might overlook the fact that what works in one context will not necessarily work in another —just a what works in one school might not work in another. The complexity and idiosyncrasy of each educational setting should be carefully taken into consideration to avoid the undesirable imposition of values and concepts — and overgeneralization problems, as previously commented. Notable inter-group and inter-cultural differences are indeed found in feeling rules, happiness conceptualizations, and emotional behaviors (Friedlmeier et al., 2011; Loinaz, 2019). Overlooking this might lead to ambiguous results, undesirable interventions, and ineffective or even counterproductive outcomes when interventions directly translate from one context to another.

6 Conclusion

PosEd has gained increasing attention and influence in the last decade. Born as an applied movement within positive psychology, PosEd aims to introduce a more holistic and positive approach to education to reduce mental health problems, improve school and academic performance and promote happiness and positive skills among children and adolescents. Whereas relatively recent, the movement has made significant progress and has enormous potential to introduce the educational changes it sets for itself. However, there is much room for improvement. PosEd still presents significant problems and limitations that need addressing. In this regard, critical works and analyses are essential to help PosEd continue moving forward. Criticism on the movement, whereas varied and increasing, is nevertheless scarce and dispersed, and reviews that compile and synthesize critiques from different angles are largely missing. The present review aimed at filling this gap. By examining both the critical and supportive literature on the movement, the review has brought these pieces of criticism together to provide a synthesis of the pending vulnerabilities and challenges of the movement. Given the range of areas and concepts covered by the movement, the review has focused on examining works targeting the outcomes of learning, performance, and health and has tackled some of the most frequently mentioned and

relevant positive concepts in PosEd related to the target outcomes, such as optimism, emotional intelligence, mindfulness, resilience, and self-esteem.

The review results showed that PosEd still presents vulnerabilities concerning its unclear theoretical framework, the decontextualized nature of the movement, and ambiguities surrounding key positive concepts such as emotional intelligence or mindfulness. Methodological and empirical challenges have also been noted. These include excessive reliance of the movement on self-reports, overgeneralization of results, limited use of control groups and lack of replication in research studies and interventions, generalized use of small samples, and modest efficacy of flagship programs in the movement regarding outcomes such as learning, performance, and mental health in children and adolescents. The review further points out the individualistic bias still underlying PosEd and the need for more significant consideration of social, cultural, and contextual factors in research studies and interventions. Tackling these vulnerabilities would undoubtedly contribute to the ongoing advancement of the movement.

On this point, it is fair to remark that many of the conceptual and methodological problems noted herein regarding PosEd, are not exclusive to the movement but affect the fields of psychology, education, and educational psychology at large. In the last few years, psychologists and educationists have begun to question the robustness of certain conceptual frameworks and empirical research as many long taken-for-granted results might have been exaggerated, effect sizes overestimated, and few studies have been able to be replicated (Francis, 2014; Gong & Jiao, 2019; Hartgerink & Pernet, 2015). Some questionable research practices and notable biases have also been exposed (Spellman, 2015). The unearthing of these problems has led some to talk about a "replicability crisis" that affects psychological and educational science—as well as other natural and social sciences (Baker, 2016). However, the fact that these and other scientific problems are not unique to PosEd does mean that the movement should evade responsibility; on the contrary, this should motivate the field to keep on improving its scientific quality. We believe that PosEd would significantly benefit from addressing its pending vulnerabilities.

The recent publication of the *Palgrave Handbook of Positive Education* (Kern & Wehmeyer, 2021b) is proof that the movement is heading in the right direction. The handbook provides valuable resources, guidelines, and recommendations for the application of PodEd within schools, includes case examples to illustrate what PosEd looks like in practice, and examines evidence-based tools and techniques aimed at both students and teachers to help improve learning, promote wellbeing, and create more positive and engaging educational environments. Further, the handbook calls for a growing recognition of the importance of contextual and environmental factors, a higher emphasis on the complexity and cultural diversity of the classroom setting, a broadening of focus beyond the individual and the positive-negative divide, and the need to continue refining ways for defining, studying, and applying PosEd through open and critical dialogue. These and other challenges that the movement currently faces and will continue to deal with in the coming years have been noted in this review.

6.1 Recommendations

A number of recommendations for PosEd researchers and practitioners would directly follow from the review's results. On the one hand, a more substantial consensus about what is and what is not PosEd should be achieved. This includes more clearly establishing what concepts the movement should incorporate and pursue and which not. A clearer and more coherent theoretical and methodological framework would help PosEd establish as an area of study in its own right, able to incorporate positive psychological knowledge and developments from other fields of study in psychology, education, or sociology. Otherwise, the movement risks becoming just a fad or an umbrella name for a series of approaches, theories, and practices inconsistently brought together and eclectically applied to the school setting.

On the other hand, PosEd should pursue more ambitious research designs in studies and interventions. This involves the use of more extensive and more diverse samples that include subjects from different ages, educational levels, and cultural and socioeconomic backgrounds; well-controlled tests and randomized controlled trials in investigations; a higher number of cross-cultural and longitudinal studies; the replication of flagship and key interventions, or the use of qualitative methodologies that complement the mainly quantitative approach of the movement. Relatedly, and in line with the third wave recently started in positive psychology, PosEd should continue in the direction towards embracing higher contextual and environmental complexity and move from the principal focus on the individual level, thus addressing shortcomings and distortions associated with the individualistic bias, as previously noted.

Finally, special consideration should be given to the schools' idiosyncratic context, needs, and material and human resources when implementing PosEd strategies and interventions. On the one hand, it would be important that researchers provided more specific practical guidelines to teachers and practitioners for strategically applying PosEd within the complexity of different school environments. On the other hand, schools should be more actively engaged in providing feedback on the benefits and shortcomings of PosEd implementation in their respective environments. Closer collaboration between researchers and practitioners would allow for a more thorough exploration of the strengths and weaknesses of the strategies and interventions applied.

6.2 Limitations and future directions

The present review has several limitations worth mentioning and considering in future studies. First, in addition to JSTOR and ScienceDirect, databases such as Psych Info or SCOPUS could have been included in the bibliographic search. Additional databases would have provided a more comprehensive number of results and potentially relevant items to analyze in this review, so future reviews should consider including these and other databases to ensure higher representativity and relevance of the items retrieved.

Second, whereas the present review concentrates on analyzing a limited number of relevant outcomes and concepts in the movement, future studies may consider cov-

ering a broader range of research areas and constructs related to PosEd. This would allow for a more complete critical examination of the vulnerabilities and potential of the movement.

Third, whereas specific data has been provided, the review focused on a narrative presentation of the vulnerabilities of the field rather than a systematic description of the data. This approach was chosen because it allows for a more extensive and detailed description of the problems and the reasons underlying these vulnerabilities according to the critical and supporting literature on the topic. However, critical meta-analyses and systematic data reviews are still missing, so future inquiries should adopt a more quantitative approach.

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