



Child Self-Report Measures of Primary-Secondary Transition Experiences and Emotional Wellbeing: An International Systematic Literature Review

LITERATURE REVIEW

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ABSTRACT

A systematic literature review of international empirical research was conducted to examine what child self-report measures have been used to assess their primary-secondary school transitions experiences and/or emotional wellbeing. The systematic review covered the period 01/2008 and 03/2021 with the aim of (a) understanding authors' conceptualisation of primary-secondary school transitions and emotional wellbeing, and (b) systematically reviewing transitions and emotional wellbeing scales used in primary-secondary transitions research.

Using the EPPI-Centre (2010) method, after a rigorous screening of 4,518 records, 60 articles were included based on the study's inclusion/exclusion criteria. Synthesis of the findings identified that the corpus of measures used to date to assess primary-secondary school transitions and/or emotional wellbeing have the following key limitations: 1. do not take into account the longitudinal and dynamic nature of primary-secondary school transitions and emotional wellbeing, 2. use negative terminology, 3. use inaccessible formats (e.g. broad number of items), 4. do not assess both transitions and emotional wellbeing in a single scale, 5. inconsistent reliability and validity assessment (especially when measures are adapted) and 6. key constructs (transitions and emotional wellbeing) are not conceptualised and/or theoretically defined. Lack of understanding of these limitations could negatively impact transitions research, and lead to policies and practices that are not fit for purpose, in turn having a negative impact on children's emotional wellbeing.

This is the first systematic literature review to focus on the use of emotion wellbeing scales in the context of primary-secondary transitions and concludes with several original and significant implications for future research, policy and practice.

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Primary-secondary school transitions are critical transitions for children (West et al., 2010), where they experience multiple concurrent transitions due to changes in, amongst others, identity (primary/secondary school child, child/young person), friendship groups, teaching styles and academic expectations (Jindal-Snape et al., 2020). These transitions can be simultaneously exciting and worrying for children (Jindal-Snape, 2016, 2018) and have both positive and negative impacts on children's emotional wellbeing (Bagnall et al., 2021a) and mental health (White, 2020).

Emotional wellbeing, defined as "optimal psychological experience and functioning" (Deci & Ryan, 2008, p.1), is a dynamic construct (Jordan & Graham, 2012) and can be shaped by dynamic environmental and psychological conditions. Dodge et al. (2012) used the analogy of a see-saw, conceptualising wellbeing as a balance point between the resources available to an individual and the challenges the individual faces, which can influence choices, behaviours, and coping skills. Thus, critical transitions, such as primary-secondary school transitions, where children are more likely to experience changing environmental and psychological conditions, can present heightened risk to children's short and long-term emotional wellbeing (Bosacki, 2016). For example, transitions can 'threaten' or change children's ability to draw on external and internal protective factors (Evans et al., 2018) and pose risk to their emotional wellbeing. However, equally a child's emotional wellbeing can also have an influence on how transitions are experienced. For example, children with poor emotional wellbeing, may respond to or interpret environmental stressors associated with transitions differently and as a result show poorer adaptation, and primary-secondary school transitions have been found to be more difficult for children with emotional difficulties (Bagnall et al., 2021b; Riglin et al., 2013).

Thus, in line with broader mental health literature, including the dual-factor model of mental health and longitudinal developmental cascade studies, which have shown emotional wellbeing to predict changes in mental health over time within adolescent populations (Kelly et al., 2012), there is a need to focus on longitudinal changes in children's emotional wellbeing during this time. This recognises primary-secondary school transitions as a turning point for children in establishing the foundations for nurturing long-term positive mental health (Bagnall, 2020).

However, a criticism of the current field is that few studies have focussed on children's emotional wellbeing over primary-secondary school transitions. Jindal-Snape et al.'s (2020) systematic literature review, found that, of the 96 articles included in the review, only 20 studies had investigated emotional wellbeing outcomes; the emotional wellbeing outcomes included socio-emotional wellbeing, depression, anxiety, mental health, school belonging, connectedness and quality of life. This is despite supporting children's emotional wellbeing during primary-secondary school transitions being a key concern for all involved (e.g. parents, teachers; children experiencing transitions; and wider society), both in mainstream and special schools, e.g., in the UK (Bagnall et al., 2019) and USA (Bagnall et al., 2021c).

This concern has been intensified by the international outbreak of COVID-19. For example, a significant number of children faced additional uncertainty when navigating primary-secondary school transitions on top of feeling anxious and apprehensive about COVID-19 and negotiating structural system changes associated with the pandemic (e.g. distance learning, social bubbles, milestones associated with leaving primary school left unmarked), causing the (potentially negative) impact of primary-secondary school transitions on children's emotional wellbeing to heighten (Bagnall et al., 2022). It is important to acknowledge that other research has suggested that the small teaching groups created due to COVID-19 restrictions, facilitated children's transitions and wellbeing (Leaton Gray et al., 2021).

Overall, previous studies indicate lack of clarity about the evidence of impact of primary-secondary school transitions on children's emotional wellbeing. In part, this is due to methodological design limitations, including lack of baseline measures and longitudinal follow-up designs with at least four time points (as opposed to reliance on one time point pre and post the 'move' to secondary school). In addition, there are limitations in the measures used, the focus of this systematic review. For example, majority of studies, within primary-secondary school transitions literature, to date have either (a) focused on a single aspect of transition adjustment, specifically academic attainment (Evans et al., 2018; Riglin et al., 2013) and social adjustment (Coffey, 2013), in place of assessing children's affective experiences of school transitions, as discussed above, or (b) provided descriptive data of these experiences from which generalisation is limited, which has resulted in a lack of clarity about the evidence of impact (Jindal-Snape & Cantali, 2019).

Over a decade ago, Rice et al. (2011) recognised that while a number of measures are used within primary-secondary school transitions literature, these measures have key limitations including: focusing only on one aspect of transitions adjustment, use of open-ended items which impose high literacy demands, design items with face validity specific for a particular study, rely on retrospective reports, or do not account for the longitudinal nature of primary-secondary school transition, as a process of assimilation, as opposed to an ‘event’. This led to the development of the validation of the *School Concerns Questionnaire* (Thomasson et al., 2006), which asks children to rate levels of concern towards 17 aspects of primary-secondary school transitions. Focussing on ‘concerns’ or ‘worries’ contributes a negative discourse towards primary-secondary school transitions, but can also be insensitive for children completing the measure in potentially planting ‘concerns’ or ‘worries’ they may not have towards secondary school (Bagnall et al., 2021a).

However, this understanding has been informed by recommendations within individual articles, as to date, there is a lack of systematic review of the existing measures used within primary-secondary school transitions literature. The present systematic review is conducted to unpack what measures are being used to assess children’s transitions experiences and/or emotional wellbeing over primary-secondary school transitions, whether this has changed over time, and the methodological rigour of measures used. This will help to accelerate progress within primary-secondary school transitions research, by helping researchers to make informed decisions in choosing appropriate measures, that can be sustainably and consistently used within the field, to improve primary-secondary school transitions practice.

For a robust study and its trustworthiness, it is important to have a clear conceptualisation of key concepts underpinning the study and any scales used by the authors. Further, it is important to investigate the reliability and validity of the scales used to measure children’s self-reports of their transitions experiences and emotional wellbeing. Therefore, this article reports on a systematic literature review undertaken with the purpose of (a) understanding authors’ conceptualisation of primary-secondary school transitions and emotional wellbeing, and (b) to systematically review transitions and emotional wellbeing scales used in primary-secondary transitions literature between 2008 and 2021. To provide context to this systematic literature review, we undertook a scoping review of existing literature reviews as well as analysis of literature related to the key concepts used in this study, namely transitions and emotional wellbeing. Prior to presenting that, it is pertinent for us to provide our own conceptualisations of the two key concepts.

CONCEPTUALISATION OF PRIMARY-SECONDARY SCHOOL TRANSITIONS

It is clear from primary-secondary transitions research literature that authors’ conceptualisation of primary-secondary transitions is often not explicit and sometimes totally absent (Jindal-Snape et al., 2021). Galton, Gray and Ruddock (2003) have used the term ‘transfer’ for the move between schools and ‘transitions’ for the move within the same school such as moving from one year group to another. Others have suggested ‘transitions’ as the move between schools (e.g., Langenkamp, 2009) with some highlighting that it should be seen beyond the initial move with data collection or analysis of longitudinal dataset across the secondary school years (e.g., Felmlee et al., 2018; Langenkamp, 2009) but did not go beyond that to highlight what they mean by transitions. Andreas and Jackson (2015) and some others have highlighted that primary-secondary transitions are also happening alongside developmental transition and can be turning points in their lives, suggesting that children will be experiencing multiple transitions at the same time. Authors’ conceptualisation/s will be an aspect that will be analysed in this review as it has important implications for their research designs, measures used, study findings and their interpretation, as well as how they can inform policy and practice.

Although, we are open to analysing authors’ conceptualisation of primary-secondary school transitions in this article, it is important to articulate our own evidence-based and more comprehensive conceptualisation. Transitions, including primary-secondary transitions, are an ongoing process of psychological, social, cultural, spatial, and educational adaptations due to changes in contexts (school/home), interpersonal relationships (peers/teachers), domains (psychological/social) and/or identity (primary/secondary school child, child/young person), which can be simultaneously exciting and worrying for a child and significant others (Jindal-

Snape, 2016, 2018). It is theorised as Jindal-Snape's evidence-based Multiple and Multi-dimensional Transitions (MMT) Theory which proposes that each child moving from primary to secondary school experiences multiple transitions at the same time (e.g., developmental, social, academic transitions) and that the child's transitions can trigger transitions of significant others (e.g., due to change in parental identity). Further, significant others' will be experiencing their own transitions and trigger and/or have an impact on the child's transitions, highlighting the multi-dimensional nature of transitions. Additionally, these transitions are affected by the dynamic nature of the ecosystems and environment they are situated in (Jindal-Snape, 2016; Jindal Snape et al., 2021).

Further, research also suggests that aspects that children were looking forward to when in primary school stayed almost the same after starting and through secondary school; conversely their concerns reduced dramatically over time (Jindal-Snape & Cantali, 2019). However, paradoxically, for some children who reported no problems immediately after starting secondary school, some issues emerged towards the end of the first year that continued till the end of their second year in secondary school. This highlights that primary-secondary transitions are an ongoing process of adaptation over time, and therefore, any scale used to measure children's emotional wellbeing needs to be used in an ongoing manner, over multiple time-points, rather than as a one-off (Bagnall et al., 2021a).

Similar to Lucey and Reay's view (2000), Jindal-Snape et al.'s (2021) systematic mapping of studies found that, there is a negative discourse around transitions, with 60 of the 96 reviewed studies (63%) using a primarily negative discourse and only two using a primarily positive discourse. This negative discourse was found in research, but also in the wider community, for instance, in children's discussions with siblings, parents, peers and teachers (Bagnall et al., 2019; Jindal-Snape et al., 2019; Lucey & Reay, 2000). This prevalent discourse has the potential to have a negative impact on children's emotional wellbeing, potentially more than primary-secondary transitions might. Therefore, it is important to understand how the conceptualisation and discourse of primary-secondary transitions in research literature might impact the emotional wellbeing measures used and to what extent the results are reliable.

In this review, we will specifically focus on children's perceptions of primary-secondary school transitions, and how their *transitions experiences* are operationalised. Thus, *transitions experiences*, which will be referred to throughout this systematic review, are conceptualised as children's *first-hand perceptions* of the ongoing adaptations, they make across contexts and domains over primary-secondary school transitions.

CONCEPTUALISATION OF EMOTIONAL WELLBEING

Wellbeing is a "multidimensional construct incorporating mental/psychological, physical, and social dimensions" (Yarcheski et al., 1994, p. 288). In other words, the term 'wellbeing' can be used in relation to our physical, social, and emotional health, and pertains to our functioning in those domains. As a result, conceptualisations of wellbeing can vary depending on what is being 'measured', and, not surprisingly, several systematic literature reviews have found no clear definition of wellbeing (Toma et al., 2014). Collectively these domains are poorly understood, conceptualised and operationalised. When different domains are employed within research studies and not clearly conceptualised, it is difficult to make meaningful comparisons of childhood wellbeing across studies and contexts (Statham & Chase, 2010). This suggests the need to focus on specific domains of wellbeing, such as emotional wellbeing, which to date has been under-researched, especially in the context of primary-secondary school transitions. Therefore, for the purpose of this article, we focus on emotional wellbeing.

Emotional wellbeing has also been conceptualised in various ways. Having roots within positive psychology (Di Fabio & Palazzeschi, 2015), the term emotional wellbeing is often used interchangeably with qualities and states that enable individuals and communities to thrive, such as happiness, quality of life, and flourishing. Children define good emotional wellbeing according to their feelings (happy, joyful), thoughts (positive thinking), behaviors (smiling, laughing), and highlight factors that support their emotional wellbeing, including activities (swimming, playing), achievements (praise), relationships (social support) and feelings of safety and stability (Bazalgette et al., 2015).

As discussed above, emotional wellbeing is by no means a stable construct (Jordan & Graham, 2012). A consistent challenge is how to operationalise and measure emotional wellbeing. Emotional wellbeing is often used interchangeably with terms such as adjustment, functioning, happiness, and quality of life (Statham & Chase 2010), and measured in terms of *absence* of emotional or psychological symptoms, including stress and anxiety. Emotional wellbeing may also be measured in terms of indicators or predictors of wellbeing, including an individual's resources, such as emotional intelligence, self-esteem, and resilience.

However, in line with Dodge et al.'s (2012) see-saw analogy, emotional wellbeing is also shaped by an individual's exposure and ability to cope with challenge: "each time an individual meets a challenge, the system of challenges and resources comes into a state of imbalance, as the individual is forced to adapt his or her resources to meet this particular challenge" (Kloep et al., 2009, p. 337). Similarly, adopting an ecological view of children's emotional wellbeing, *The Social-Emotional Well-being Survey* designed by the Australian Council for Educational Research (ACER) (2010) assesses seven components of social and emotional wellbeing: three external components of school life, home life, and community life; and four internal components of resilience. These external and internal components, which align with Dodge et al.'s (2012) conceptualisation of wellbeing, could be viewed as predictors of emotional wellbeing as opposed to measuring the construct emotional wellbeing.

For clarity, we conceptualise emotional wellbeing in the context of primary-secondary school transitions as a change in one's feelings and mind-set that is more than temporary (e.g. change in mood), that can influence one's ability to manage one's own emotions, and cope with challenges. Changes in emotional wellbeing in turn may impact feelings of belonging and self-conception, but the term emotional wellbeing should not be used interchangeably with mental health, which is when changes are more long-lasting. Nonetheless, it is worth noting that significant and prolonged changes to emotional wellbeing in the here-and-now, are acknowledged as key signifiers of the emergence of early onset mental health complaints (Kelly et al., 2012).

RATIONALE FOR THIS SYSTEMATIC LITERATURE REVIEW

There is a relative paucity of systematic literature reviews of international research on primary-secondary transitions, with four that were assessed as being systematic literature reviews (based on Garrard's criteria, 2016) between 2013 and 2020. These were Hanewald (2013), Hughes et al. (2013), Pearson et al. (2017), and Jindal-Snape et al. (2020).

However, none of these systematic literature reviews have focussed explicitly on children's emotional wellbeing, which as discussed above is missing, but nonetheless needed to inform school transitions research and practice. Furthermore, no systematic literature reviews to date have unpacked conceptualisations of primary-secondary transitions *and* emotional wellbeing, nor how both primary-secondary transitions *and* emotional wellbeing are operationalised, in terms of the specific measures used. Transparency, and consistency between ontological framework and subsequent choice of measurements, is paramount to trust the robustness of a study, and as raised by Jindal-Snape et al. (2021), vital to advance international primary-secondary school transitions research, policy and practice. For example, Jindal-Snape et al. (2021) found to date most studies did not clearly conceptualise transitions within the specific context of their research, nor use this to underpin the research design; it is important to understand whether this extends to researchers' selection of emotional wellbeing measures too.

Within school transitions practice and research, there is a clear paucity of children's voices (van Rens et al., 2018). For example, van Rens et al.'s (2018) review found only thirty studies published between 1987 and 2011 that focussed on children's perceptions of school transitions. Amongst these just two studies explicitly asked children to share their first-hand thoughts and experiences and few made recommendations based on the content of what was said and translated this insight into practice. These findings are incongruent with Lundy's (2007) four dimensions (voice, space, influence and audience) discussed as vital to support effective, valued and worthwhile contributions from children. Furthermore, embedding children's voices into decisions that affect them is not only considered an educational standard (DfHSC & DfE, 2018), but also a right of young people (UNICEF, 1989), and by neglecting children's valuable first-hand insight, studies not only lack context-specific evidence, but do little in terms of

supporting children's agency and empowerment. Therefore, as it is crucial to capture children's perspectives of their own experiences of transitions, we used an explicit inclusion criteria, of including only child self-report measures, in the systematic literature review.

Given the timeline of the previous systematic literature reviews, we have focussed on the extant literature between 2008 and 2021. Both standardised and non-standardized measures that assess children's emotional wellbeing over primary-secondary school transitions (or equivalent, e.g. Middle school transitions, Junior High School transitions, High School transitions), were considered to obtain a rigorous and critical understanding of how children's emotional wellbeing to date has been assessed. These measures were then evaluated and their items mapped in terms of what measures are being used within the field, how this has changed over time and the methodological rigour of these measures. This mapping, will make a unique contribution to primary-secondary school transitions research, a field which has been studied for over 60 years, yet to date there are no systematic reviews which have evaluated current measures used within the field to assess primary-secondary transitions experiences *and* emotional wellbeing. In line with the common metrics agenda, it is recognised that inconsistent outcome measurement across studies is stunting progression within mental health research (Krause et al., 2021). Research focussed on children's emotional wellbeing, recognised as a key signifier for mental health difficulties, is no exception. One way to overcome this is to examine emotional wellbeing within specific contexts such as primary-secondary school transitions to assist researchers in choosing appropriate measures, that can be sustainably and consistently used within the field. Thus, this systematic literature review has been informed by the following research questions:

1. How have authors conceptualised primary-secondary school transitions and emotional wellbeing during primary-secondary school transitions? Further, are these conceptualisations explicit or implied?
2. To date, what child self-report measures have been used to assess children's transitions experiences and/or emotional wellbeing over primary-secondary school transitions?
 - 2.1. How many articles use existing, adapted, and/or author created measures to assess children's transitions experiences and/or emotional wellbeing?
 - 2.2. Were these measures used in the same country they were developed in, and with the same age group they were developed for?
 - 2.3. What was the average number of items that were used in the measures?
 - 2.4. How, if at all, have child self-report measures of transitions experiences and/or emotional wellbeing over primary-secondary school transitions changed over time?
3. What is the methodological rigour (in terms of reliability and validity) of the child self-report measures of transitions experiences and/or emotional wellbeing over primary-secondary school transitions?

METHODOLOGY

SYSTEMATIC LITERATURE REVIEW PROTOCOL

This review is based on the Evidence for Policy and Practice Information and Co-ordinating Centre's (EPPI-Centre, 2010) method for undertaking systematic literature reviews.

1. Scoping the review: Firstly, we undertook a review of existing systematic literature reviews. This, and our research questions, guided us in defining clear inclusion/exclusion criteria to determine literature that should be included in this review (see Table 1). Only peer reviewed literature was included due to its perceived robustness. Initially, all empirical studies were included, regardless of their methodology, such as longitudinal, experimental and intervention designs to ensure no studies were missed that might have used different terminology for transitions and emotional wellbeing measures, as well as conceptualisations. However, after reviewing, studies that did not include child self-report of emotional wellbeing relating to school transitions were subsequently removed (see Table 1).

ASPECT	CRITERIA
Relevance	<ol style="list-style-type: none"> 1. Relates directly to at least one of the four research questions. 2. Used child self-report to assess emotional wellbeing and transitions experiences
Search Terms	Transition*, 2. Transfer, 3. Mov* in combination with i. primary school, ii. elementary school, iii. middle school in combination with a. secondary school b. high school c. post-primary
Databases	Web of Science (WoS) (Science Citation Index Expanded, Social Sciences Citation Index, Arts & Humanities Citation Index); the Education Resources Information Center (ERIC); British Education Index (BEI); PsycINFO; and Applied Social Sciences Index and Abstracts (ASSIA)
Time period	Between 1 st January 2008 and 31 st March 2021
Age-range	10–14 years to include age during transitions from primary to secondary school across international educational systems
Geographical spread	International
Language	English
Research base	<ol style="list-style-type: none"> 1. Empirical research to ensure inclusion of information about scales used: qualitative, quantitative or mixed methods 2. Child self-report 3. Uses a transitions experiences and/or an emotional wellbeing measure that aligns with one of the following categories: a. general emotional wellbeing; b. anxiety symptoms; c. depressive symptoms/low mood; d. coping/resilience; e. self-concept; f. attitudes towards school; g. loneliness
Transparency	Explicit methodology (e.g. sample size, instruments, analysis)
Reliability/ validity	As far as can be determined, the child self-report scale used must be valid and reliable

Table 1 Inclusion criteria.

2. Searching for studies: The PRISMA flow diagram outlines the process of searching for studies (see Figure 1). The databases searched are: a. Web of Science (WoS) (Science Citation Index Expanded, Social Sciences Citation Index, Arts & Humanities Citation Index); b. Education Resources Information Center (ERIC); c. British Education Index (BEI); d. PsycINFO; and e. Applied Social Sciences Index and Abstracts (ASSIA). In total, 4,824 records were retrieved for screening (see Figure 1 for details of datasets and number of hits). In addition, most relevant journals, including British Educational Research Journal, British Journal of Special Education, and American Educational Research Journal were searched. Further, reference lists of identified articles were manually searched. The number of additional records obtained through this process was 20, resulting in a total of 4,844 records.

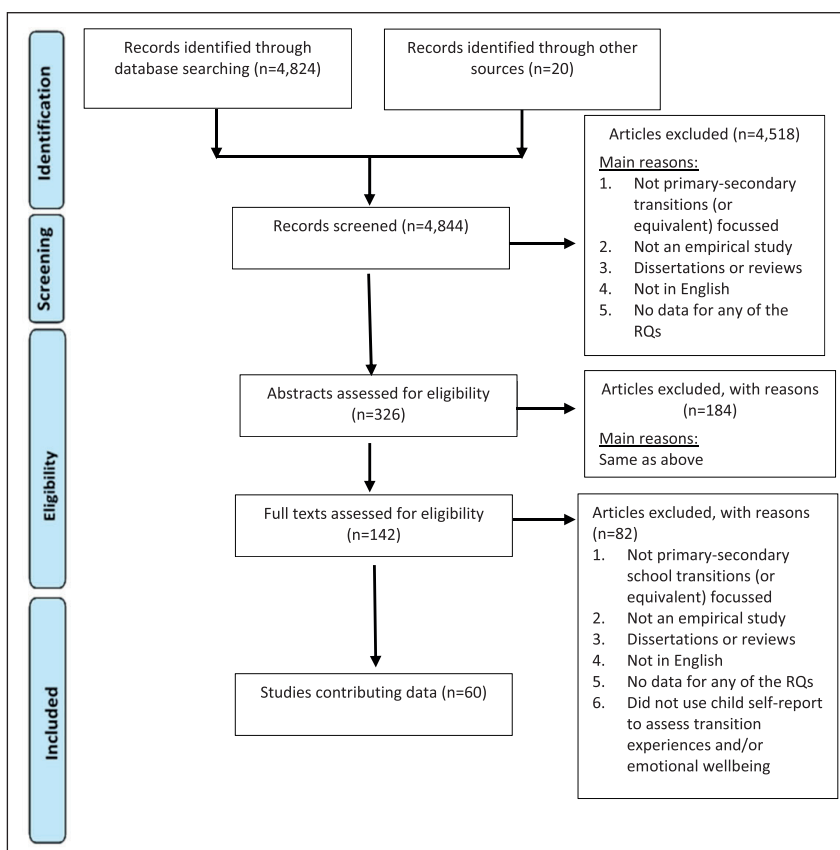


Figure 1 PRISMA diagram of study selection.

3. Screening studies: An extended research team screened the literature using the inclusion criteria (see Table 1). Cross-checking was employed at different stages to enhance the rigour of the process. In total, 4,518 records were excluded at title-level due to at least one of these five criteria (see Figure 1): 1. lack of focus on primary-secondary transitions; 2. not an empirical study; 3. a book/review/student dissertation; 4. not in English; 5. no data for any of research questions. This left 326 potential articles for inclusion in the next stage, and their abstracts were reviewed by the two authors; resulting in a rejection of another 184 articles based on the criteria above. A full read of articles led to a further rejection of 82 articles due to five main reasons mentioned above and an additional criteria 6. did not use child self-report to assess transitions experience and emotional wellbeing. This resulted in 60 studies being included in this review (Figure 1). Throughout this process, the extended team and the authors carried out further scrutiny and cross-member checking to ensure that no relevant studies were missed and to ascertain the robustness and rigour of the review.
4. Describing and mapping: A standard coding strategy was employed (based on EPPI-Centre, 2010), to extract information about the research questions, sample and research design. A 'descriptive map' was produced to create a systematic schema of these variables and their potential links with the systematic review's research questions. In line with the four research questions, key information was then extracted from each of the 60 articles using a coding scheme. This included 1. conceptualisation of primary-secondary school transitions; 2. conceptualisation of emotional wellbeing; 3. the types and number of measures used within each article to assess transitions experiences and emotional wellbeing and the category each fell under, and 4. Mapping of whether the measure used was a) existing, b) adapted or c) created for the study, what country the measure was developed in, what country the measure was implemented in, number of items within the measure, and whether the measure was designed for the age group it was used with.
5. Quality and relevance appraisal: Every article in the above descriptive map was assessed in terms of its quality, specifically whether the study assessed reliability and validity of the child self-report measure. The year of the measure(s) creation was also mapped, along with the countries it was created and subsequently used in. Further, if used in other geographical areas or translated, the quality appraisal included whether the authors had conducted an appraisal of its reliability and validity post-adaptation of the scale.
6. Synthesising study findings: Tables synthesising findings of the studies for each research question were created. Then the Narrative Empirical Synthesis (EPPI-Centre, 2010) was used to capture the main findings from the mapping exercise.
7. Conclusions and recommendations: The findings were summarised and recommendations on their basis articulated. Limitations of the reviewed studies and our literature review design have been reported. Furthermore, we have highlighted areas for further research, including key considerations when using a transitions and/or emotional wellbeing measure.

RESULTS

Data from the 60 articles are presented, separated under themes in line with the research questions. The first two sections provide a synthesis of how the authors of the reviewed articles conceptualised primary-secondary school transitions and emotional wellbeing. This framed the subsequent sections to identify conceptual strengths and gaps within international literature. Subsequently, we provide an analysis of child self-report measures included in the reviewed literature, focussing on the remaining three research questions.

CONCEPTUALISATION OF PRIMARY-SECONDARY SCHOOL TRANSITIONS

Of the 60 articles included in the review, 56 provided some conceptualisation of primary-secondary school transitions, although not always made explicit. Lack of conceptual clarity is a significant limitation for the four articles that did not provide any conceptualisation, especially as their foci was to examine children's emotional wellbeing during primary-secondary school transitions. This has limited the implications of their research findings in terms of their robustness and interpretation.

Of the 56 articles, 43 provided an explicit (clear statement) and 13 an implicit (no clear statement) conceptualisation of school transitions. A thematic analysis led to 10 overarching themes (see Table 2). For eight of the articles, the researchers referred to two conceptualisations of transitions, e.g. disruption/risk and discontinuity (Whelan et al., 2021).

OVERARCHING THEME	DESCRIPTION AND EXAMPLE ARTICLE FROM REVIEW	FREQUENCY
1. Time of change	Discussed school transition as a time of change relating to environmental, academic, and/or systemic differences between primary and secondary school (e.g. van Rens et al., 2019)	20
2. Disruption/risk	Referred to transition as a time of disruption and/or risk and/or highlighted risk factors, such as school disengagement, internalising/externalising problems (e.g. Bagnall et al., 2021a)	11
3. Life course perspective	Discussed transitions in line with Elder's (1998) life course theory, referring to how common life transitions shape life trajectories from birth to death (e.g. Martinez et al., 2011)	7
4. Normative life transition	Discussed school transition as a normative life transition/event, rather than a normative school transition (e.g. Symonds & Hargreaves, 2016)	6
5. Multiple transitions/changes	Referred to the multiple transitions/changes experienced at the same time (e.g. Rice et al., 2011). Four articles referred to multiple transitions (Smith et al., 2008; Hannah & Topping, 2013b; Hebron et al., 2017; Ng-Knight et al., 2019), one article specifically referred to multiple and multi-dimensional transition theory (MMT) (e.g. Jindal-Snape & Cantali, 2019)	7
6. Discontinuity	Discussed school transition as a time of discontinuity or disjunction (e.g. McCoy et al., 2020)	4
7. Normative period in school career	Discussed primary-secondary transition as a normal or common event in school life (e.g. Madjar & Chohat, 2017)	4
8. Rite of passage	Conceptualised transition as a rite of passage marking the end and beginning of an important developmental stage (e.g. West et al., 2010)	2
9. Turning point	Discussed transition as a turning point or decisive change in development (e.g. Mandy et al., 2016)	1
10. Developmental and environmental lack of fit	Conceptualised transition as a time where there is misfit between development and environmental discontinuity and continuity, in line with Eccles & Midgley's (1989) Stage-Environment Fit (SEF) theory (e.g. Booth & Gerard, 2014)	1

Table 2 Frequency and examples of primary-secondary school transitions conceptualisations by theme.

It is clear that most of the articles within the review, published nearly 20 years later, have used older and borrowed conceptualisations and theoretical frameworks of primary-secondary school transitions, such as Elder's (1998) life course theory and Eccles and Midgley's (1989) SEF theory, as opposed to more recent theoretical and conceptual understandings. Similar to Jindal-Snape et al. (2021), these findings suggest that future research should focus on richer and more up-to-date understandings and conceptualisations of primary-secondary school transitions.

CONCEPTUALISATION OF EMOTIONAL WELLBEING

Explicit and implicit conceptualisations

Two articles explicitly conceptualised wellbeing more broadly as: "...identified through a combination of wellbeing (i.e. life-satisfaction and self-esteem) and lack of psychological distress (i.e. depressive symptoms and emotional exhaustion)" (Duineveld et al., 2017, p.6) and "the term wellbeing is sometimes used interchangeably with happiness and represents a positive effect, absence or negative effect, and cognitive judgement of satisfaction with life as a whole" (Wolters et al., 2012, p.464). These definitions strongly define wellbeing in that they focus on both positive and negative effects and use a balanced discourse, but they did not define *emotional* wellbeing. Only one article explicitly conceptualised emotional wellbeing as "perceived stress and the experience of positive and negative affect" (Galla et al., 2020, p.350). However, one could argue that as 57 articles did not define wellbeing and only one article

explicitly conceptualised emotional wellbeing, that wellbeing is an inherently ambiguous and ‘hard-to-define’ concept. However, this could be an indication of a lack of operationalization of key concepts in primary-secondary transitions research articles in general.

This explicit conceptualisation of emotional wellbeing in a clear and unambiguous way in Galla et al.’s (2020) article provides clarity and confidence in their findings. Galla et al. (2020) also clearly outlined how emotional wellbeing was operationalised in their research study: “emotional wellbeing (operationalised here as perceived stress and the experience of positive and negative affect)” (Galla et al., 2020, p.350), which is in line with their conceptualisation. This matching of conceptualisation and operationalisation was also the case for Duineveld et al. (2017) and Wolters et al. (2012), despite their broader focus on wellbeing, reinforcing the importance of explicitly discussing pathways and mechanisms being investigated within studies.

From a further seven articles, we could thematically deduct their implicit conceptualisation of emotional wellbeing, namely 1. the presence or absence of psychological symptoms, such as stress, depression and anxiety; 2. focus on feelings, affective experience and emotional states, and 3. synonymous with quality of life and responsive to changes in mood and life events (see Table 3).

OVERARCHING THEME	DESCRIPTION AND EXAMPLE ARTICLE FROM REVIEW	FREQUENCY
1. Associated with presence or absence of psychological symptoms, such as stress, depression and anxiety	Two articles discussed emotional and psychological adjustment in terms of absence of stress, anxiety and psychological problems/symptoms (Rice et al., 2011; West et al., 2010). One article discussed emotional health problems in line with depression/anxiety and poorer wellbeing (Waters et al., 2014b). One article explicitly discussed what poor short term emotional wellbeing looks like, which was feelings of stress and anxiety (Bagnall et al., 2021a).	4
2. Focus on feelings, affective experience and emotional states	One article focussed on feelings, and measured feelings of happiness and excitement, as opposed to worry (Smith et al., 2008). One article explicitly discussed psychological wellbeing as a chief factor for children to feel and discussed the importance of measuring emotional states (Fortuna et al., 2014).	2
3. Synonymous with quality of life and responsive to changes in mood and life events	Wellbeing discussed synonymously with quality of life and discussed as responsive to daily mood and life events (Gillison et al., 2008).	1

Table 3 Implicit conceptualisations of emotional wellbeing.

Subsequently, 50 articles did not include explicit conceptualisation of wellbeing/ emotional wellbeing and we could not deduct their implicit conceptualisation. For 29 of these articles, where reference was made to the construct emotional wellbeing, we looked at the context in which emotional wellbeing was used, as listed below. These included, primary-secondary transitions:

- affecting emotional wellbeing (n = 7; e.g. Bagnall et al., 2021a)
- having the potential to negatively impact wellbeing in general (n = 6; e.g. Waters et al., 2014a)
- negatively affect emotional and psychological adjustment (n = 4; e.g. Rice et al., 2011)
- lead to emotional difficulties or problems (n = 4; e.g. Rice et al., 2021)
- impacting emotional health (n = 1; e.g. Waters et al., 2012)
- long term negative implications for mental health problems/concerns, such as anxiety or depressive symptoms (n = 4; e.g. Kingery et al., 2011)
- associated with emotional reactions, distress and emotional pressure (n = 3; Kenyon et al., 2020)

As can be seen, it was common for discussion pertaining to emotional wellbeing in the context of primary-secondary school transitions to be negative, i.e., deterioration due to transitions.

Factors related to emotional wellbeing

Of the 60 articles, 38 articles discussed factors associated with emotional wellbeing. Factors included self-concept factors such as self-efficacy and self-esteem ($n = 7$), depressive symptoms/low mood ($n = 7$), anxiety symptoms including general and school related anxiety ($n = 5$), resilience/mental toughness ($n = 3$), coping ($n = 5$), attitudes towards school (e.g. school belonging/connectedness) ($n = 9$), and loneliness ($n = 2$). Most of the articles within our review measured these factors rather than emotional wellbeing, using a standardized measure, such as the *Weinberger Adjustment Inventory—Short Form* (Weinberger, 1997) used by Wentzela et al. (2019), or more general measures of emotional wellbeing, such as the *Strengths and Difficulties Questionnaire (SDQ)* (Goodman, 2001) or Quality of Life measures (Ravens-Sieberer et al. 2007). This is a limitation of primary-secondary school transitions research, and highlights a gap in the development of a scale, which explicitly measures emotional wellbeing, and taps into these factors in this context.

Only two of the factors discussed as being associated with emotional wellbeing have a neutral discourse, namely self-efficacy and self-esteem, and attitudes towards school. In comparison, depressive symptoms/low mood, anxiety symptoms, resilience/mental toughness, coping and loneliness suggest a negative discourse with a focus on identifying the presence or absence of a problem or difficulty, with limitations inherent with this in terms of face validity and the potential ‘message’ given to a child.

CHILD SELF-REPORT MEASURES USED TO ASSESS CHILDREN’S TRANSITIONS EXPERIENCES AND/OR EMOTIONAL WELLBEING

To address research question two, articles were categorised based on the scales they used to measure transitions experiences and/or emotional wellbeing. Drawing on the conceptualisation of emotional wellbeing findings presented above, emotional wellbeing was broken down into (1) scales that measure general emotional wellbeing, (2) scales that specifically measure anxiety symptoms, (3) scales that specifically measure depressive symptoms/low mood, and (4) broader measures of emotional wellbeing, which included (a) coping/resilience, (b) self-concept, (c) attitudes towards school and (d) loneliness. In addition, these four categories of broader measures of emotional wellbeing were informed by previous research, which have discussed these categories as broader measures of emotional wellbeing (Bagnall et al, 2021a). A breakdown of the included measures within each category, is presented in Table 4.

Table 4 Frequency of included measures within each category.

FOCUS	MEASURES USED	FREQUENCY	AUTHOR
Transitions experiences	Successful Transition (Evangelou et al. 2008)	1 (created for study)	Evangelou et al. (2008)
	Transition experiences (West et al., 2010)	1 (created for study)	West et al. (2010)
	School Transition Questionnaire (Akos, 2002)	6 (adapted)	Smith (2008); Lovette-Wilsona et al., (2020); Bagnall et al. (2021a); Waters et al. (2012); Waters et al. (2014a); Waters et al. (2014b)
	School Concerns Questionnaire (Thomasson et al., 2006)	1 (adapted), 7 (existing)	Rice et al. (2011); Bloyce & Frederickson (2012); Rigin et al. (2013); St Claire-Thompson et al. (2017); Lester et al. (2019); Kenyon et al., (2020); Nowland & Qualter (2020); Rice et al. (2021)
	The Impending Transition to Secondary School Perceived as a Challenge and Threat Questionnaire (ITCT) (Sirsch, 2003)	3 (adapted)	Mackenzie et al. (2012); van Rens et al. (2019); van Rens et al. (2020)
	My feelings about school questionnaire (Bailey & Baines, 2012)	1 (created for study)	Bailey & Baines (2012)
	Transition preparations survey (Hannah & Topping, 2013b)	1 (created for study)	Hannah & Topping (2013b)
	Academic aspects of transition self-efficacy and social aspects of transition self-efficacy scales (Madjar & Chohat, 2017)	1 (created for study)	Madjar & Chohat (2017)
	Transition survey (Foley et al. (2016)	1 (created for study)	Foley et al. (2016)
	Transition Strategy Questionnaires (Neal et al. (2016)	1 (created for study)	Neal et al. (2016)
	List of transition concerns (Wentzela et al., 2019)	1 (created for study)	Wentzela et al. (2019)
	Transition Questionnaire (Jindal-Snape & Cantali, 2020)	1 (created for study)	Jindal-Snape & Cantali (2019).
	Experience with Transition Questionnaire (Uka & Uka, 2020)	1 (created for study)	Uka & Uka (2020)

FOCUS	MEASURES USED	FREQUENCY	AUTHOR
General emotional wellbeing	KIDSCREEN self-report questionnaire (Ravens-Sieberer et al., 2007)	3 (original)	Gillison et al. (2008); Kenyon et al. (2020); Whelan et al. (2021)
	Behavior Assessment System for Children—Second Edition (BASC-2)	1 (original)	Martínez et al. (2011)
	The Strengths and Difficulties Questionnaire (Goodman, 2001)	11 (original)	Rice et al. (2011); Bloyce & Frederickson (2012); Waters et al. (2012); Fortuna et al. (2014); Virtanen et al. (2019); Ng-Knight et al. (2019); Whelan et al. (2021); Bagnall et al. (2021a); Riglin et al. (2013); Nielsen et al. (2017); Mandy et al. (2016)
	The Satisfaction with Life Scale (Diener & Emmons, 1984)	1 (original)	Duineveld et al. (2017)
	Weinberger Adjustment Inventory—Short Form (Weinberger, 1997)	1 (original)	Wentzela et al. (2019)
	Scale of Positive and Negative Experience (Diener et al., 2010)	1 (original)	Galla et al. (2020)
	Piers-Harris Self-Concept Scale (happiness subscale) (Piers, 2002)	1 (original)	McCoy et al. (2020)
Anxiety symptoms	Self-report Screen for Child Anxiety and Related Emotional Disorders (SCARED; Birmaher et al., 1997)	3 (original)	Rice et al. (2011); Neal et al. (2016); Lester et al. (2019)
	Spence Children's Anxiety Scale (SCAS; Spence, 1997)	1 (original)	Hannah & Topping (2013a)
	Depression Anxiety Stress Scale (Lovibond & Lovibond, 1995)-anxiety subscale	2 (original)	Waters et al. (2012); Lester et al. (2013)
	Anxiety subscale (Makover et al., 2019)	1 (original)	Makover et al. (2019)
	The Social Anxiety Scale for Children-Revised (SASC-R) (La Greca & Stone, 1993)	1 (original)	Nowland & Qualter (2020)
Depressive symptoms/ low mood	Depressive Mood Scale (Kandel & Davies, 1982)	1 (original)	West et al. (2010)
	Children's Depression Inventory (CDI) (Kovacs, 1985)	2 (original)	Kingery et al. (2011); Nowland & Qualter (2020)
	Short Mood and Feelings Questionnaire (Angold & Costello, 2013)	4 (original)	Rice et al. (2011); Riglin et al. (2013); Blossom et al. (2020); Makover et al. (2019)
	Depression Anxiety Stress Scale (Lovibond & Lovibond, 1995)-depression subscale	2 (original)	Lester et al. (2013); Waters et al. (2012)
	Depression Scale (DEPS) (Salokangas et al., 1995)	1 (original)	Duineveld et al. (2017).
Coping/ resilience	Need satisfaction in the workplace questionnaire (Kasser, Davey, & Ryan, 1992)	1 (adapted)	Gillison et al. (2008)
	Resiliency Scales for Children and Adolescents (Prince-Embury, 2006)	1 (original)	Bailey & Baines (2012)
	The Mental Toughness Questionnaire (MTQ) (Clough et al., 2002)	1 (original)	St Claire-Thompson et al. (2017)
	Adolescent Coping Scale (Frydenberg & Lewis, 1993)	1 (original)	Vaz et al. (2015)
	School children Coping Style Inventory (Ryan-Wenger, 1990)	1 (original)	Brouzos et al. (2020)
	The Emotional Self-Efficacy Scale for Youth (ESES-Yv) (Qualter et al., 2015)	1 (original)	Nowland & Qualter (2020)
	Coping Efficacy Scale (Sandler et al., 2000)	1 (original)	Bagnall et al. (2021a)
Self-concept	Rosenberg Self-Esteem Scale (Rosenberg, 1965)	1 (adapted), 5 (original)	Booth & Sheehan (2008); West et al. (2010); Booth & Gerard (2014); St Claire-Thompson et al. (2017); Brouzos et al. (2020); Eskelä-Haapanen et al. (2021)
	Self-Image Scale (Rosenberg & Simmons, 1975)	1 (adapted)	Booth & Sheehan (2008)
	Self-Description Questionnaire (Marsh, 1990)	1 (original)	Arens et al. (2013)
	B/G Steem (Maines & Robinson, 1988)	1 (original)	Yadav et al. (2010)
	Self-perception profile for adolescents global self-worth scale (Harter, 1988)	1 (original)	Poorthuis et al. (2014)
	High School Questionnaire- self-esteem (Eggert et al., 1995)	1 (original)	Blossom et al. (2020)
	Self-Description Questionnaire I – (SDQ I; Marsh 1990)	1 (original)	Coelho et al. (2020)
	Harter's Self Perception Profile for Children (SPPC) (Harter, 1985)	1 (original)	Kenyon et al. (2020)

(Contd.)

FOCUS	MEASURES USED	FREQUENCY	AUTHOR
Attitudes towards school	Need satisfaction in the workplace questionnaire (Kasser et al., 1992)	1 (adapted)	Gillison et al. (2008)
	Effective School Battery (Gottfredson, 1984)	1 (adapted)	Benner et al. (2009)
	The Attachment to School Scale (Weissberg et al., 1991)	1 (original)	Frey et al. (2009)
	Sense of belonging scale (Willms, 2003)	1 (original)	Cueto et al. (2010)
	School Liking Scale (Solomon et al., 2000)	2 (original), 1 (adapted)	Rice et al. (2011); Riglin et al. (2013); Rice et al. (2021)
	The School Connectedness Scale (Resnick & McNeely, 1997)	4 (original)	Waters et al. (2012); Lester et al. (2013); Waters et al. (2014b); Nielsen et al. (2017).
	School Questionnaire (Smith & Vorst, 1990)	1 (adapted)	Wolters et al. (2012)
	School Attitude Scale (Marjoribanks, 2002)	2 (original)	Booth & Gerard (2014); Whelan et al. (2021)
	Psychological Sense of School Membership Scale (Goodenow, 1993)	4 (original)	Vaz et al. (2014); Vaz et al. (2015); Hebron et al. (2017); Nowland & Qualter (2020)
	School Perceptions measure (Symonds & Hargreaves, 2016)	1 (created for study)	Symonds & Hargreaves (2016)
	School Belonging (Gottfredson, 1984)	1 (original)	Benner & Wang (2014)
	School Engagement (Skinner et al., 2009)	1 (original)	Madjar & Chohat (2017)
	High School Questionnaire-school attachment (Eggert et al., 1995)	1 (original)	Blossom et al. (2020)
	Delaware School Climate Survey – Student Scale (DSCS-S) (Bear et al. 2011)	1 (adapted)	Coehlo et al. (2020)
Loneliness	The Loneliness Scale (Asher & Wheeler, 1985)	5 (original)	Benner et al. (2009); Kingery et al. (2011); Waters et al. (2012); Benner & Wang (2014); Rice et al. (2021)

Total number of articles that used only one measure within one category

Twenty seven articles measured *transitions experiences*, of which 11 solely measured *transitions experiences* and 16 articles measured *transitions experiences* and *emotional wellbeing*. This suggests that it is more common for researchers to use measures of *general emotional wellbeing*, specific aspects of emotional wellbeing (e.g. *anxiety symptoms* and/or *depressive symptoms/low mood*) and/or broader factors associated with emotional wellbeing (*coping/resilience*, *self-concept*, *attitudes towards school* and/or *loneliness*), as opposed to measuring *transitions experiences*. This is a limitation because, without measuring *transitions experiences*, the authors could not measure the relationship between *transitions experiences* and *general emotional wellbeing* and/or specific aspects of emotional wellbeing and/or broader factors associated with emotional wellbeing. We speculate that one reason for this may be that some articles operationalised transitions in terms of change, move, or a time point, and did not assess actual transitions experiences of children. In other words, studies may have measured changes in emotional wellbeing between two time points which happened to be pre- and post-move to secondary school rather than assessing the influence of *transitions as a process of adaptation over time*. This limits the generalisability and implications of these findings to primary-secondary school transitions research and practice.

We noted above that only 11 articles solely measured transitions experiences. It is worth noting nonetheless that within transitions experiences scales, most studies did include an item relating to children's emotional wellbeing. For example, Evangelou et al. (2008), included the item: How do you feel now that you have spent a term at your secondary school? (*excited; happy; nervous; both excited and nervous; worried; other [please write here]*) in their primary-secondary school transitions questionnaire; Foley et al. (2016) used the item: *how are you feeling about the move to secondary school?* (1 = not worried and 10 = very worried) in the transition survey created by them.

Amongst those 11 articles which solely measured *transitions experiences*, seven articles adapted already established scales such as the *The Impending Transition to Secondary School Perceived as a Challenge and Threat (ITCT)* measure (3 articles) and *Perceptions of Transition Survey* (3 articles), which include items about what children are looking forward to and worried about relating to secondary school.

Total number of articles which used two measures within one category

One article within the category *general emotional wellbeing* and one article within the category *self-concept* used two measures within the same category. For the one article within the category *self-concept*, this refers to Booth and Sheehan's (2008) study, which used Rosenberg's (1965) *Self-Esteem Scale* and Simmons and Rosenberg (1975) *Self-Image Scale*; although the former was completed by the child and the latter used in interviews with them. For the article within the category *general emotional wellbeing*, Whelan et al. (2021) used the *SDQ* (Goodman, 2001) and the *KIDSCREEN* (Ravens-Sieberer et al. 2007) to assess quality of life. Given that both scales fall under the same broader category, it is important to consider the discriminant validity of the two scales; in other words, authors should evaluate the degree to which the two conceptually related concepts are distinct and can be discriminated. If a construct has discriminant validity, there should be little correlation between theoretically dissimilar measures; however this was not assessed within the study, which is a limitation.

Total number of articles within more than one category

28 articles (47%) used a measure within more than one of the eight types of scale categories, e.g. *transitions experiences* and *coping/resilience*.

TRANSITION EXPERIENCES

16 articles that used a measure to assess transitions experiences also assessed emotional wellbeing, within one or several of the seven emotional wellbeing categories. This was expected as all articles included within this review sought to measure children's emotional wellbeing over school transitions. However, eight articles within the category transitions experiences used more than one measure across the seven emotional wellbeing categories, in addition to using a measure to assess transitions experiences. As discussed in further detail below, this reflects the notion of emotional wellbeing as being a commonly misunderstood concept, which in turn influences researchers' ability to clearly and consistently operationalise the concept and compare findings.

EMOTIONAL WELLBEING

As shown in Table 5, it is common for studies to use more than one measure to assess emotional wellbeing. All the articles within the category *depressive symptoms*, *coping/resilience* and *loneliness* and most of the articles within the category *anxiety symptoms* used measures within more than one category. This suggests that articles are using several measures to assess emotional wellbeing, including factors associated with it.

	TOTAL NUMBER OF ARTICLES WITHIN EACH CATEGORY	TOTAL NUMBER OF ARTICLES WITHIN JUST ONE CATEGORY	TOTAL NUMBER OF ARTICLES WITHIN MORE THAN ONE CATEGORY (SEE TABLE 7 BELOW FOR MORE INFORMATION)	NUMBER OF ARTICLES WITHIN ONE CATEGORY BUT USES MORE THAN ONE SCALE WITHIN THE CATEGORY
1. General emotional wellbeing	19	7	11	1
2. Anxiety symptoms	8	1	7	0
3. Depressive symptoms/low mood	10	0	10	0
4. Coping/resilience	7	0	7	0
5. Self-concept	13	5	7	1
6. Attitudes towards school	23	6	17	0
7. Loneliness	5	0	5	0

Table 5 Articles which included a measure(s) within each of the seven categories of emotional wellbeing.

This is nonetheless a limitation to the field, especially reflecting the limited articles which conceptualised emotional wellbeing, as shown in the conceptualisation findings above. For example, as shown empirically, failing to adequately define the conceptual domain of a construct can lead to confusion about what the construct refers to, including the similarities and differences between it and other constructs that already exist in the field (Morgado

et al., 2017); this can then lead to issues with convergent validity. This is suggested in the present systematic review and demonstrates the importance of conceptualising and defining constructs at the outset of research studies. This is particularly important since the quality of generated items depends on the way that the construct is defined, and suggests the need for gold standard measures to assess similar constructs.

Together, these findings highlight the need for further research to develop a single scale that can assess general emotional wellbeing, more specific aspects of emotional wellbeing, in addition to broader factors associated with emotional wellbeing (including coping/resilience, self-concept, attitudes towards school and/or loneliness), specifically in the context of primary-secondary school transitions. This harmonised measure would support the common metrics agenda, which has raised the importance of consistent use of clear and well theorised and conceptualised measures to allow clear benchmarking of outcomes and read-across of measurements between studies (Krause et al., 2021). Within transitions research, a singular measure of emotional wellbeing in the context of primary-secondary school transitions is crucial to enable synthesis, comparison and integration of evidence across studies and settings to avoid data fragmentation and identify best practice.

MAPPING OF EMOTIONAL WELLBEING AND TRANSITIONS SCALES

The 60 articles were also mapped based on the number of existing, adapted, and created measures the authors used; the country measures were developed in, the country measures were implemented in and specifically whether this was congruent; the average number of items measures used; and whether measures was designed for the age group it is used with. This information is presented in Table 6.

CATEGORIES	N EXISTING MEASURES	N AUTHOR ADAPTED MEASURES	N AUTHOR CREATED MEASURES	N MEASURES DEVELOPED AND IMPLEMENTED IN SAME COUNTRY	M (SD) NUMBER OF ITEMS	N MEASURES DESIGNED FOR AGE GROUP USED WITH
Transitions Experiences	7/27	10/27	11/27	20/27	19.33 (9.05)	27/27
General emotional wellbeing	19/19	0	0	9/19	35 (44.98)	18/19
Anxiety symptoms	7/8	0	1/8	1/8	12.63 (7.03)	6/8
Depressive symptoms/low mood	10/10	0	0	5/10	12.27 (7.39)	8/10
Coping/resilience	6/7	1/7	0	2/7	35.38 (20.14)	6/7
Self-concept	11/13	2/13	0	5/13	21.08 (8.61)	12/13
Attitudes towards school	17/23	5/23	1/23	8/23	8.77 (6.21)	22/23
Loneliness	5/5	0	0	3/5	15 (4.47)	5/5

Table 6 Mapping of existing, adapted and created measures.

Number of existing, adapted and created measures

As shown in Table 6, it is clear that for measures of emotional wellbeing and broader factors associated with wellbeing, most articles use existing measures that have already been applied in real-world settings. This is a strength of these articles, enabling clarity and comparability of research findings. For *transitions experiences*, *anxiety symptoms* and *attitudes towards school* only, authors have created measures. For *attitudes towards school*, only one article (Symonds & Hargreaves, 2016) has created a measure and it is worth noting that this article does not use any other measures within the other six emotional wellbeing categories, which suggests that the 24-item school perceptions measure developed fits the article's clear purpose in assessing children's feelings towards school.

However, significantly more articles within *transitions experiences* have created a measure (10/27 articles) or adapted measures (10/27 articles). This suggests that majority of researchers' have felt the need to create or adapt pre-existing scales, as opposed to using pre-existing measures, which contrasts with the trend shown in the seven emotional wellbeing categories which have mainly used pre-existing measures. This identifies a gap in the literature, with the

need to develop a more up-to-date measure; this is highlighted by the seven articles within the systematic review that all used Thomasson et al.'s (2006) pre-existing *School Concerns Questionnaire (SCQ)*. Very recently one article within our review (Rice et al., 2021) adapted this scale to include three additional items (losing old friends, discipline and detentions, getting lost) reflecting the three most frequently reported additional concerns described by children in previous research (Rice et al., 2011).

For the remaining eight articles that adapted a measure, three articles adapted Sirsch's (2003) *ITCT* scale and six articles adapted Akos' (2002) *School Transition Questionnaire*. Reasons for adaptation included removing items that were shown to be unreliable within reliability analyses (Mackenzie et al., 2012) or to reduce the number of items for children to respond to (Waters et al., 2014b). Other reasons included using just one sub-scale to avoid overlap with other items (Bagnall et al., 2021a) or adapting the wording of items to allow for the exploration of both positive and negative aspects of school transition experience (Lovette-Wilson et al., 2020). This, again, indicates a limitation of up-to-date measures within the field, especially given that these two scales were developed in the early 2000s, and highlights the need to develop a more up-to-date (reflecting more contemporary conceptualisations of transitions, e.g. MMT) and balanced measure in terms of reflecting positive as well as negative discourse.

For the 10 articles within the category *transitions experiences* that developed a measure, four articles exclusively used this measure and did not include measures in the other seven emotional wellbeing categories. Amongst the created scales, items mainly related to transitions concerns; relating to school and peer concerns (West et al., 2010), academic and personal concerns (Madjar & Chohat, 2017), in addition to general worries. For example, it was common for developed measures to ask children to express their level of worry e.g. item eight in Foley et al.'s (2016) article: "in your opinion how worried did you feel about the move to secondary school?" which was rated on a four point scale from *not worried* to *extremely worried*, and Wentzela et al.'s (2019) article that asked children to write down four things that they are thinking about or that concern them about the transition to high school, which were referred to as "anticipated concerns."

This negative discourse situating school transitions as a hostile and adverse experience is not uncommon with transitions literature (Jindal-Snape et al., 2021), and may reflect empirical findings that commonly show short-term declines in children's emotional wellbeing over school transitions. However, this is a limitation of these articles, especially when considering that this negative discourse is shown to frame research designs through the measures used within studies. This is not only likely to bias study findings, leading to demand characteristics, socially desirable answers and negative self-fulfilling prophecies, but may also have adverse negative impacts on participating children causing them to negatively question their feelings towards school transitions and potentially plant anxieties they may not have had. Thus, there is a need to shift this discourse, especially given that children's faith in their coping skills and self-identity is shown to decrease over primary-secondary school transitions (Symonds, 2015) and use more positive items within measures, such as Bailey and Baines' (2012) *My feelings about school* questionnaire that uses positive items to assess children's self-reports of school adjustment. This is especially relevant given the mixed evidence pertaining to using reverse scoring within measures, which may on one hand avoid acquiescence, but can also lead to confusion especially if the opposite of a construct reverse-scored is fundamentally different than the construct (Morgado et al., 2017), e.g. worry and happy.

For six articles within *transitions experiences* that developed a measure, these articles also used another measure within an emotional wellbeing category (the most common second category being *general emotional wellbeing*) and one article (West et al., 2010) used another two measures within another two categories. This suggests that measures that have been designed by authors to assess *transitions experiences* have not also included items to assess children's emotional wellbeing. For example, West et al. (2010) created a survey to assess children's preparedness for secondary school, transitions experiences and pre-secondary experiences within the category *transition experience*, but also used a specific measure of emotional wellbeing by assessing depression symptoms using Kandel and Davies (1982) *Depression Scale* and a broader factor associated with emotional wellbeing using the *Rosenberg Self-Esteem Scale* Rosenberg (1965). Similarly, Bailey and Baines (2012) developed the *My Feelings About School* questionnaire to assess transitions adjustment, but also assessed children's resilience using Prince-Embury's (2006) *Resiliency Scales for Children and Adolescents*. This is acknowledged as

a limitation within transitions literature, given the extensive time children are often required to complete measures, as to date we do not have a single measure to adequately operationalise emotional wellbeing in the context of school transitions.

Number of measures developed and implemented in the same country

For *transitions experiences*, the majority of articles have included a measure that has been implemented in the same country in which it was developed. Compared to the emotional wellbeing categories this is the highest match and through further examination it is clear that most of these measures were implemented and developed within the UK ($n = 14$), specifically assessing primary-secondary school transitions experiences. Due to the role of educational systems and cultural factors that have been shown in school transitions research (Jindal-Snape et al., 2019), developing and implementing measures in the same country enables researchers to specifically design and implement items focussed on children's experiences relating to specific school transitions. For example, Evanoglou et al.'s (2008) created three scales to assess children's adjustment over primary-secondary school transitions, and included items specifically relating to open days in the UK, e.g. "If you went to your new school's open day/evening, what did you do there?" Response options included: listened to the Headteacher's talk, met Headteacher, met other teachers, met other children, saw classes working, had demonstration lesson(s), had a tour, was free to wander around, which specifically relate to the culture around primary-secondary school transitions. These questions might not be relevant in other educational systems, and in some cases, even within the same country when education is evolved.

Moreover, Neal et al.'s (2016) *Transition Strategy Questionnaire* included items specifically relating to Year 6 in the UK, e.g. item eight: "Change your timetable in Year 6 so that it was more like your timetable at secondary school?" and item nine: "Give you extra responsibilities in Year 6 (e.g. becoming a monitor)?" These items again specifically relate to primary-secondary school transitions in the UK and can improve the readability and accessibility of measures by using items that are as simple as possible, express a single idea and use common words that reflect the vocabulary level of the target population. For example, amongst the 11 measures that were designed and implemented in the same country to assess *transition experience*, the most common scale was the SCQ developed by Thomasson et al. (2006) in the UK, where all the articles using this scale also conducted their research within the UK. Instead, other countries assessing other school transitions, such as the transition to Middle school or High school in the USA used Smith et al.'s (2008) *The Perceptions of Transition Survey* or the *Student Perception survey* (Akos & Galassi, 2004) – which was based on Akos' (2002) *School Transition Questionnaire*. Nonetheless, the lack of cross-cultural and diverse regional perspectives undermines the generalisability of the measures to explore school transitions and emotional wellbeing across diverse groups of children and regions.

It is also important to consider translation of survey items, because, even when rigorous translation procedures are implemented, it can be very difficult to generate equivalent items across languages (Davidov & De Beuckelaer, 2010) as language is often correlated with characteristics such as ethnicity, religion, or class, meaning an ethnic or class inference could lead to non-equivalence and bias inferences. Three studies within the category *general emotional wellbeing* assessed quality of life using the KIDSCREEN survey (Ravens-Sieberer et al., 2007). This is a survey that was originally developed in English and then translated to be used in: Austria, Switzerland, Germany, Spain, France, The Netherlands, Australia, and the USA. In order to implement a measure in another country effectively, items must not only be (double) translated into different languages, but also need to be adapted culturally to maintain the content validity of the instrument. Beaton et al. (2000) provides an overview of the process of cross-cultural adaptation.

Average number of items

The lowest average number of items used within measures was nine (within the category *attitudes towards school*) and the greatest 35 items (within the categories *general emotional wellbeing* and *coping/resilience*). Given that all measures were designed to assess children's transitions experiences or emotional wellbeing, this is a significantly large range; it is worth noting that there was vast heterogeneity across and between categories in terms of number of items within measures as reflected in the standard deviation scores. For example, one study (Waters et al., 2012) within the category *transitions experiences* adapted a measure to include just one item from the *School Transition Questionnaire* (Akos, 2002), whereas within this same

category one article (Foley et al., 2016) designed the *Transition* survey, which contained 32 items. However, it is worth noting that Foley et al. (2016) did not use any other measures across emotional wellbeing categories and instead used this measure to examine affective concerns and preparations relating to school transitions.

Nonetheless, the number of items used within measures have the potential to influence the psychometric properties, namely validity and reliability of the measure, and the quality of the data (Bell, 2007). On one hand, too many scale items have the potential to cause confusion, especially if more than one item is used to assess the same construct (which in turn questions the measures construct validity), boredom and cognitive overload (Bell, 2007). For example, the largest measure included within the present systematic review contained 186 items, which was *The Behavior Assessment System for Children: Second Edition (BASC-2)*, used within Martinez et al.'s (2011) research. It is worth noting that this scale requires children to rate 186 statements on a dichotomous true/false basis, pertaining to their personal thoughts and feelings relating to school problems, internalising problems, externalising problems and personal adjustment. Dichotomous scales can limit an individuals' ability to express uncertainty or varying degrees of a characteristic, and forces individuals to state that something is or is not present. Given that this measure was included within the broader category *general aspects of emotional wellbeing*, the significantly large number of items may also reflect the difficulty defining, conceptualising and operationalising the concept emotional wellbeing.

Very short scales can also compromise the reliability of measures (Raykov, 2008), specifically the Cronbach's alpha if too many items are removed. This is likely to be the case for the studies that used less than three items for a measure such as Waters et al. (2012) who used one item from the *School Transition Questionnaire* (Akos, 2002), Wentzela et al. (2019) who used the three item wellbeing subscale of the *Weinberger Adjustment Inventory: Short Form* (Weinberger, 1997) and Witherspoon et al. (2011) who used three items from the *School Belonging* measure (Battistich & Hom, 1997). In this context, future researchers should prioritize scales with enough items to keep the alpha within the acceptable range.

When also considering the number of items within a measure, it is also important to consider the response format because this can also affect the accessibility of measures. Generally, an introductory paragraph at the start of measures can increase response rate (Hox & Borgers, 2001) as can response scales that are not ambiguous. Many researchers argue that it is recommended to use four or five scale points when sampling children (Hox et al., 2001), although there is debate pertaining to the use of mid-points within survey items. This was shown in the present systematic review with majority of pre-existing and adapted scales using four to five response categories and an introductory paragraph, such as the *Coping Efficacy Scale* (Sandler et al., 2000) which was used in Bagnall et al.'s (2021a) study.

Measures used with the age group they were designed for

Across transitions experiences and emotional wellbeing categories, most studies used measures that are age-appropriate, in other words use a measure within their study that was designed for the same age group as the sample in the study. In fact, for *transitions experiences*, *self-concept* and *loneliness* there is 100% congruity in articles. This is a strength of the articles within this review, as when samples differ from the measure target population, validity and reliability of the measure can be reduced as score comparisons are not with demographically similar individuals.

However, some of the measures within the present review were not congruent. For example, one article (Galla et al., 2020) within the category *general emotional wellbeing* used a scale that was designed initially for university students; *Scale of Positive and Negative Experience* (Diener et al., 2010). Two articles within the category *anxiety symptoms* and *depressive symptoms/low mood* (Waters et al., 2012; Lester et al., 2013) used the scale *Depression Anxiety Stress Scale* (Lovibond & Lovibond, 1995) to assess both constructs, which had initially been designed for university students. Within the category *depressive symptoms/low mood*, Duieveld et al. (2017) also used the *DEPS depression scale* (Salokangas et al., 1995) which had initially been designed for adults. For, *coping/resilience*, *The Mental Toughness Questionnaire* (Clough et al., 2002) which was designed for adults was used in one study (St Claire-Thompson et al., 2017) and for *attitudes towards school* the *Need Satisfaction in the Workplace Questionnaire* (Kasser et al., 1992) which was designed for adults was adapted in another study (Gillison et al., 2008).

Using the same measure, across age ranges, with appropriate adaptation to consider readability, attention, and children's cognitive capability of answering questions, can be advantageous in allowing comparisons between groups and over time. However, without sufficient validation, to consider how adults' models of emotional wellbeing and measures of the structure of affect can be applied to childhood, this is likely to influence the validity of the measure.

QUALITY AND RELEVANCE APPRAISAL

For the articles included within our review, we assessed the quality of the child self-report measures that authors used and specifically whether the reliability and validity of the child self-report measure was reported. The year of the measure(s) creation was also mapped, along with the countries it was created and subsequently used in (see Table 7).

FOCUS	TYPE OF MEASURE	FREQUENCY	COUNTRY/IES DEVELOPED IN	YEAR OF CREATION/ ADAPTATION
Transitions experiences	Existing measure	7	UK (7)	2006
	Reliability	7		
	Validity	7		
	Adapted measure	10	Austria (2), USA (5), Netherlands (1), UK (2)	2008, 2012, 2014, 2019, 2020, 2021
	Reliability	7		
	Validity	0		
	Created measure	10	UK (7), Israel (1), Albania (1), Ireland (1)	2010, 2012, 2013, 2016, 2017, 2019, 2020
	Reliability	2		
	Validity	1		
General emotional wellbeing	Existing measure	19	UK (13), USA (6)	1985, 1987, 1996, 1997, 2001, 2002, 2005, 2007, 2010
	Reliability	19		
	Validity	19		
Anxiety symptoms	Existing measure	7	USA (4), UK (2), Australia (1)	1993, 1995, 1997, 1999
	Reliability	7		
	Validity	7		
	Created measure	1	USA (1)	2019
	Reliability	1		
	Validity	0		
Depressive symptoms/low mood	Existing measure	10	USA (7), UK (2), Finland (1),	1982, 1985, 1987, 1992, 1995,
	Reliability	8		
	Validity	8		
Coping/ resilience	Existing measure	6	UK (2), USA (4)	1985, 1990, 1992, 1993, 2000, 2002, 2006
	Reliability	6		
	Validity	6		
	Adapted measure	1	USA (1)	2015
	Reliability	0		
	Validity	0		
Self-concept	Existing measure	11	USA (10), UK (1)	1965, 1985, 1988, 1990, 1995
	Reliability	10		
	Validity	10		
	Adapted measure	2	USA (2)	2008
	Reliability	0		
	Validity	0		
Attitudes towards school	Existing measure	17	USA (15), Australia (1), Finland (1)	1984, 1991, 1993, 1995, 1997, 2000, 2002, 2003, 2009
	Reliability	17		
	Validity	17		
	Adapted measure	5	USA (4), The Netherlands (1)	2008, 2009, 2013, 2020, 2021
	Reliability	3		
	Validity	0		
	Created measure	1	UK (1)	2016
	Reliability	0		
	Validity	0		
	Existing measure	5	USA (5)	1985, 1992
Loneliness	Reliability	5		
	Validity	5		

Table 7 Frequency of the measures' reliability and validity, the country they were developed in and year of creation.

Reliability and validity

For a scale to be considered reliable, Cronbach's alpha values of .70 or above are recommended, as a minimum internal consistency score (Nunnally & Bernstein, 1994) and was used as a criterion for reliability in this systematic review, recognising that it is the most commonly used measure of internal consistency (McCrae et al., 2011). However, recognising the longitudinal nature of primary-secondary school transitions, test-retest reliability, which addresses consistency across time, was another criterion. This, allows the assessment of a measure's predictive validity over time enabling a deeper understanding of the construct of interest, and in fact combining the two indices has been recommended to holistically evaluate reliability (Schmidt et al., 2003). Table 7 shows that most measures included in this systematic review were considered reliable, especially existing measures, in comparison to adapted and created measures.

Validity is a multifaceted concept determined by relations with other variables and the five main types of validity: criterion, content, construct, discriminant and face were assessed in the present systematic review. This enabled us to consider how well measures correlate with an established criterion, examines all the targeted aspects of a construct, considers the hypothetical qualities it was designed to measure and has a pattern of relationship between measures of two constructs consistent with theoretical expectation.

While most articles reported validity, it was clear that measures more commonly demonstrated reliability rather than validity, especially for adapted and author-created measures, such as *The Perceptions of Transition Survey*, which was created by Smith et al. (2008). This scale demonstrated reliability but acknowledged that a limitation of the study was that the measurement was modified from a checklist format and lacked extensive evidence of its psychometric properties, particularly concerning statistical tests of validity.

It was also clear that scale adaptations have been subject to inconsistent reliability and validity testing. For example, when considering adapted existing measures within the category *transitions experiences*, six articles adapted Akos' (2002) *Transition Questionnaire*, three articles adapted Sirsch's (2003) *ITCT* questionnaire, and one article adapted Thomasson et al.'s (2006) *SCQ*. However, what is particularly concerning is that none of these adapted measures were considered to have validity and only seven demonstrated reliability.

Countries developed in and year of creation

As discussed above, significantly more articles within the category *transitions experiences* have adapted or developed a measure, as opposed to creating one. For example, all of the articles within this systematic review which used an existing measure to assess *transitions experiences* used Thomasson et al.'s (2006) *SCQ*. This scale, which was developed in the UK, has established validity and reliability, and most of the articles within this review have also implemented this scale in the UK in the context of primary-secondary school transitions. However, this measure was published 16 years ago, and since then, discourse around primary-secondary school transitions in some (although limited) more recent studies has changed. This is also reflected in some of the more recently created scales such as Madjar and Chohat's (2017) *Academic Aspects of Transition Self-Efficacy* and *Social Aspects of Transition Self-Efficacy* scales which portrayed transition more positively in terms of mastery of goals and self-efficacy. Similarly, Bailey and Baines' (2012) *My Feelings About School Questionnaire* contains 27 positively worded items to measure five aspects of school adjustment, such as item 3: 'I am happy to be at this school'. Some of the adapted measures also align with this discourse, for example Lovette-Wilsona et al. (2020) adapted the *Perception of Transition Survey* (Akos, 2002) to a five point Likert scale (1 = very negative to 5 = very positive) that allowed for the exploration of both positive and negative feelings towards academic, procedural, and, social factors related to children's transition to middle school, e.g. the open, judgement free question stem was used: "When you think about going to secondary school, rate how you feel about the following..." to introduce items, such as item 9: 'being in a larger school'.

It is of note that the UK is leading the way in the development of measures which assess *transitions experiences* and *general aspects of emotional wellbeing*. For *transitions experiences*, 16 out of the 27 measures were designed in the UK. For *general aspects of emotional wellbeing*, 13 of 19 measures were designed in the UK.

The *SDQ* (Goodman, 2001) is the most popular scale used within the category *general aspects of emotional adjustment*, with 11 articles, by different authors, using this scale. The *SDQ* is a widely used measure with good factorial validity, internal reliability and test-retest reliability (Goodman, 2001). It is regarded as a validated and widely used measure of children's wellbeing, and in the context of primary-secondary school transitions, the emotional symptoms and peer problems subscales have been categorised as a broader measure of emotional wellbeing (Bloyce & Frederickson, 2012), psychological adjustment (Rice et al., 2011) and psychological functioning (Riglin et al., 2013). However, this scale was published over two decades ago and does not always show adequate internal consistency, with lower Cronbach's alpha coefficients frequently reported for peer problems *SDQ* subscales (α range = 0.30 – 0.59) (D'Souza et al., 2017), and homogeneity across samples. Nonetheless, Cronbach's alpha can also be affected by scale length, and due to the *SDQ* subscales only consisting of five items each, it is possible that low alpha values are due to the small number of items for each subscale. Thus, as discussed above it is important that internal consistency is assessed using different estimators of scale reliability (McCrae et al., 2011).

LIMITATIONS

Prior to drawing any conclusions, it is important to acknowledge the limitations of this review which need to be considered within future work in this field. First, as outlined in the introduction and literature review, emotional wellbeing is a multidimensional concept and our conceptualisation framework of general emotional wellbeing, specific aspects of emotional wellbeing and factors associated with emotional wellbeing was based on our inductive Thematic Analysis of articles which explicitly, but mainly implicitly, conceptualised emotional wellbeing. This required an element of interpretation for several articles where conceptualisations were unclear and were mitigated by cross-checks between authors and across a wider team. Second, although in line with expected protocols of a systematic literature review, we established inclusion/exclusion criteria and identified key words through a review of reviews; we are aware that some relevant literature might have been missed due to our focus on its relevance to our research questions. Thirdly, we did not report the weight of evidence appraisal due to the limited number of articles that could be included; the quality assessment has instead fed into the appraisal of measures.

DISCUSSION

This systematic review offers several original and significant contributions that can inform future research, policy and practice. To date, emotional wellbeing, has been acknowledged in MMT theory, through recognition of primary-secondary school transitions, as a simultaneously exciting and worrying time for children and significant others, due to negotiation of multiple adaptations (Jindal-Snape, 2016, 2018). However, this is the first systematic literature review to focus exclusively on emotion wellbeing in the context of primary-secondary transitions. It highlighted the lack of explicit and evidence-based conceptualisations of both primary-secondary transitions, adding to the findings of Jindal-Snape et al.'s (2021) article, and uniquely in the context of emotional wellbeing during primary-secondary transitions, which has not been considered before. It unpacked conceptualisation of transitions, to derive 10 categories from 56 articles which were not fully discreet, and showed that most authors have conceptualised transitions using a negative discourse. It also highlighted limitations in this literature related to articles that seemed to have multiple conceptualisations as it was not clear which conceptualisation underpinned their research design, if at all. Further, authors have applied theories developed in other domains rather than transitions, which in itself is not an issue, but is problematic as they were developed some decades ago and in different educational and cultural contexts.

This review also makes an original contribution by highlighting that emotional wellbeing was only conceptualised and operationalised in one article and could only be deducted from authors' implicit conceptualisation in seven articles. Nearly two-thirds of studies used factors seen to be associated with emotional wellbeing (e.g., anxiety symptoms, depressive symptoms/low mood, resilience/mental toughness, self-concept, attitudes towards school and loneliness), which formed the emotional wellbeing categories within the review. The findings of this review are significant as they

highlight a major limitation of current theoretical and conceptual understanding of emotional wellbeing and primary-secondary school transitions, and its potential impact on transitions practices and policies. For example, undertaking appraisals of transitions experiences and emotional wellbeing without defining them is problematic as that leaves it open for interpretation by the stakeholders who might have a view that is different from that of the authors.

Second, this is the first review of existing scales which have assessed ‘transition concerns’ or ‘transition adjustment’ and emotional wellbeing. The review concluded that a quarter of the studies used more than one measure to assess emotional wellbeing. This provides insights into a potential lack of robust analysis of the construct and its factors. It could be that within the present systematic literature review, studies have assessed children’s emotional wellbeing using a measure, which focusses on *general emotional wellbeing*, specific aspects of emotional wellbeing (e.g. *anxiety symptoms* and/or *depressive symptoms/low mood*) and/or broader factors associated with emotional wellbeing, which include items not specific to the primary-secondary school transition context. This could have contributed to emotional wellbeing being operationalised as a multi-faceted concept with multiple dimensions, which has resulted in several studies using more than one measure to assess the construct.

However, using multiple measures to assess one construct, is largely inconsistent with the common metrics agenda, which has raised the importance of consistent use of clear and well theorised and conceptualised measures to allow clear benchmarking of outcomes and read-across of measurements between studies (Krause et al., 2021). Within transitions research, a singular measure to assess emotional wellbeing in the context of primary-secondary school transitions could enable synthesis, comparison and integration of evidence across studies and settings to avoid data fragmentation and identify best practice (Petersen et al., 2021). The usability of a single scale could accelerate progress within the field and overcome common metrics agenda concerns regarding sustainability, consistency, and will be more cost and time effective.

Furthermore, it could be argued that without this contextual element, assessing emotional wellbeing as a general concept would not fully represent children’s emotional experiences of the changes they are negotiating within that specific context. Thus, the present findings demonstrate a vital paradigm shift in conceptualising emotional wellbeing within a specific context. Given, that there is no shared understanding between professionals, policy makers, and young people (Bazalgette et al., 2015) regarding the conceptualisation of emotional wellbeing, and emotional wellbeing in the context of primary-secondary school transitions, this review has made a unique theoretical contribution to providing a model of emotional wellbeing in context.

Third, this review found that not only the conceptualisation of key concepts, but also most scales used to date, use negative terminology, with emotional wellbeing referred to as presence/absence of low mood, loneliness etc. One could argue that such terminology could be leading as well as possibly giving a negative message to children about what impact primary-secondary transitions can have on their emotional wellbeing, as raised in previous research (Bagnall et al., 2021a). More importantly, it is not clear how the language/discourse of these scales was derived, for instance, were children involved in ensuring the language is child-friendly, relevant to their context, non-stigmatising, accessible and unambiguous. Therefore, we argue for more explicit reporting of these aspects even in research using pre-existing scales.

Moreover, this systematic review established that scales which have assessed ‘transition concerns’ or ‘transition adjustment’ and emotional wellbeing have key limitations including: 1. a lack of an up-to-date measure as most scales were created almost two decades ago, 2. the broad range in the number of items used in the scales without reporting of any considerations of how this can influence its psychometric properties, carefully balanced with the needs of the child, 3. it being more common for authors to report reliability of the measures used rather than validity, especially when authors either created or adapted a scale, 4. scale adaptations were subject to inconsistent reliability and validity testing and 5. scales do not take into account the longitudinal and dynamic nature of primary-secondary school transitions and emotional wellbeing.

IMPLICATIONS FOR FUTURE RESEARCH

This review highlighted several implications for future research. Future research should clearly state and operationalise the authors’ (and ideally participants’) conceptualisation/s and ensure that they underpin their research design. When using existing theories, it is important that they

are contextualised, critiqued and potentially developed to apply to the context of primary-secondary school transitions and emotional wellbeing.

Researchers using existing transitions and/or emotional wellbeing scales should consider their key limitations as outlined in this review prior to using them, including the country, context and educational systems where the scale was developed and where it is being used. Also, if researchers do use them, they should clearly articulate the limitations of the scales and, therefore potentially, the limitations of their study. In line with the MMT theory (Jindal-Snape, 2016) conceptualisation of transitions as an ongoing process and the dynamic nature of emotional wellbeing, it is important that future research, measures children's transition experiences and emotional wellbeing over time. However, this should be balanced with consideration of participants' research fatigue (Morgado et al., 2017).

The lack of a robust scale, highlights the need for future research to develop a more updated, robust and reliable scale to measure emotional wellbeing and primary-secondary school transitions experiences. Further, it is recommended that a *single scale* is developed that can assess general emotional wellbeing, along with a number of broader factors associated with it (e.g., attitudes towards school, resilience- or indeed subscales related to social capital) and transitions to address the key limitations in measure development to date. It is important that the scale is developed in partnership with children to ensure that the language and format are age and stage appropriate for the children with whom the scale will be used. A robust, transitions experiences and emotional wellbeing scale, which we aim to design and is the key goal of our larger research project, will not only make an important contribution to the field, it will also have practical utility for children, families and professionals supporting multiple and multi-dimensional transitions.

IMPLICATIONS FOR POLICY AND PRACTICE

Transitions policies and practices that are based on studies that have not reported their conceptualisation of transitions and/or emotional wellbeing run the danger of policy makers and practitioners using their findings as evidence without knowing whether the author/s and their conceptualisations are similar or not. Further, studies that used narrow conceptualisations may also run the risk of leading to policies and practices that are not fit for purpose. For instance, if transition is seen to be the *move* from primary to secondary school, it could lead to transitions support only being offered before and after the move. Additionally, based on such conceptualisations when transitions experiences and/or emotional wellbeing are measured just before or after the move, or indeed when they are only measured once, it could lead to misleading data resulting in transitions policies and practices that might not be optimal. Therefore, it is important that policy makers and practitioners critique the research literature before using it to inform policies and practices. This also points to the importance of their continuous professional development and research capacity building.

CONCLUSION

This is the first review of existing scales which have assessed transition experiences and/or emotional wellbeing, and provides insights into a potential lack of robust analysis of the construct and its factors in the context of primary-secondary school transitions. The lack of a standardised, robust, sensitive, and accessible quantitative measure to assess children's emotional wellbeing and primary-secondary school transition experiences, highlights the need for future research to develop a single, more updated, and reliable scale. This review is the first step towards developing this measure, and demonstrates how researchers should carefully consider, and report explicitly in their studies:

1. The psychometric properties, including optimum number of items and response format
2. The reliability, validity, and generalisability of the scale
3. Clearly highlight any potential impact of age and cultural factors
4. A shift in discourse in the title and the language of the items

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Charlotte Bagnall is a member of the *Primary-Secondary School Transitions* special issue editorial team. She was removed from any decision making related to the abstract submission and acceptance as well as the review process to ensure independent review and editing.

Divya Jindal-Snape is Editor-in-Chief of IJELT and a member of the *Primary-Secondary School Transitions* special issue editorial team. She was removed from any decision making as above. She was also removed from the editing system for this article to ensure independent review and editing.

AUTHOR CONTRIBUTIONS

CB and DJ-S designed the study, undertook literature search and review, and drafted the article. Both authors read and approved the final version.

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