



Developing the Emergent Literacy Skills of English Language Learners Through Dialogic Reading: A Systematic Review

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Accepted: 20 November 2021 / Published online: 21 January 2022
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Abstract

The development of emergent literacy skills at an early age sets learners on a positive trajectory for later literacy skills and overall academic success. Although the development of emergent literacy skills is a major focus of preschool programmes internationally, English language learners (ELLs) often display difficulties with emergent literacy skills upon entry to primary school, in comparison to their peers whose first language is English. Consequently, the identification of effective emergent literacy interventions for ELL is of paramount importance. To date, however, a comprehensive review of the effectiveness of dialogic reading interventions for developing the emergent literacy skills of ELLs has not been conducted. Following PRISMA procedures, a systematic review was undertaken and 6 studies were found to meet the inclusion criteria. Gough's (2007) Weight of Evidence framework was used to evaluate the methodological quality, methodological relevance and relevance of the evidence to the research question presented. Findings demonstrated that dialogic reading interventions are effective for developing the emergent oral language skills of ELLs but may not be effective for developing the emergent reading or writing skills of these learners. The implications of the findings for practice and research are discussed.

Keywords Dialogic reading · English language learners · Emergent literacy skills · Preschool

Introduction

Emergent literacy refers to the set of skills, knowledge, and attitudes which pertain to the developmental process of conventional reading and writing, and the environments conducive to this process (Whitehurst & Lonigan, 1998). Emergent literacy skills are often divided into two distinct categories, including code-related skills, which consist of phonological awareness and print knowledge, and meaning-related skills, encompassing oral language and comprehension (Lonigan et al., 2013). The term 'emergent literacy' was first coined by Marie Clay in her seminal work (1966) on children's reading, which theorised that literacy is another aspect of human development and that a substantial amount of literacy learning occurs before formal education. Hence, although it might appear that children's emergent literacy skills begin developing once they start preschool, there is evidence to suggest that literacy development is a continuous

process which begins much earlier in the child's life (Lonigan et al., 2013). Recent research in this area postulates that literacy development begins at birth (Dowling et al., 2020) and that literacy development is positively affected by frequent parental engagement in literacy activities prior to preschool (Niklas & Schneider, 2013). However, many children complete preschool without having acquired these skills (Tindal et al., 2015), which affects their ability to benefit from literacy instruction at the early stages of primary school (Lonigan et al., 2013).

The development of emergent literacy skills at an early age is paramount, as studies indicate that emergent literacy skills are predictors of reading achievement in the foundation stages of primary school (Diamond et al., 2008; Hammer et al., 2014) reading outcomes in post-primary school (Lonigan et al., 2013), early numeracy skills (Purpura et al., 2011), second-language reading ability (Sparks et al., 2008), and overall academic success and school performance (Doctoroff et al., 2006; Hammer et al., 2014; Kern & Friedman, 2009; Markova, 2017). Additionally, studies examining the link between emergent literacy skills and social-emotional development demonstrate that specific components of emergent literacy skills are associated with the externalising and

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internalising behaviours, and interpersonal skills of children. For instance, emergent oral language and print awareness skills were found to be negatively related to aggression (Doctoroff et al., 2006; Tan & Dobbs-Oates, 2013), hyperactivity (Hume et al., 2016; Tan & Dobbs-Oates, 2013), social withdrawal (Hall et al., 2016; Tan & Dobbs-Oates, 2013), depression (Tan & Dobbs-Oates, 2013), and negative affect (Doctoroff et al., 2006). By comparison, studies report a positive relationship between emergent literacy skills and adaptability, functional communication, and social skills (Arnold et al., 2012; Tan & Dobbs-Oates, 2013). Consequently, the development of emergent literacy skills has been the primary aim of many preschool programmes across the globe (Diamond et al., 2008) and an important field of study in early childhood education research (Saracho, 2017). The effectiveness of dialogic reading interventions in developing the emergent literacy skills of English language learners (ELLs), a population of learners with diverse language and literacy backgrounds, is the focus of the present study.

English Language Learners

Globalisation has led to growing cultural and linguistic diversity in contemporary education settings (Scarino, 2014). Accordingly, research has examined the effects of global movement on students and educators (Lems et al., 2017). Students living in native English-speaking countries whose first and primary language is not English are often defined as English language learners ((Farver et al., 2013) and represent the fastest-growing section of the school-age population in many native English-speaking countries (Demie, 2018; Farver et al., 2013; Ferlis & Xu, 2016). By way of example, it is estimated that approximately 1 in 5 students attending schools in the United States of America (USA) speak English as a second language (Jiménez-Castellanos & García, 2017). In a like manner, governmental figures in the United Kingdom (UK) demonstrate that ELLs account for approximately 21.2% of the primary school population (DfE, 2018). However, research indicates that ELLs encounter significant challenges in becoming proficient readers and often exhibit difficulties with emergent literacy skills, upon entry to school, in comparison with their peers (Cheung & Slavin, 2012; Farver et al., 2013; Fitton et al., 2018). Therefore, the identification of effective emergent literacy interventions for ELLs is an area of critical concern for education researchers.

Dialogic Reading

Research emerging in recent years highlights the effectiveness of shared book reading interventions for the development of emergent literacy skills in ELLs (Fitton et al., 2018; Rivera et al., 2013). Shared book reading usually involves

an adult or skilled reader, reading and interacting with one or more children. Adopting an interactive approach during reading, such as dialogic reading (DR), allows the child to participate and respond to the book being read (Brannon & Dauksas, 2014; Hur et al., 2020), which in turn, increases their interest and engagement (Chow et al., 2008). Accordingly, dialogic reading differs from shared book reading considering children are encouraged to become active participators in dialogic reading, that informative feedback is provided to children throughout a dialogic reading activity and that the reading of the story is adapted to match the child's linguistic abilities in dialogic reading (Whitehurst & Lonigan, 1998). Hence, DR is underpinned by the socio-cultural theory of child development (Vygotsky, 1978) through activation of the child's zone of proximal development. For instance, according to Arnold et al., dialogic reading is more than "simply reading the text" (1994, p. 236). It is a process of reading picture books with children, which involves adults or more knowledgeable others (Vygotsky, 1978) modelling language from the book that is appropriate to the child's stage of development. DR also requires the more knowledgeable other to prompt the child, through questioning and distancing, and to provide suitable responses to the child's queries to draw out increasingly elaborate descriptions about the book from the child. Therefore, the aim of DR is to empower the child to become the "teller of the story" (Arnold et al., 1994, p.236).

Dialogic reading is also rooted in Bakhtin's dialogism and notion of 'carnival' (1981, 1984). Dialogism refers to a style of discourse or interaction between the author, the work or story, the reader and the listener. According to Bakhtin (1986), "any utterance, whether spoken or written, that people use in communication with each other is internally dialogic" and these interactive utterances ultimately orient towards a search for answers or meaning between stakeholders (Bakhtin, 1981). During dialogic reading, children are encouraged to enter into a discourse with the reader, the author and the characters in the story, which in turn develops their understanding of the text, their sense of self and personal experiences (Cohen, 2011). Emergent literacy develops during dialogic reading through a child's reciting of their interactions "by heart" (Bakhtin, 1981, p. 341) and through retelling of the interactions "in one's own words" (Bakhtin, 1981, p. 341). Dialogic reading is also grounded in Bakhtin's notion of 'carnival,' which refers to the carnivals or festivals Bakhtin wrote about that occurred during the Middle Ages. In Bakhtin's views, carnivals were extraordinary events that broke down barriers between different classes in society, which resulted in the reversal of authority and power (Bakhtin, 1984). In a like manner, the purpose of dialogic reading is to reverse the conventional roles played between adults or teachers and children, promoting autonomy in young children and empowering them to take control of literary texts and their own learning.

DR has been reported to have significant effects on the development of emergent literacy skills in monolingual children (Justice & Pullen, 2003; Morgan & Meier, 2008). Conversely, the literature examining the effects of DR on the emergent literacy skills of ELLs presents inconsistent findings. For instance, studies indicate that DR interventions are effective in developing the emergent oral language skills of ELL preschool children (Farver et al., 2009; Restrepo et al., 2013) but further research is necessary to examine whether DR interventions enhance the emergent phonological awareness skills of ELLs (Huennekens & Xu, 2015). Furthermore, no systematic review to date has examined the effects of DR, as a standalone shared book reading intervention, on the emergent literacy skills of ELLs.

Rationale and Research Objectives

There is an increasing population of ELLs attending education settings in English-speaking countries across the world (Demie, 2018; Farver et al., 2013; Ferlis & Xu, 2016). An existing international consensus is the need for education settings to move towards more inclusive education systems (Norwich, 2013), and in many countries inclusion is supported by legislation, such as the Education Act and Code of Practice (DfE, 1994) in the UK. Inclusive education aims to meet the diverse needs of all learners, including the unique needs of ELLs, and Educational psychologists (EPs) play an important role in supporting educators in their development of inclusive school systems (Farrell, 2006). For instance, EPs engage in consultation with school staff to disseminate information about evidence-based practice and interventions to support additional learning needs (Cline et al., 2015), such as literacy interventions for ELLs who are presenting with literacy difficulties. In addition, EPs undertake research to evaluate the effectiveness of educational interventions (Cline et al., 2015). Thus, the purpose of the present review is to investigate the effectiveness of a dialogic reading approach for the development of emergent literacy skills of English language learners. Consequently, the review aims to address the following research question:

How effective is dialogic reading as an approach to develop the emergent literacy skills of preschool English language learners?

Method

Systematic Review

As was previously stated, the aim of the present study is to evaluate the effectiveness of dialogic reading as an approach to develop the emergent literacy skills of preschool ELLs.

Literature reviews are a common process that researchers undertake to appraise or learn more about educational interventions (Newman & Gough, 2020). However, if literature reviews are undertaken without the use of a clear and replicable methodology, they may be susceptible to bias, which might produce skewed findings in relation to the research topic under review (Gough et al., 2012). Consequently, many researchers choose to adopt a more systematic approach to conducting a literature review. Systematic reviews are a type of literature review that use “explicit, systematic methods that are selected with a view to minimizing bias, thus providing more reliable findings from which conclusions can be drawn and decisions made” (Higgins et al., 2019, p. 4).

Petticrew and Roberts (2006) propose that there are seven stages in the process of conducting a systematic review. First, researchers must clearly define the research question or hypothesis that the review aims to answer (Petticrew & Roberts, 2006). Next, the type of studies that will appropriately answer the research question need to be identified and located (Petticrew & Roberts, 2006). In order to decide which types of studies to include, researchers must set inclusion and exclusion criteria, which must also be explicitly specified in the final report or article detailing the review (Siddaway et al., 2019). The third stage of the systematic review process involves undertaking a comprehensive literature search to find studies that will appropriately answer the research question (Petticrew & Roberts, 2006). Subsequently, the results of the literature search are screened and selected for deeper analysis if they meet the inclusion criteria (Petticrew & Roberts, 2006). The fifth stage of the systematic review process entails a critical appraisal of the studies included for review, whilst the sixth stage involves synthesising the studies to assess for variability among the findings of each study included for review (Petticrew & Roberts, 2006). Finally, the dissemination of the findings of the review is the last step in the systematic review process (Petticrew & Roberts, 2006). The section below, entitled ‘Search Strategy,’ describes the comprehensive literature search that was undertaken in the present review, including the electronic databases that were used to locate studies, the search terms and exclusion criteria that were employed in the literature search and the screening process that was adopted to evaluate the eligibility of studies retrieved during the literature search.

Search Strategy

A comprehensive literature search was undertaken between November 2nd, 2020, and November 9th, 2020, using the following databases: PsychInfo, SAGE Journals Online, SpringerLINK, Education Source and Educational Resources Information Centre (ERIC). The search terms presented in Table 1 were used to conduct the search,

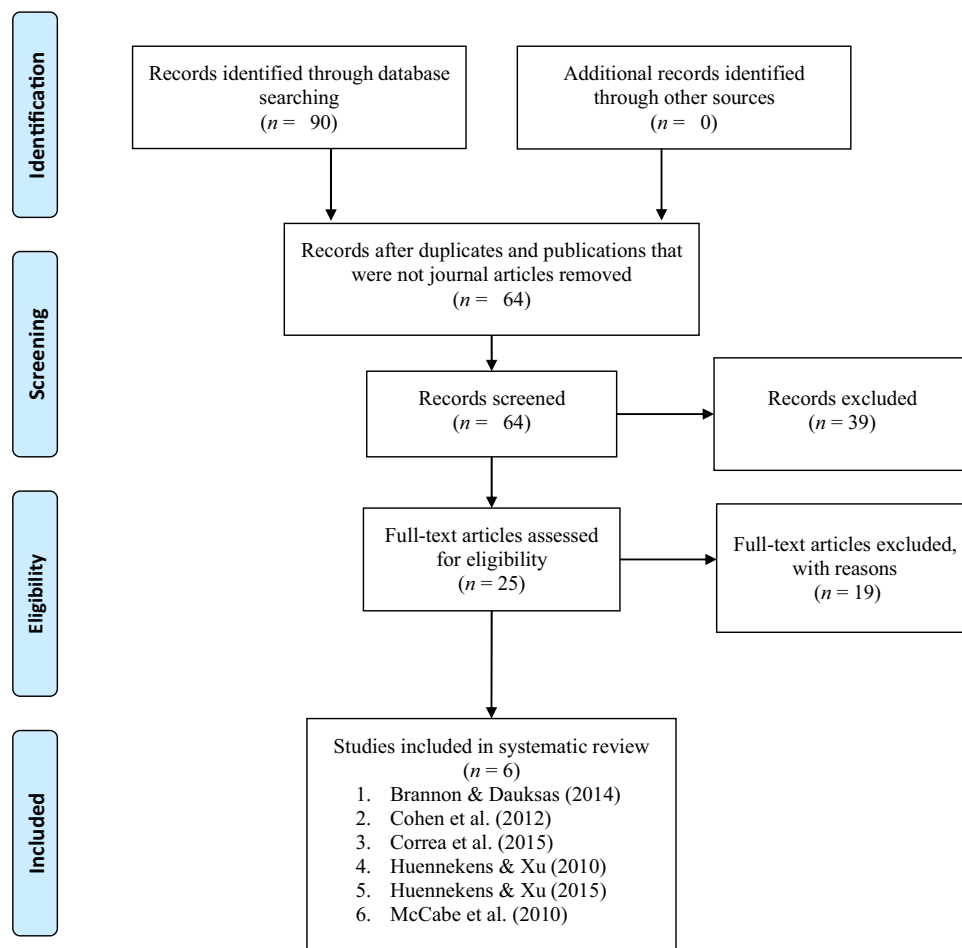
which produced 90 results across all databases. As the terminology used to describe English Language Learners varies depending on the country or context, four different search terms for ELLs were used to attain studies from a variety of contexts. As dialogic reading is a long-standing approach (Whitehurst et al., 1988), articles published between 1988 to 2020 were included for review. Next, duplicate results and sources that were not journal articles were removed, resulting in 64 articles. Subsequently, the remaining articles were screened by title and abstract, which excluded a further 39 studies in accordance with the following exclusion criteria: (a) the article was not peer-reviewed; (b) the study did not examine children learning English as a second or additional language attending pre-school; (c) a dialogic reading intervention was not used in

the study; (d) the study did not examine outcomes related to emergent literacy skills; (e) the study did not include pre- and post-measures of at least one outcome related to emergent literacy skills; and (f) the study was not undertaken in a country where English is an official language. Consequently, the full-texts of the remaining 25 articles were assessed for eligibility and 6 of these articles, which met the inclusion criteria, were included in the systematic review. Following PRISMA protocols, the search selection process is displayed in Fig. 1. Furthermore, a list of the excluded studies is included in the Appendix 1 of the Supplementary Material (Tables 7, 8) indicating the various stages during which studies were excluded and the criteria for exclusion.

Table 1 Database search terms

Intervention	Participants
“Dialogic Reading”	AND “English Language Learners” OR “English as a Second Language” OR “English as a Foreign Language” OR “English as an Additional Language” OR “ELL” OR “ESL” OR “EFL” OR “EAL”

Fig. 1 PRISMA Flow Diagram Demonstrating Search Strategy (Moher et al., 2009)



Mapping the Field and Framework for Review

An overview of the six studies identified during the literature search process are represented in Table 2. Gough's Weight of Evidence (WoE, 2007) framework was used to analyse and critique the identified studies in three areas related to study quality: the methodological quality (WoE A), the methodological relevance (WoE B) and the relevance of the evidence to the research question presented (WoE C). The results of WoE A, B and C were then combined to establish an overall weighting score (WoE D) to establish the extent to which each study provides evidence to address the current review question.

Weight of Evidence A: Methodological Quality

As different types of quantitative research designs were employed in the selected studies, the WoE A analysed the methodological quality of the six selected studies using Nha Hong et al.'s (2018) Mixed Methods Appraisal Tool (MMAT). The MMAT (Nha Hong et al., 2018) indicated that three of the selected studies should be assessed using the quantitative non-randomised methodological quality criteria and that the remaining three studies should be assessed in accordance with the quantitative descriptive methodological quality criteria. The presence or absence of methodological criterion, guided by the coding protocol in Table 3, were identified and scored (Yes = 1, No = 0). Subsequently, a quality score was calculated as a percentage [(No. of 'Yes' responses divided by the five relevant criteria) × 100] and converted into WoE Quality Rating Scores and WoE Descriptive Quality Ratings (Table 3).

Weight of Evidence B: Methodological Relevance

The WoE B evaluated the methodological relevance of the selected studies using the Muir Gray (1996) matrix, which determines the suitability of various research methodologies depending on the research question posed (Petticrew & Roberts, 2003). The Muir Gray matrix (1996) was selected because of the growing debate in relation to the wider generalisability or applicability of the "hierarchy of evidence" approach in evaluating the methodological relevance of research articles (Petticrew & Roberts, 2003). According to Muir Gray (1996), randomised controlled trials (RCTs), quasi-experimental studies and cohort studies are most appropriate for answering research questions addressing the effectiveness of a particular variable. In line with the "hierarchy of evidence," RCTs are regarded as the most suitable research methodology for investigating effectiveness (Petticrew & Roberts, 2003). Table 4 and Table 9

(Supplementary Material Appendix 2) represents the scoring criteria and rationale used to determine the methodological relevance (WoE B) of each study.

Weight of Evidence C: Relevance of Evidence

The WoE C is a review-specific judgement related to the relevance of evidence portrayed in selected review studies in consonance with the review question (Gough, 2007). As the present review was examining the effectiveness of a DR intervention for developing the emergent literacy skills of preschool ELLs, the following criteria were included in the WoE C: school setting, pre- and post-measures of emergent literacy skills, training for DR intervention and duration of DR intervention. A rubric including coding protocol was developed to score the four WoE C criteria and is included in Appendix 3 of the Supplementary Material (Table 10). As the present review was focusing on the effectiveness of a DR intervention, the presence and timeliness of pre- and post-measures of emergent literacy skills was included as a set of criteria within the WoE C scoring system. Additionally, Dickinson et al. (2020) assert that interventionists should be trained in appropriate intervention approaches or strategies prior to the delivery of an intervention to ensure that the intervention is delivered consistently and to a high-quality standard. Therefore, the training of interventionists in DR techniques prior to implementation of the DR intervention was considered in the development of WoE C scoring criteria. Hence, studies which did not include information in relation to interventionist training in DR received lower 'training' scores than studies which included limited or detailed information regarding interventionist training in DR. Finally, the duration of the DR intervention implemented in each study was considered as the fourth set of criteria in the WoE C scoring process, as evidence from research evaluating the effectiveness of dialogic reading interventions in the wider population indicates that 6 weeks is insufficient time for an intervention to influence change in outcome measures (Noble et al., 2020). Table 5 illustrates the total WoE C rating scores, produced by calculating the mean score for the four WoE C criteria, and the descriptive quality rating assigned to each study.

Weight of Evidence D: Overall Weighting

The WoE D provides an overall weighting score for the six studies selected for review. For instance, the mean score for the WoE A, WoE B and WoE C assigned to each study was calculated to produce an overall weighting score, the WoE D. Table 6 displays a summary of all of the WoE scores appointed to the selected studies, providing information about the methodological quality, methodological

Table 2 Mapping the field

Author	Country	Participants (included in review)	Research design	Dialogic reading intervention	Emergent literacy skill pre and post test measures
1 Brannon and Dauksas (2014)	USA Languages: English and/or Spanish	Preschool children = 42 (17 females; 25 males) Age: 3–5 years	Experimental between-groups design DR group (n = 22, 9 females; 13 males) Control group (n = 21, 8 females; 13 males)	10-week (biweekly, 5 week) DR parent-training in English and Spanish. Parents received DR training on Mon-Wed during mandatory family involvement time for the first 15 min of each school day Both DR group and control group received 5 English/Spanish picture books to control for access to books in the home	1. Adult Child Interactive Reading Inventory (ACIRI) 2. Picture-Naming Subscale of the Individual Growth Developmental Indicators (IGDI)
2 Cohen et al. (2012)	USA Languages: English and/or Spanish	Preschool children = 72 (27 females; 45 males) Mean age: 4.77 years	Experimental between English-only group (n = 47 Bilingual ELL (n = 18 Spanish-Dominant ELL (n = 7)	8-week DR training for teachers with English DR instruction in the classroom (1–2 weekly whole-class DR lessons & 3–4 weekly small-group DR instruction)	1. Receptive Vocabulary (Peabody Picture Vocabulary Test-Fourth Edition (PPVT-4) and the Test de Vocabulario en Imagenes Peabody, Adaptacion Hispanoamericana (TVIP)) 2. Free Recall Target Word Test
3 Correa et al. (2015)	USA Languages: English and/or Spanish	Preschool children = 4 (4 males of Mexican descent, USA born) Child 1: 4 years old, limited-fluent English, significantly below average (score = 14, Boehm-3 Preschool) Child 2: 4 years old, limited-fluent English, normal range (score = 40, Boehm-3 Preschool) Child 3: 4 years old, Fluent English normal range (score = 37, Boehm-3 Preschool) Child 4: 4 years old, limited-fluent English (score = 37, Boehm-3 Preschool)	Single-case multiple probe across participants design	5 month adapted DR intervention delivered by researchers 3–4 days per week in English Adapted DR: DR session, Rapid Naming Game (post-DR session), Pretend Play with Story Props	1. Frequency of English utterances (nouns, verbs, words, and phrases) relevant to the story during the adapted DR session 2. Accuracy of pictures named in English in 1 min during the Rapid Naming Game following the DR session 3. Number of words retold in English per minute during story retell post DR session

Table 2 (continued)

Author	Country	Participants (included in review)	Research design	Dialogic reading intervention	Emergent literacy skill pre and post test measures
4 Huennekens and Xu (2010)	USA Languages: English (L2) and/or Spanish (L1)	Preschool children = 2 (1 female, 4.8 years old; 1 male, 5.4 years old)	Single-subject multiple baseline design 2 settings: Classroom (large group) and a child-directed centre time (socially-oriented setting)	Child 1: Parent training in DR, followed by 7-week intervention. (English) DR 3–5 times a week in classroom with teacher and Spanish DR 20 min a day, 5 times a week at home with parent Child 2: Parent training in DR, followed by 5-week intervention. (English) DR 3–5 times a week in classroom with teacher and Spanish DR 20 min a day, 5 times a week at home with parent	1. Frequency of English utterances 2. Mean Length of Utterance-word (MLU-w) in English 3. Frequency of child-initiated English utterances 4. Frequency of child's responses to others in English
5 Huennekens and Xu (2015)	USA Languages: English and/or Spanish	Preschool children = 15 (4–5 years old, 7 females, 8 males)	Single subject, multiple baseline, across subjects design	6-week DR intervention delivered by researchers 5 days per week in 20 min DR sessions. DR sessions were conducted one-to-one and in Spanish	1. Get Ready to Read! Screening Tool–Revised (both English and Spanish versions)
6 McCabe et al. (2010)	USA	Preschool children = 96 (42 females; 54 males, 4–5 years old) Year 1 Participants: 21 females, 27 males; mean age at pre-testing point = 4.58 years old Year 2 Participants: 21 females, 27 males; mean age at pre-testing point = 4.66 years old	Experimental between groups design Year 1: DR Intervention and Control Group Year 2: DR Intervention and Control Group	26 weeks Remembering, Writing, Reading (RWR) DR intervention delivered once a week by research assistants in one-on-one 20-min sessions	2. Receptive Vocabulary (Peabody Picture Vocabulary Test–Third Edition (PPVT-3) Production of Oral Personal Narratives (Scored Using High Point Analysis) 3. Teacher Rating of Oral Language and Literacy test (TROLL)

Table 3 Methodological Quality Criteria adapted from Nha Hong et al.'s Mixed Methods Appraisal Tool (2018)

	Brannon and Dauksas (2014)	Cohen et al. (2012)	Correa et al. (2015)	Huennekens and Xu (2010)	Huennekens and Xu (2015)	McCabe et al. (2010)
<i>Quantitative non-randomised design</i>						
1. Are the participants representative of the target population?	Yes	Yes	X	X	X	Yes
2. Are measurements appropriate regarding both the outcome and intervention (or exposure)?	Yes	Yes	X	X	X	Yes
3. Are there complete outcome data?	No	Yes	X	X	X	Yes
4. Are the confounders accounted for in the design and analysis?	No	Yes	X	X	X	Yes
5. During the study period, is the intervention administered (or exposure occurred) as intended?	No	Yes	X	X	X	Yes
<i>Quantitative descriptive design</i>						
1. Is the sampling strategy relevant to address the research question?	X	X	Yes	Yes	Yes	X
2. Is the sample representative of the target population?	X	X	No	No	No	X
3. Are the measurements appropriate?	X	X	Yes	Yes	Yes	X
4. Are there complete outcome data?	X	X	Yes	Yes	Yes	X
5. Is the statistical analysis appropriate to answer the research question?	X	X	Yes	Yes	Yes	X
WoE Quality Score as a Percentage (% of 'Yes' Responses)	40%	100%	80%	80%	80%	100%
WoE A Quality Rating Score	1	3	3	3	3	3
WoE A Descriptive Quality Rating	Low	High	High	High	High	High

Table 4 Overall WoE B: methodological relevance scores

WoE B rating score	WoE B descriptive quality rating	Study	Rationale
2	Acceptable	Brannon and Dauksas (2014)	A quasi-experimental or cohort design was used
2	Acceptable	Cohen et al. (2012)	A quasi-experimental or cohort design was used
1	Low	Correa et al. (2015)	A single-case design was used
1	Low	Huennekens and Xu (2010)	A single-case design was used
1	Low	Huennekens and Xu (2015)	A single-case design was used
2	Acceptable	McCabe et al. (2010)	A quasi-experimental or cohort design was used

Table 5 WoE C Overall relevance of evidence rating scores and descriptive quality ratings

	Brannon and Dauksas (2014)	Cohen et al. (2012)	Correa et al. (2015)	Huennekens and Xu (2010)	Huennekens and Xu (2015)	McCabe et al. (2010)
School setting	3	3	3	3	3	3
Pre- and post-measures of emergent literacy skills	3	3	3	3	3	3
DR training	3	3	1	3	2	2
Duration of DR intervention	1	2	3	1	1	3
Total	10	11	10	10	9	11
Total WoE C rating score (mean score of 4 criteria)	2.5	2.75	2.5	2.5	2.25	2.75
Total WoE C descriptive quality rating	High	High	High	High	Acceptable	High

Scores of 2.5 and over are allocated a 'high' descriptive quality rating, whilst scores of 1.5 – 2.4 are considered 'acceptable' and between 1 and 1.4 are assigned a 'low' descriptive quality rating

Table 6 Summary of all WoE rating scores and descriptive quality ratings

	Brannon and Dauksas (2014)	Cohen et al. (2012)	Correa et al. (2015)	Huennekens and Xu (2010)	Huennekens and Xu (2015)	McCabe et al. (2010)
WoE A score and descriptive quality	1 (Low)	3 (High)	3 (High)	3 (High)	3 (High)	3 (High)
WoE B score and descriptive quality	2 (Acceptable)	2 (Acceptable)	1 (Low)	1 (Low)	1 (Low)	2 (Acceptable)
WoE C score and descriptive quality	2.5 (High)	2.75 (High)	2.5 (High)	2.5 (High)	2.25 (Acceptable)	2.75 (High)
Total	5.5	7.75	6.5	6.5	6.25	7.75
WoE D rating score (mean score of WoE A, B & C)	1.83	2.58	2.17	2.17	2.08	2.58
WoE D descriptive quality rating	Acceptable	High	Acceptable	Acceptable	Acceptable	High

Scores of 2.5 and over are allocated a ‘high’ descriptive quality rating, whilst scores of 1.5 – 2.4 are considered ‘acceptable’ and between 1 – 1.4 are assigned a ‘low’ descriptive quality rating

relevance, relevance of evidence and overall weighting score for each study.

Results

Participants

In total, 231 children participated in the six studies included in the current review. The sample size ranged from $N=2$ (Huennekens & Xu, 2010) to $N=96$ (McCabe et al., 2010). The age of participants was determined at the beginning of each study, prior to intervention, across all studies. As the focus of the review was on the emergent literacy skill development of ELLs attending preschool, all participants were attending preschool and thus, the age range of the children was limited. For instance, the youngest child was aged 3 years and 8 months old, and the oldest participant was 5 years old. Gender statistics were reported for all studies and the overall gender ratio was 40.7% female ($N=94$) to 59.3% male ($N=137$).

All participants were attending preschools in the USA and the first language of ELLs in five out of the six selected studies was Spanish. Approximately 38.5% of participants in the remaining study spoke a first language other than English, however, no further information was provided on these languages (McCabe et al., 2010). Incomplete outcome data and limited information about procedures used to increase the likelihood that demographic characteristics of participants were comparable between participants or between groups contributed to lower WoE A methodological quality scores in two studies (Brannon & Dauksas, 2014; Correa et al., 2015).

Research Design

Three studies selected for review employed a group experimental design (Brannon & Dauksas, 2014; Cohen et al., 2012; McCabe et al., 2010), whilst the remaining 3 studies utilised a single-case design (Correa et al., 2015; Huennekens & Xu, 2010, 2015). Group experimental design refers to a type of quantitative research design which uses more than one group to evaluate the effectiveness of an intervention. In this review, the group experimental design employed by 3 studies used two different groups to evaluate the effectiveness of the DR interventions, namely an intervention group, who received the DR intervention, and a control group, who did not receive the DR intervention. Single-case design, which may also be referred to as a single subject design, is a type of quantitative research design which investigates in detail the effectiveness of an intervention in a relatively small number of participants or in a particular case context, such as an individual education setting.

Pre- and post-measures of outcomes were included in the research design of all studies. The group element of the three experimental design studies, namely use of control groups, allowed for a greater degree of causality to be inferred from these studies in comparison to the single-case design studies, which is reflected in the WoE B scores of the selected studies (Table 3). However, the participants in the group experimental design studies were not randomly allocated across groups, limiting the WoE B scores of the group experimental design studies to ‘acceptable’ quality ratings rather than ‘high’ quality rating scores. Sampling methodology was presented in only one out of six studies, identifying convenience sampling as a method for recruiting participants (Correa et al., 2015). Furthermore, none of the studies engaged in follow-up studies at a later stage to

measure whether the effects of the DR intervention on the development of participants' literacy skills were maintained. Finally, all six studies had high ecological validity as they were conducted in the natural environment of the participants, with four studies implementing the intervention in the participants' preschool alone (Cohen et al., 2012; Correa et al., 2015; Huennekens & Xu, 2015; McCabe et al., 2010), whilst the setting of the remaining two studies included both the participants' home and preschool (Brannon & Dauksas, 2014; Huennekens & Xu, 2010).

Intervention

Dialogic reading interventions were implemented in all six studies, however the DR interventions facilitated by interventionists varied across studies. For instance, two studies involved parent participation and training in the DR intervention (Brannon & Dauksas, 2014; Huennekens & Xu, 2010), two studies required teacher participation and training in the DR intervention (Cohen et al., 2012; Huennekens & Xu, 2010), and the remaining studies were facilitated by the researchers of the studies (Correa et al., 2015; Huennekens & Xu, 2015; McCabe et al., 2010). Furthermore, two studies implemented the DR interventions using a dual language approach (Brannon & Dauksas, 2014; Cohen et al., 2012), two studies implemented English-only DR interventions (Correa et al., 2015; McCabe et al., 2010), and two studies implemented Spanish-only DR interventions (Huennekens & Xu, 2010, 2015). Additionally, three studies delivered the DR intervention on a one-to-one basis (Correa et al., 2015; Huennekens & Xu, 2015; McCabe et al., 2010), whilst the remaining studies facilitated the DR intervention during a combination of whole class instruction and small group or one-to-one delivery (Brannon & Dauksas, 2014; Cohen et al., 2012; Huennekens & Xu, 2010). The duration of the DR interventions implemented ranged from 5 weeks (Brannon & Dauksas, 2014; Huennekens & Xu, 2010) to 26 weeks (McCabe et al., 2010), which impacted the WoE C rating scores of each study, as longer interventions received higher WoE C scores. Similarly, the materials utilised during the DR intervention differed across studies, with two studies using pictures, photographs and play props, alongside picture books, to reinforce vocabulary development during the DR process (Cohen et al., 2012; Correa et al., 2015), one study using drawing/writing materials in addition to a picture book (McCabe et al., 2010) and the other three studies utilising a picture book alone (Brannon & Dauksas, 2014; Huennekens & Xu, 2010, 2015; McCabe et al., 2010).

Five of the studies provided a clear and detailed synopsis of the DR intervention implemented (Brannon & Dauksas, 2014; Cohen et al., 2012; Correa et al., 2015; Huennekens & Xu, 2010; McCabe et al., 2010), providing ample information to determine whether the DR intervention was

administered as intended. Consequently, four of these studies received higher WoE A rating scores (Cohen et al., 2012; Correa et al., 2015; Huennekens & Xu, 2010; McCabe et al., 2010). In addition, the provision of a clear description of the DR intervention provides insight into how parents, teachers, teaching assistants or other interventionists could use DR interventions to develop the emergent literacy skills of ELLs in the home or preschool setting.

In parent-led, one-to-one DR interventions, parents were trained to use the 'Comment, Ask and Respond' strategy from the *Language is Key* programme designed by Washington Research Institute, the '1, 2, 3 Tell Me What You See' strategy (Brannon & Dauksas, 2014) or stop points and DR scripts within storybooks supplied by the researchers (Brannon & Dauksas, 2014; Huennekens & Xu, 2010). The aims of the training were to guide parents to comment, ask questions and respond to interactions with child participants during reading, which would potentially encourage the child participants to become actively involved in the reading process as the "teller of the story" (Arnold et al., 1994, p.236) by using gestures or oral language (Brannon & Dauksas, 2014; Huennekens & Xu, 2010). One of the parent-led, one-to-one DR interventions was undertaken in the preschool setting during the first 15 min of the school day, whilst the other parent-led, one-to-one DR intervention was undertaken in the child's home for 20 min each day for five days a week, with additional whole-class DR input provided by the children's teachers between 3–5 times each week (Brannon & Dauksas, 2014; Huennekens & Xu, 2010). Similarly, in a teacher-led DR intervention, teachers were trained to use DR strategies through the Read Together, Talk Together programme (Pearson Early Learning, 2002), including use of the acronym CROWD to remind teachers to use different types of questioning (Completion, Recall, Open-ended, 'Wh' and Distancing questions) and the use of the acronym PEER for different types of prompts (Prompting, Evaluating the child's verbalisations, Expanding the child's verbalisations and Repeating expanded verbalisations) and a DR script to stimulate the children's interest in the book and initiate interactions during reading (Cohen et al., 2012). On Day 1 and, sometimes, Day 2 the teachers implemented the DR intervention by reading the selected book aloud, employing the CROWD and PEER strategies and introducing the children to props and pictures that represented new vocabulary in the book on a whole-class basis (Cohen et al., 2012). On Days 2–4 the process was repeated by the teachers using the same book and materials, however the children were organised into small groups (Cohen et al., 2012). Finally, on Day 5, the children were encouraged to engage with the book being read by playing with props, representing vocabulary in the story (Cohen et al., 2012). While the type of instruction (one-to-one, small-group or whole-class) and materials used were key difference between parent-led and teacher-led

DR interventions, the DR strategies employed by parents and teachers were similar in their approach to engage the children to become actively involved in the reading through the use of various questioning and prompting strategies, and props (Brannon & Dauksas, 2014; Cohen et al., 2012; Huennekens & Xu, 2010).

By contrast, researcher-led DR interventions were undertaken with children on a one-to-one basis in locations within the school building rooms, outside of the children's ordinary classrooms, for approximately 10–20 min, between one and five times each week (Correa et al., 2015; Huennekens & Xu, 2010; McCabe et al., 2010). Two researcher-led studies indicated that they used various DR strategies during the DR intervention, including commenting, 'wh' questions, repeating or recasting children's responses with complete sentences, expanding children's vocabulary by repeating their phrase and adding correct words, making connection's with the children's lives and offering praise and encouragement for interactions related to the story (Correa et al., 2015; McCabe et al., 2010). Conversely, one study did not explicitly describe the DR strategies employed during intervention (Huennekens & Xu, 2015).

Overall, aside from the amount of individual attention or adult guidance, the DR interventions employed in one-to-one, small-group or whole-class settings did not differ greatly between parent-led, teacher-led or researcher-led DR interventions as similar DR strategies and procedures were employed in five out of the six studies (Brannon & Dauksas, 2014; Cohen et al., 2012; Correa et al., 2015; Huennekens & Xu, 2010, 2015). However, it is important to highlight that participants in two studies that implemented the DR interventions on a one-to-one or small-group basis were encouraged to play with props, which varied from the DR intervention implemented in the whole-class setting (Cohen et al., 2012; Correa et al., 2015). In addition, the DR intervention in McCabe et al.'s study (2010) differed from the interventions employed in the other five studies (Brannon & Dauksas, 2014; Cohen et al., 2012; Correa et al., 2015; Huennekens & Xu, 2010, 2015), as the reading materials used for the DR intervention in McCabe et al.'s study (2010) were oral narratives told by the children and hand-written by the interventionists rather than published storybooks. Subsequently, the hand-written versions of the children's own stories were reread to them using the DR strategies, such as commenting, questioning, expanding children's vocabulary and recasting children's sentences (McCabe et al., 2010).

Three studies presented detailed information about interventionists' training in DR prior to implementing the DR intervention, which was reflected in the WoE C ratings for these studies. Finally, although the surface features of fidelity implementation were evident in five of the studies reviewed (Cohen et al., 2012; Correa et al., 2015; Huennekens & Xu, 2010, 2015; McCabe et al., 2010), only three

studies examined the quality of intervention implementation (Cohen et al., 2012; Correa et al., 2015; Huennekens & Xu, 2010).

Measures

All six studies used appropriate measures to gather data regarding the emergent literacy skills of participants through the use of a variety of established and reliable measures, including the PPVT-3 – Oral Spanish – (Ballad & Tighe, 2004), the ACIRI (DeBruin-Parecki, 1999), the picture-naming portion of the IGDI (McConnell et al., 2002), the PPVT-4 (Dunn & Dunn, 2007), the Get ready to read! Screening tool (Whitehurst & Lonigan, 2009), the MLU-w in English (Brown, 1973) and the TROLL test (Dickinson et al., 2003). The use of appropriate measures is reflected in the methodological quality scores for each study. Furthermore, all studies collected pre- and post-intervention data in relation to the emergent literacy skills of participants, allowing researchers to assess the effectiveness of the DR interventions implemented in each study. Four studies collected data on emergent literacy skills through measures designed by the researchers of each study (Cohen et al., 2012; Correa et al., 2015; Huennekens & Xu, 2010, 2015).

As recommended by Gersten et al. (2005) multiple measures for the assessment of participants' literacy skills were evident in all studies, ensuring an appropriate balance between measures directly associated with the dialogic reading intervention and measures of generalised language and literacy performance. Conversely, only three studies provided information regarding the criterion-related validity and construct validity of the measures used (Brannon & Dauksas, 2014; Cohen et al., 2012; McCabe et al., 2010).

Effectiveness of DR Interventions in Developing the Emergent Literacy Skills of ELLs

The focus of the present review was the effectiveness of dialogic reading interventions for developing preschool ELL's emergent literacy skills. Gough's WoE Framework (2007) was used to analyse and critique the methodological quality, methodological relevance, and the relevance of evidence of the six studies reviewed. The WoE D (Table 6) component of the framework indicates the overall capability of reviewed studies in answering the research question. In the present review, two studies received a 'high' WoE D score of 2.58 (Cohen et al., 2012; McCabe et al., 2010). The remaining four studies obtained 'acceptable' WoE scores of 1.83 (Brannon & Dauksas, 2014), 2.08 (Huennekens & Xu, 2015) and 2.17 respectively (Correa et al., 2015; Huennekens & Xu, 2010).

All six studies demonstrated evidence which indicated that dialogic reading interventions are effective for

developing the emergent literacy skills of preschool ELLs. For instance, there were significant differences between the reading abilities of parent participants (Brannon & Dauksas, 2014) and oral language skills (Brannon & Dauksas, 2014; McCabe et al., 2010) of child participants who received the DR intervention in comparison with control groups. It is worth noting that the DR interventions in Brannon and Dauksas' study (2014) were implemented by trained parents of the child participants, whilst in McCabe et al.'s study (2010) the intervention was carried out by trained, volunteer research assistants, demonstrating the positive impact that parents and volunteers in the school community can have on children's literacy development once they have received training in a literacy intervention. Furthermore, it is not surprising that the children in Brannon and Dauksas' study (2014) acquired significantly more vocabulary from pre-test to post-test than the control group, as there were significant differences in the amount of access parents allowed their children to the book and the number of questions asked by parents who had received DR training in comparison to parents in the control group.

Across both years of McCabe et al.'s study (2010), 55.55% of the variance between participants in the intervention and control group's emergent literacy skills was accounted for by the intervention status of the group, whether the participants were attending the school receiving the intervention or not. Interestingly, the control group of this study demonstrated significantly higher increases in emergent reading skills than the intervention group following the implementation of a dialogic reading intervention (McCabe et al., 2010). According to McCabe et al. (2010), the DR intervention employed may have had a more conspicuous effect on the participant's emergent oral language because aspects of oral language often receive less direct instruction in preschools than emergent reading or writing. Consequently, as the control group were participants attending a 'typical' preschool, direct instruction may have been more focused on emergent reading skills which provides an explanation as to why there was a difference in emergent reading scores between the intervention and control groups in this study (McCabe et al., 2010).

By contrast, results from studies which employed a single-case design indicated that ELLs made statistically significant gains in oral print knowledge, linguistic awareness and oral language skills, and emergent writing following DR interventions (Correa et al., 2015; Huennekens & Xu, 2010, 2015). For instance, in one of these studies, parents acted as the 'more knowledgeable other' (Vygotsky, 1978) and used researcher-designed DR questions and a script whilst reading to their child at home for 20 min each day (Huennekens & Xu). This DR intervention was effective in developing the emergent literacy skills of ELLs as there were significant differences in the children's oral expression following

intervention by parents, namely frequency of utterance, mean length of utterance and child-initiated responses to others (Huennekens & Xu, 2010). In the other studies which employed a single-case design, researchers engaged with child participants as the 'more knowledgeable other' and focused on commenting, questioning, expanding on children's vocabulary, making connections with the children's lives and encouraging the children to hold the book and turn the pages during reading. Both studies resulted in significant differences in the children's oral language skills, vocabulary knowledge, print knowledge and phonological awareness following intervention by researchers (Correa et al., 2015; Huennekens & Xu, 2015). Notably, the results of Cohen et al.'s (2012) found large effects on the emergent vocabulary skills of ELLs after a DR intervention was implemented ($\eta^2 = 0.09$) indicating alternative degrees of vocabulary development between groups of participants dependent on their spoken language (monolingual or bilingual). The DR intervention in Cohen et al.'s study (2012) was implemented by teachers who were instructed to use the CROWD and PEER questioning strategies whilst reading to children in whole-class and small-group settings.

Discussion

The objectives of this systematic review were twofold. Firstly, the review aimed to present an integrated report of key findings which exist in literature investigating the effectiveness of dialogic reading interventions in developing the emergent literacy skills of ELLs. The second intention of the review was to evaluate the strength of the evidence reported in studies examining this research area, through Gough's WoE framework (2007). In conclusion, all six studies presented evidence which supports the use of dialogic reading interventions to develop the emergent literacy skills of English language learners.

Two studies which received 'high' overall weighting scores and large effect sizes, indicated that dialogic reading interventions are effective for developing ELLs' emergent oral language skills (Cohen et al., 2012; McCabe et al., 2010), which provides strong evidence to support the use of dialogic reading strategies in preschools to develop the emergent oral language skills of ELLs. In addition, Brannon and Dauksas (2014) reported significant increases in the emergent reading skills of ELLs following implementation of the DR intervention, however, these results must be interpreted with caution, owing to the small sample size and variations in attendance at training between the intervention and control group. Furthermore, the control group in McCabe et al.'s study (2010), which obtained a higher overall weighting score than Brannon & Dauksas' study (2014), displayed significantly higher increases in emergent reading

skills than the intervention group following the implementation of the DR intervention, which suggests that the DR intervention was less effective in developing the emergent reading skills of ELLs than traditional reading interventions implemented in the control group. In addition, there were no significant differences between the emergent writing skills of participants and control groups following a DR intervention, which suggests that DR interventions may not be effective for developing the emergent writing skills of ELLs. Therefore, the findings from the current review suggest that dialogic reading interventions are effective for developing the emergent oral language skills of ELLs, which is in accordance with previous research in this area (Farver et al., 2009; Restrepo et al., 2013). Conversely, the findings suggest that DR may not be an effective intervention for developing the emergent reading or writing skills of these learners, which has important implications for practice and future research.

Limitations of the Research

The small sample sizes and research design of the selected studies were limitations of the current review, as small sample sizes may affect the sample's ability to represent the wider population, and neither design included randomisation procedures, which are included in methodological designs with greater rigour (Petticrew & Roberts, 2003). Furthermore, although the search strategy aimed to include studies from a variety of contexts, all six studies were conducted in the USA which may impact the generalisability of the reported findings to English-speaking countries outside the USA. In addition, there were differences in the language approach adopted by interventionists delivering the DR interventions, including dual language, English-only and Spanish-only language approaches, which may have influenced the effectiveness of the DR interventions across studies.

Implications for Practice

The results of this study have important implications for a variety of stakeholders in early childhood education, including parents, teachers, teacher educators, specialist literacy tutors and educational psychologists, owing to the impact of early literacy intervention on later outcomes for young children. For instance, a key responsibility held by educational psychologists is the development, design and implementation of interventions that result in positive outcomes for participating individuals (British Psychological Society, 2019). Likewise, teachers and specialist literacy tutors are often bound by codes of professional conduct or professional standards, which highlight their responsibility to employ effective teaching methodologies, such as DR interventions, in the classroom. The results of this study indicate that DR

interventions were effective in developing the emergent literacy skills of ELLs when implemented by teachers in small-group or whole-class settings, and when implemented by researchers on a one-to-one basis, in school, outside of the child's classroom. Consequently, contingent on receiving appropriate training on DR strategies, DR is a powerful and cost-effective approach that school professionals or volunteers within the school community could implement during daily whole-class literacy instruction or indeed, across the curriculum, during small-group or station-teaching, or during more intensive, one-to-one instruction to develop the emergent literacy skills of ELLs.

Notably, findings from this review also suggest that dialogic reading interventions may be an effective intervention which parents could implement at home to support the development of young ELLs' emergent literacy skills. Thus, collaborative consultation between parents and educational professionals could identify how DR interventions could be effectively implemented within children's homes to empower parents to take the lead in their child's emergent literacy development. Educational professionals could support parents by resourcing appropriate storybooks for DR that would motivate young children and increase opportunities for dialogue. Notably, studies reviewed in this article which included training in dialogic reading strategies and techniques received higher WoE C scores, highlighting the need for adequate training in intervention techniques prior to the implementation of a DR intervention. Therefore, it is recommended that education professionals consider the training requirements and engage in continuous professional development in DR to ensure effective delivery of an intervention prior to recommending the intervention to students or parents.

Future Research

Future research investigating the effectiveness of DR in developing ELLs' emergent literacy skills could address the limitations of the studies reviewed. As was previously stated, Petticrew and Roberts (2003) assert that RCTs are the most appropriate research design for answering research questions that are evaluating the effectiveness of a variable, and thus, future research examining the effectiveness of DR interventions should employ a RCT design. Furthermore, future studies could also include follow-up measures to evaluate whether the intervention's effects are maintained across time. Five out of the six studies selected for review investigated ELLs whose additional language to English was Spanish, and all studies were undertaken in the USA, as studies exploring DR interventions in ELLs outside of the USA did not meet the inclusion criteria of this review. Consequently, future research could examine the effectiveness of dialogic reading interventions for developing learners'

emergent literacy skills in a range of different languages to gather further data about the effectiveness of DR interventions for ELLs. Furthermore, future research could investigate the effectiveness of dialogic reading interventions for the development of ELLs' emergent literacy skills in countries who hold English as an official language, outside of the USA, to explore whether DR interventions are effective in developing the emergent literacy skills of ELLs in other continents across the world.

Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s10643-021-01291-1>.

Author Contributions The conceptualisation, literature search, data analysis and writing of the original and final drafts was carried out by Catriona Kennedy. Supervision, critical review and editing of all drafts of the review paper was undertaken by Aoife McLoughlin.

Funding No funding was received to assist with the preparation of this manuscript.

Availability of Data and Material All data generated or analysed during this study are included in this published article (and its supplementary information files).

Code Availability Not applicable.

Declarations

Conflict of interest The authors have no relevant financial or non-financial interests to disclose.

Ethical Approval Not Applicable.

Consent to Participate Not Applicable.

Consent for Publication Not Applicable.

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