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MSc Dissertation

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The role of the UK school nurse in supporting school-age children with emerging mental health difficulties and existing mental health diagnoses; a systematic review.

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Abstract

Background

In the context of rising mental disorder prevalence among school-age children in the UK and increasing pressures on services to deliver effective and efficient interventions, school nurses have been identified as a key workforce to clinically support school-age children with emerging mental health difficulties and existing mental health diagnoses.

Objective

This systematic review aims to identify and critically analyse existing academic literature, in order to ascertain the current role of the UK school nurse in supporting school-age children with emerging mental health difficulties and existing mental health disorders. In doing so, this systematic review makes recommendations for future research and discusses implications for nursing practice.

Method

Whittemore and Knafl's (2005) integrative review methodology was utilised in order to conduct a systematic review of the literature. This was used in conjunction with the PRISMA (2009) guidelines. CASP tools were used to critically appraise the selected papers, and the findings were tabulated in order to identify emerging themes.

Findings

268 papers were found from database searches, and six papers were identified as relevant to this literature review. Although these papers were preliminary in nature, clear themes were identified across the selected papers. School nurses were found to be *uniquely well-placed to support* school-age children with emerging mental health difficulties and existing mental health diagnoses. However, barriers to effective interventions included school nurses' *lack of knowledge* and *lack of resources* within school nurse teams.

Conclusion

This systematic review is the first to investigate the role of the UK school nurse in relation to supporting school-age children with emerging mental health difficulties and existing mental health diagnoses. However, there is a lack of evidence to ascertain the nature

of this role, but it remains a common area of practice for school nurses across the UK. Therefore, the lack of training and knowledge within this clinical subject area is an urgent cause for concern and future practice development and research is strongly recommended.

Table of contents

List of tables and figures

Introduction

Mental health disorder prevalence has risen among the UK population in the last decade, with evidence to suggest that 75% of mental health disorders have a paediatric aetiology (Department of Health 2015, Office of National Statistics 2018). This has increased public awareness of children's mental health and has initiated a public health response by the UK government, that aims to increase access to early intervention and support among children and young people with emerging mental health difficulties (Department of Health & Department for Education 2017). This increased focus upon the mental health of children has, however, coincided with a decade of nation-wide austerity and reduced public spending; leading to decreased funding and service provision (Stuckler *et al.* 2017). Therefore, any initiative to improve the emotional health and well-being of the UK school-age population must utilise the existing workforce and resources, including school nurses (Department of Health 2015).

This systematic literature review has been conducted in order to ascertain the current role and scope of school nurses in the UK, with regards to supporting school-age children with emerging mental health difficulties or diagnosed mental health disorders. Existing systematic reviews, related to the role of the school nurse in mental health support for school-age children, have been multifaceted and include those with learning difficulties and behavioural or kinetic disorders (Wainwright *et al.* 2000, Turner & Mackay 2015). Moreover, a scoping study conducted by Ravenna and Cleaver (2016) used papers from other countries including America and Sweden; thus is not wholly applicable to the UK system. In addition, although a systematic review of UK literature considering the school nursing role and mental health was conducted by Bartlett (2015), the selected papers included other elements to the school nurse role, not just mental health support.

This review therefore, is the first systematic review to consider mental health specifically, across the UK school-age population, with reference to the role of school nurses. A brief scoping study identified a gap in literature which provided the rationale for this systematic review and with resultant identified research questions. The literature search utilised Whittemore and Knafl's (2005) integrative review methodology, and the PRISMA checklist was used throughout (PRISMA 2009). The majority of literature identified from database searches was qualitative and thus thematic data was extracted with six studies included in the final literature review. Although six is a small number of studies as part of an integrative review, key themes relevant to the research question and implication for school nursing practice were identified and discussed in detail (Hopia *et al.* 2016). Therefore, this review contributes to the literature and makes important recommendations relevant to school nurse practice, in the mental health support of the school-age population.

Background

Mental health in children

In order to define the parameters of this systematic review, it was important to gauge an understanding of the manifestation of mental health in school-age children in the UK. 'Children' within this systematic review are defined as those within a 5-19 age bracket, in line with the scope of the school nurse role encompassing these ages (Deparment of Health and Social Care 2009).

The inclusion criteria for, and defintion of, mental health 'disorder' and 'difficulty' is contentious (Clark *et al.* 2017, Telles-Correia *et al.* 2018). The International Statistical Classification of Diseases and Related Health Problems (ICD) 10, adopting a medical model, defines a mental disorder as 'the existence of a clinically recognisable set of symptoms or behaviours associated in most cases with distress and with interference with personal functions' (World Health Organisation 2015). However, other definitions include social and

qualitative aspects; the World Health Organisation (WHO) describes mental health as "a state of well-being in which the individual realises his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community' (Mental health: strengthening our response 2018). This recognises the need for qualitative description rather than categorical diagnosis. For the purpose of this systematic review, as many children and young people present with *emerging* mental health difficulties that fall short of diagnosis, this term will be used alongside mental health diagnosis, in order to capture a wide-range of presentations. Specialist mental health services are often reluctant to diagnose mental health disorders in the school-age population, so the recognition of children and young people's early-onset symptoms and emerging behaviour changes is important to include within this review, rather than solely on a fixed definition of mental illness or disorder (O'Connor *et al*. 2019).

The Department for Education (2018) noted that 1 in 10 school pupils have a diagnosable mental health disorder, and 1 in 7 will suffer from (less severe) mental distress. Moreover, this was supported by Public Health England (2016) who reported that mental illness is the leading cause of health-related disabilities in the UK. The Mental Health of Children and Young People in England review reported that mental health difficulties in childhood make the transition into adulthood significantly more difficult, and those with untreated mental health disorders at an early age are more likely to have poorer outcomes as they become adults, thus placing an emphasis on early intervention (Public Health England 2016). Anxiety, depression, eating disorders, self-harm and mood disorders were noted to be the most common difficulties for under-18s (Public Health England 2016). Moreover, an association between mental and physical health is evidenced; the National Institute of Clinical Excellence (2009) noted that mental health issues are concerning in their own right, but that being mindful of the impact on physical health is also important. The Royal College

of Nursing (2019) Toolkit for School Nurses highlights self-harm as an important example of a causative association between mental health difficulties and physical injury. Furthermore, both the Department of Health and Public Health England (2014) requested legislation for parity between mental and physical heath by stating '*there is no health without mental health',* and the guidelines for supporting pupils at school with medical conditions notes that school staff and school nurses should be aware of the emotional impact that physical health conditions can cause in children and young people. Thus demonstrating that for the school-age population, not only is the prevalence of mental health disorders rising, and concerning in itself, but physical health is impacting on mental health, and vice versa.

Role of the school nurse

School nurses have existed in varying forms since 1907 (Royal College of Nursing 2019), and are thought to be a well-placed mediator between health and education, in order to support the public health needs of the young population (Department for Health and Social Care 2009). School nurses offer universal services to all school-age children in the UK, and more targeted interventions for those in need of extra support (Universal Plus), including co-ordinating services for children with multiple needs (Universal Partnership Plus) (Department of Health 2012). However, these targeted interventions vary between localities, as Clinical Commissioning Groups decide what services to target, and which elements of the workforce are best place to support them (Allan *et al.* 2017). Historically, school nurses have supported with public health initiatives such as immunisations, obesity, and sexual health concerns (Royal College of Nursing 2019). However, now that mental health is being seen as a public health priority, school nurses have an increased responsibility to include supporting pupils with mental health conditions (Royal College of Nursing 2019).

School nurses are thought to be well-placed to identify and support those suffering with mental health difficulties, and they are often seen as being non-judgmental, and 'trusted adults' (Public Health England 2015). The importance of early intervention by school nurses specifically was noted by the Department of Health (2012), and both Public Health England (PHE) and the Royal College of Nursing (RCN) note that nurses' *compassion* and *inclusivity* mean they can 'intervene quickly when someone is in distress or crisis' (Public Health England & Royal College of Nursing 2015). One newspaper article noted that school nurses may be preferable to teachers in supporting pupils with mental health difficulties, due to their confidentiality (Avery 2017). The Department of Health and PHE note that school nurses are the single biggest workforce trained and skilled to deliver public health for school children (Public Health England & Department of Health 2014). This puts school nurses at the forefront of public health delivery; and subsequently of mental health support. Utilising the existing workforce is a key aspect in the Department of Health (2015) 'Future in mind' document, in line with austerity measures; thus further demonstrating that school nurses are, in theory, well-placed to support the school-age population with emerging and existing mental health difficulties and/or diagnosed disorders.

Safeguarding and child protection was noted to be an aspect of the school nursing role, and the links to adverse childhood experiences and developing mental illness later on in life was apparent (National Institute of Clinical Excellence 2008). 50% of Children Looked After have diagnosed mental health disorders, and mental illness is noted to be more common in children who have been neglected and abused (House of Commons Education Committee 2016). The links between mental health and the school nurses' safeguarding role therefore cannot be overlooked. Much of the literature specifically demonstrates the connection between abuse and neglect, and mental ill-health in children (Public Health England 2016). The prevalence of mental health difficulties is significantly higher among children in the care

system, and adults who had adverse childhood experiences, compared to the general UK population (Akister *et al.* 2010). School nurses are often utilised by professionals in a safeguarding role for the early identification of children at risk of abuse and are seen as 'trusted adults' by the children themselves, therefore placing emphasis on this aspect to their role (Public Health England & Department for Health 2014).

Moreover, early identification and intervention was noted to be vital in supporting those with emerging mental health difficulties (Department of Health 2014). The RCN and PHE both note that nurses are likely to encounter suicidal young people, and are therefore both well-placed and obligated to provide intervention (Public Health England & Royal College of Nursing 2015). School nurses in particular have a high frequency of contact with vulnerable children and young people compared to other professionals (Royal College of Nursing 2019). This provides the opportunity to deliver brief interventions to children and young people, rather than the burden falling solely upon specialist mental health services. A government Green Paper noted that school nurses could be as successful with their interventions as trained therapists when supporting children and young people (Department of Health & Department for Education 2017). This demonstrates that government bodies have an expectation of school nurses to deliver interventions to support pupils with emerging mental health difficulties or diagnosed mental health conditions, to a high standard. Specialist services are not solely responsible for the mental health of children and young people as noted by the RCN, which further necessitates the provision of mental health support within the school nurse role (Royal College of Nursing 2014).

Identified gaps in the literature

A scoping study was initially conducted to gather background knowledge of this topic. Davis *et al.* (2009) note that scoping studies are useful as a formative activity because

they can offer a ‘diverse range of evidence’. However, the importance of being rigorous when following a procedure and methodology should also be noted (David *et al.* 2009*)*. Thus, Arksey and O’Malley’s (2005) scoping study format was used to gather background information. Levac *et al.* (2010) note that accessing multiple study designs is effective, and recognising emerging evidence is crucial. School nursing, as a nursing specialism, has significant literature gaps concerning audit, practice and effectiveness (Yonkaitis 2017). Therefore, collating data from a variety of sources was important to provide a background to this systematic review and frame the research question. This brief scoping search demonstrated limited robust research papers and resources, and rather, significant amounts of grey literature; as well as opinion pieces and local, small scale studies (see Avery 2017, Shuttleworth 2019). Moreover, a search of the Cochrane library returned no results related to this research question.

An internet search engine was used for the background search, which resulted in access to a wide-range of different literature. NICE guidelines, government directives, and the RCN were all used to search for data. There were many results relating to the school nurse role in terms of obesity, sexual health, and other public health priorities (see Department of Health 2014, Dawe & Coward 2019). These were largely irrelevant as were not directly related to the research question nor the focus on specifically mental health support. In line with the PRISMA guidelines the main objective for this systematic review was identified; to investigate the role of the school nurse in supporting children and young people with mental health difficulties (5-19 years old) and to provide evidence of whether that be a proactive and preventative approach, early identification of difficulties, and/or targeted interventions.

The background search demonstrated theoretical concepts of the school nurse role in relation to supporting pupils with emerging or diagnosed mental health disorders, but with a

limited evidence-base. Brown (2015) reported that there was no statutory requirement for nurses to have mental health training, and the RCN (2014) noted a knowledge gap for school nurses by stating that with more support and training, school nurses could provide screening and subsequent simple, targeted interventions. There is limited evidence for universal interventions in relation to mental health promotion as noted by NICE (2009). This is related to proactive, preventative approaches to improving emotional well-being rather than targeted interventions, but it does highlight some conceptual discrepancies in relation to school nursing interventions.

Moreover, when looking at the 'grey literature' as a whole body, it is important to note that a number of government guidelines make limited reference, or indeed no mention, of school nurses. The Department for Education (2018) do not adequately include school nurses in their guidelines for managing emotional health and well-being in schools, despite other health professionals being noted, including General Practitioners (GP's). This is at odds with the Department of Health (2012) guidelines which place a focus upon school nurses being 'well-positioned to identify mental health issues'. Moreover, although there are NICE (2014) guidelines for school nurses and health visitors for certain practices, none are related to mental health or emotional well-being. This shows a discrepancy in the evidence base and regulated practices. The Department of Health and Social Care and Public Health England (2018) has identified '6 High Impact Areas for School Nurses'. One of these areas, 'Resilience and Emotional Well-Being' explicitly references mental health support, however, it could be argued that the remaining areas link to mental health. For example, 'Improving Lifestyles', and 'Maximising Learning and Achievement' both could be significantly impaired by mental ill-health (Department of Health & Social Care and Public Health England 2018). Moreover, other areas including 'Reducing Harm and Managing Risk', 'Transitioning to Adulthood', and 'Supporting Children with Additional Health Needs' are

also targeted areas for intervention, and all link to mental health. However, there is no evidence-base for what these interventions include, and no clinical guidelines for practitioners (National Institute of Clinical Excellence 2008).

Therefore, it can be argued that from the background scoping study, there is a lack of evidence relating to the school nurse role within mental health, and disparities in its overarching guidance. This highlights a lack of coherence and strategy within the government's public health agenda, resulting in a lack of definition of the school nursing role. There is limited evidence for both universal and targeted interventions to improve mental well-being in the school-age population. NICE (2008) guidelines highlighted this lack of evidence as a cause for concern and noted the difficulty in planning interventions with limited evidence. For example, nurse-led Personal Social Health and Education (PSHE) sessions are highlighted in a number of documents as being a tool to be utilized by schools (Department for Health & Department of Education 2017). However, from a public health perspective, it has been argued that school-based education programmes around certain Public Health issues often have limited success (Stuart-Brown 2006).

Therefore, in light of the context outlined above, it was appropriate to conduct a systematic review of the existing academic literature, in order to ascertain what the school nurses' role in supporting children and young people with emerging mental health difficulties and existing mental health disorders currently entails.

Methods

An integrative review methodology was identified as an appropriate search strategy for reporting the results for this systematic literature review. Whittemore and Knafl's (2005) integrative methodology review was adopted, as it offered a clear structure to the methodology of a systematic literature review, minimising the risk of erroneous collation and

reporting of data. Historically, systematic reviews have focused on accessing exclusive standards of evidence, such as Randomised Control trials (Whittemore & Knafl 2005). However, the importance of using diverse ranges of evidence has been noted more recently, especially in nursing practice, and cannot be underestimated (Davis 2009). Broadening the methods used and data collated within systematic reviews can lead to a richer understanding of topics, exploring both concepts and theories as well as collated empirical or thematic data (Whittemore & Knafl 2005). However, the inclusion of experimental evidence or collating data from mixed and broad sources without following clear guidance, can lead to incoherent reporting of results within a literature review (Pare & Kitsiou 2017). The background scoping study demonstrated a paucity of academic research for this systematic review, and thus accessing various study designs and emerging evidence was important. The PRISMA checklist was utilised to ensure accurate reporting of reliable information (Liberati *et al.* 2009). The guidelines for PRISMA, as described by Liberati *et al*. (2009) note that the 27-item checklist is a guide for practitioners to accurately report a systematic review, but not necessarily how to conduct the review itself. Therefore, it was used in combination with the integrative review methodology.

Problem identification

The *problem identification* stage of Whittemore and Knafl (2005) integrative review methodology was initiated by a scoping study as discussed. However, utilising the knowledge from the scoping study and expanding upon it for a more robust systematic review of the literature was critical (Whittemore & Knafl 2005). This allowed for a more formulaic structure to this systematic review than the scoping study allowed, and for tools to be utilised to determine the papers were of a sufficient standard. The scoping study showed that mental illness was rising in the school-age population, and was noted to be a key public health issue (see Department for Health 2015). School nurses are specialist public health nurses, and all

public health concerns come under their remit, including obesity, immunisations, and more recently mental health and emotional wellbeing (Royal College of Nursing 2019). Moreover, it was clear from the background scoping study that the view from the UK government and indeed from the nursing profession, was that school nurses should take a lead role in supporting these pupils for a number of reasons (Department for Health 2014). As a result, the *problem identification* stage of this review noted that assessing the school nurse role in relation to mental health in school-age children, would be important to ascertain.

Literature search

As part of the *literature search* stage, a 'PEO' tool was utilised to identify the facets to be included as part of the question, as well as alternatives phrases/words which may be relevant to the search; see table 1. This is also an important part of the PRISMA (2009) checklist in terms of identifying an eligibility criteria.

Table 1. Identified PEO of interest.

Population	**Exposure**	**Outcome**
School-age children (5-19)	Emerging mental health difficulties or existing mental health disorders.	Support from school nursing services.

It was identified that the 'population' was children and young people, aged between 5-19. This was chosen because school nurses in the UK typically only work with children in these age brackets, due to being 'school-age'. (Public Health England 2009). Moreover, including the phrase 'young people' as part of the search was important, as this usually includes adolescents rather than just primary school-age children. This was important data to capture, as typically many mental health difficulties begin during the adolescent period (Paus *et al.* 2008). The facet analysis also included other terms that may be used to describe children between these ages, as noted in Table 1. The 'exposure' was identified as emerging mental health difficulties or existing mental health disorders; this resulted in the population of 5-19 year olds being further narrowed down to include those who were experiencing concerns around their mental well-being. Within this facet analysis, the Common Mental Health Disorder's (CMD's) were included as MeSH terms, including anxiety and depression, as well as behaviours related to mental health, such as self-harm. Psychosis, phobias and eating disorders were also included, as these are mental health issues which school nurses may be in a position to identify with young people, as they typically begin before the age of 18 (Department of Health 2015, Office of National Statistics 2018). The final component of the PEO tool was the 'outcome' and this was identified as the school nursing service. Differential terms also included Specialist Community Public Health Nurse (SCPHN); a post-registration qualification that registered nurses often have to complete in order to qualify as a

school nurse, and the abbreviation ‘SCPHN’ was included also (Royal College of Nursing 2019). However, this term could have included health visitors within the search, but this was not an issue due to the age of the selected population being above the age of 5; health visitors work with under 5s so this was not a concern for the search strategy (Department for Health and Social Care 2009). In summation, this question intended to focus on school-age children, with emerging mental health difficulties or existing diagnosed mental disorders who had been/were being supported by the school nursing service. These were the parameters set for the literature search in order to answer the research question.

A literature search was conducted using three databases. These included, EMBASE, MEDLINE and CINAHL, utilising the above ‘PEO’ as the search parameters. CINAHL was chosen as a specialist nursing database which was important to access (Wright *et al.* 2015). Both EMBASE and MEDLINE are the largest biomedical databases with access to millions of research articles worldwide, which ensured a high sensitivity to relevant literature (Kwon *et al.* 2014). Initially non-UK papers were included within the literature search, so worldwide databases were important to access. The databases were all searched in 2018 and 2019, and there was no contact with authors of studies to identify additional literature. A facet analysis was completed and Boolean operators utilised, see table 2. This facet analysis included other differential search terms that may be used to describe children between these ages, varying names or job titles of school nurses, and which symptoms of emerging mental health difficulties or existing mental health diagnoses would be covered within this review. Moreover, exploding the MeSH terms in all databases ensured other facets would be identified and thus more literature available (Baumann 2016). It was important to include only papers written in English, those published recently i.e. within the past 10 years to ensure clinical relevance which was achieved by selecting these criteria within each database (Meline 2006).

Table 2. Facet analysis for database searches.

MeSH terms	**School-age children (5-19)**		**Emerging mental health difficulties or existing mental health diagnoses**		**Support from school nursing services**
Facet analysis	Child/ren OR young adults OR teenagers OR adolescents OR young people	AND	Mental health OR mental illness OR depression OR anxiety OR mental health disorder(s) OR eating disorder(s) OR psychiatric OR panic OR phobia(s) OR psychosis OR self-harm OR self-injury	AND	School nurse(s) OR Specialist Community Public Health Nurse OR SCPHN.

However, many papers were identified from the initial search that were not relevant to the study, so inclusion and exclusion criteria were chosen to shortlist the relevant literature. For example, one of the excluded papers, Fazel *et al.* (2014), investigated school-based mental health support programmes run by teachers and school-based psychologists and counsellors, which was not relevant to this literature review. Moreover, behavioural difficulties, kinetic disorders and learning difficulties were conflated within 'mental health' as a search term, so these were also excluded from the review. Very specific populations were also excluded from the 'school-age children' facet, such as Children Looked After, and expectant mothers under 18, due to not being representative of the general youth population, who may also have other services involved within their care (Patino & Ferreira 2018). Table 3 describes all of the inclusion and exclusion criteria. It must also be noted that initially, US papers were not excluded, due to concerns around the sparsity of UK papers.

Table 3. Inclusion and Exclusion criteria.

Inclusion Criteria	**Exclusion Criteria**
School nurse role	Attention Deficit Hyperactivity Disorder, kinetic disorders, behavioural difficulties such as Oppositional Defiance Disorder, and other learning difficulties
Mental health as the main focus	Role of teaching staff
School nurse	Solely physical illness
School nursing specific journals	Socialisation concerns
Physical illness and impact on MH	Very specific populations i.e. expectant mothers <18, Children Looked After
2009-2019	Non-English papers or non English-speaking country
Relevant to the research question	Medication administration in schools
	Children under 5
	Other school staff including welfare officers or counsellors
	Papers older than 10 years (pre-2009)
	Studies from outside of the UK (added as exclusion following from the database search, see Findings)

Data evaluation

The CASP guidelines were used to *evaluate the data* as part of this systematic literature review (Whittemore & Knafl 2005). This was chosen in an effort to capture all types of studies including mixed methods, qualitative studies, and RCTs. Therefore, the CASP guidelines were used for all of the papers in the later stages of the search, especially when determining study selection. This tool was used because it has an evidence base for quality appraisal of studies, and can provide a numerical value to quantify the quality of the study; which is useful when assessing many papers (Munthe-Kaas *et al.* 2019). The CASP tools also effectively allows for the assessment of bias within studies and is beneficial when papers have initially been sifted (Young & Solomon 2009). Moreover, the prompts and 'questions to consider' within the CASP checklists were found to be more user-friendly than other options for assessment tools including the Mixed Methods Appraisal Tool (MMAT) (Hong *et al.* 2018, Munthe-Kaas *et al.* 2019). The MMAT appraises methods and collection of evidence, but not other aspects such as reporting results, analysis of data, and ethical considerations (Hong *et al.* 2018). Whilst the MMAT can be easily quantified to indicate quality of papers, the CASP checklist criteria was also numericalised for this purpose, with a mark out of 10 for each 'yes' answer to the prompts (Dalton *et al.* 2017, Hong *et al.* 2019, Munthe-Kaas *et al.* 2019). Therefore, the MMAT tool was not preferable for this literature search, and using the CASP tool once the studies were chosen allowed for more critical analysis.

Data analysis and presentation.

Data from the studies identified was tabulated. This presentation format aids the comparison of study design, main themes, and risk of bias of the selected papers; and is recommended by Cochrane (2019) as a way of presenting data in systematic reviews. A

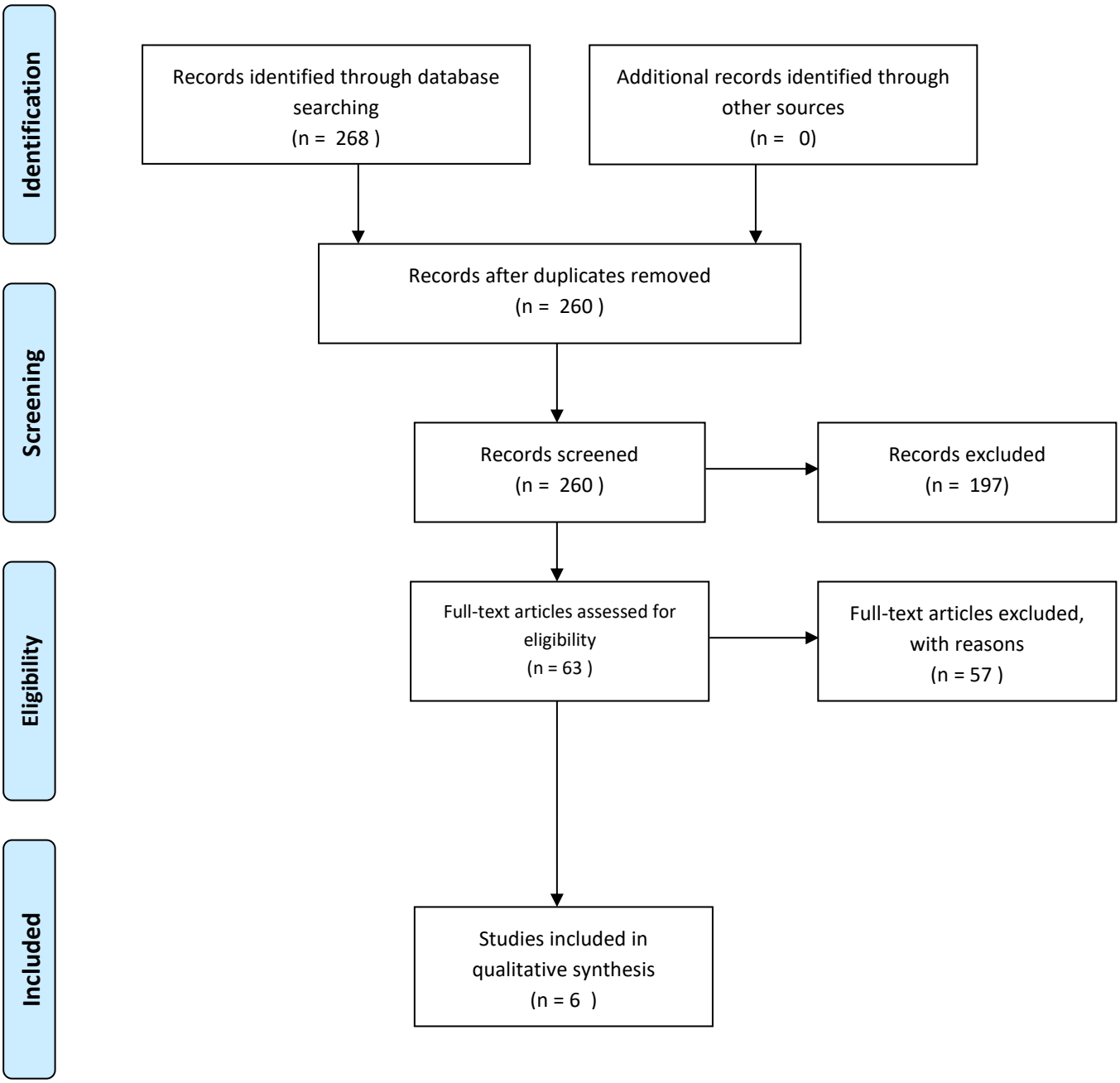
thematic table was also used, as there was little direct comparable data. All of the papers used varying study designs, and thus themes were the most appropriate was of comparing and contrasting the content and the findings within the chosen papers (Thomas & Harden 2008).

Findings

Study Selection

Figure 1 demonstrates the PRISMA flowchart, noting study selection for this literature review. 268 papers were identified during the initial search, before stricter inclusion and exclusion criteria was applied. EMBASE had the highest number of papers (164) of any database, and CINAHL had the lowest number of results with only 35. After the application of exclusion criteria and abstract review, 63 papers were returned; these included American studies. It should be noted that some papers were found on more than one database, therefore each study was only counted once.

Figure 1. PRISMA flow chart.



The eligibility selection within the PRISMA flowchart demonstrates where American studies were excluded; 54 US studies were removed from the search, as there were nine identified UK papers which could have been relevant to the literature review. As the US healthcare system differs to the UK healthcare system with there often being one school nurse per school in the US compared to varying ratios in the UK, it is not a suitable comparison (National Association of School Nurses 2011, Papanicolas *et al.* 2019). Although nine UK papers were found which met the inclusion/exclusion criteria, it was noted that two were published 'opinion pieces', (Pryjmachuk & Trainor 2015, Royal College of Nursing 2016). These 'opinion pieces' were not considered research articles and were not included in the review of existing academic research literature. Moreover, the other excluded paper was a systematic review of the school nursing role in general (Turner & MacKay 2015). Although this contained some data relevant to this literature review, it considered multiple school nurse interventions including smoking cessation, weight reduction, as well as mental health support, thus was excluded for not meeting the eligibility criteria as the PRISMA diagram illustrates. Therefore, these three papers were not appropriate to include in the final study selection for this systematic review, and six were chosen.

Study characteristics

Study design was not part of the exclusion criteria in this systematic review, given the sparse availability of literature, and thus a variety of studies are reflected throughout the six papers. Haddad and Tylee (2013) and Haddad *et al.* (2018) both used quantitative data collection methods, with Doi *et al.* (2018), Haddad *et al.* (2010), Pryjmachuk *et al.* (2011) and Spratt *et al.* (2010) qualitative or mixed methods approaches. Two of the selected studies, Pryjmachuk *et al.* (2011) and Doi *et al.* (2018) used focus groups which was appropriate given the small sample sizes; both had 33 participants, but Doi *et al.* (2018) also combined

this data with interviews and quantitative data. Haddad *et al.* (2010) sent questionnaires out to school nurses in the post, and Spratt *et al.* (2010) used semi-structured interviews to collect their data. Studies with a quantitative methodology included one Randomised Controlled Trial (RCT), Haddad *et al.* (2018), and the other, Haddad and Tylee (2013), included collecting numericalised data from knowledge tests. The number of participants in the included papers varied from 25 participants in one study (Spratt *et al.* 2010), up to 258 in another (Haddad *et al.* 2010). However, Haddad *et al.* (2010) had a low response rate of only 37%. The participants included overall were from a range of UK healthcare trusts ensuring a good geographical spread of studies; London, Manchester, and parts of Scotland were represented across the studies, which offers an insight into the school nursing services in the UK as a whole. However, some studies had a low number of participants, with three of the studies Doi *et al.* (2018), Pryjmachuk *et al.* (2011), and Spratt *et al.* (2010) having 33 participants or less. Moreover, school nurses of varying seniority were included, for example Pryjmachuk *et al.* (2011) did not stratify for nurses with the SCPHN qualification. Also, some of the participants in two of the studies, Spratt *et al.* (2010) and Doi *et al.* (2018), were school nurse managers with no direct clinical contact.

Only one of the included papers had a targeted intervention; this was Haddad *et al.* (2018) RCT, and involved evaluating a training programme designed to help school nurses identify symptoms of depression. However, the other five papers included were broader and had aims of gathering information on school nurses' or managers views and experiences of their role within mental health. The selected six papers overall included research aims such as highlighting training requirements, testing school nurses' knowledge around mental health issues, and exploring their views and attitudes on mental health generally.

Table 4. Table of findings.

Study	Location	Study aims	Design and methods	Participants	Key findings	Limitations	CASP score
Doi, Wason, Malden, Jepsen (2018).	UK	To assess the new initiative of refocusing the role of the school nurse, and how more training could be used to support school nurses.	Mixed methods study. Interviews, focus groups, and collection of quantitative data.	33 in total (27 school nurses and 6 managers) across '2 sites' in Scotland.	Mental health pathways used by school nurses more than other pathways. School nurses can identify those with mental health difficulties but are not adequately trained for interventions. There is limited evidence for school nurse effectiveness.	Aims not clear; focusing on all aspects of school nursing, not just mental health; Small sample size.	7/10
Haddad, Butler and Tylee (2010).	UK	To identify attitudes of school nurses towards their role in mental health, training requirements, and attitudes towards depression and anxiety.	Cross-sectional qualitative study using questionnaires	258 school nurses 'throughout the United Kingdom'.	Those with the SCPHN qualification have higher scores than those who do not. Half of school nurses have received no post-qualification training in mental health. School nurses spend a lot of their time supporting pupils with mental health difficulties. More support from CAMHS needed. Positive and non-stigmatizing attitudes of school nurses noted.	Unclear sample selection. Low response rate of 37%. Results not clearly written as no access to the content of the surveys; difficult to analyse effectively.	9/10

Haddad and Tylee (2013).	UK	To test school nurses' knowledge of depression	Quantitative study. Knowledge test and vignettes.	146 school nurses from 12 Primary Healthcare Trusts.	SCPHN'S scored higher than those without the qualification. School nurses are found to score well in identifying depression. School nurses who have more understanding attitudes towards depression result in better identification of it.	Sample all from London which may not reflect the wider experience of the UK. Vignettes are not real-life scenarios; no chance for extra questions or analysis of the situation, which clinicians would be expected to do.	8/10
Haddad, Pinfold, Ford, Walsh, Tylee (2018).	UK	To evaluate a training programme intended to improve school nurses' knowledge of depression.	Randomised Controlled Trial	115 school nurses from 13 Primary Care Trusts completed the study.	Training associated with significant improvements in recognition, knowledge and confidence in dealing with depression in school-age children. School nurses were keen to refer to other services than provide interventions themselves.	Sample all from London which may not reflect the wider experiences of school nurses across the UK. Vignettes are not real-life scenarios; no chance for extra questions or analysis of the situation, which clinicians would be expected to do.	9/10
Pryjmachuk, Graham, Hadad, Tylee (2011).	UK	To explore school nurses' views on mental health in school-age children and how they can support them.	Qualitative study using focus groups	33 school nurses from 4 school nursing teams.	School nurses had a good awareness of mental health issues and also noted physical symptoms associated. Long waiting list for	Focus group was self-selecting. Researcher knew some of the participants. No justification for focus group or why	8/10

					CAMHS. Low confidence reported from school nurses in dealing with the common mental health disorders and self-harm. Lack of training in managing these conditions for school nurses. Heavy caseload in other areas taking priority.	some school nurses did not wish to take part. Unclear what Agenda for Change band the school nurses were.	
Spratt, Phillip, Shucksmith, Kiger, Gair, (2010).	UK	An overview of the work completed by school nurses regarding mental health of children and young people.	Qualitative study using semi-structured interviews.	25 school nurse managers across Scotland, from 13 health boards.	Drop in clinics were valued. School nurse role is unique as confidential and relationships of trust are built. School nurses non-judgemental. School nurses having access to health records offer a medical and holistic approach as well. However School nurses have few resources and insufficient training to appropriately support school-age children.	Small sample size and all managers-no opinions of school nurses or service users.	7/10

Quality appraisal

The quality of the papers returned within this systematic review was judged to be of a generally high standard, see table 4. The CASP tools were utilised to demonstrate and assess how robust the papers were, and assess for risk of bias. The main risk of bias with the six papers found was due to low sample sizes overall or low response rates, and unclear ethical guidelines. For example, Pryjmachuk *et al.* (2011), Spratt *et al.* (2010) and Doi *et al.* (2018) all had few participants. Low response rates with limited author explanation was found in Haddad *et al.* (2010) which reduced data reliability. Pryjmachuk *et al.* (2011) declared that the author knew some of the participants, but did not explain any attempts to limit biased data collection as a result; this shows a lack of ethical considerations for participants and highlights a risk of bias across the selected papers. In Haddad *et al.* (2010), sample selection and participant inclusion criteria was not presented, and although focus groups were utilised in both Pryjmachuk *et al.* (2011) and Doi *et al.* (2018), this data collection method was only partially justified these papers, and the limitation of 'self-selection' for participants not acknowledged. Moreover, one of the papers, Pryjmachuk *et al.* (2011), did not control for the extraneous variable of nurse seniority or additional qualifications, which may reduce reliability of the findings. Furthermore, three other papers (Haddad *et al.* 2010, Haddad & Tylee 2013, Haddad *et al.* 2018) did stratify for seniority, and thus comparisons between these two studies and Pryjmachuk *et al.* (2011) is problematic. Two of the papers, Doi *et al.* (2018) and Spratt *et al.* (2010), spoke with managers who had no patient contact. Doi *et al.* (2018) combined this with school nurses' views, attempting to gain a more holistic understanding and differing perspective on the role. Moreover, none of the papers included the views of any children and young people who use the school nursing service; thus, excluding the patient group whose well-being is the subject of the systematic review. No parents' views were sought either. This could have been due to ethical considerations, but it

is important to note that this systematic review, as a result, only includes the school nurses' and managers' views on the current role of the school nurse role within mental health support for school-age pupils. This finding demonstrates a clear knowledge gap within the literature and must be noted as a significant limitation in light of the overall body of data.

Themes

There were three themes noted as a result of the systematic review, see table 5. Despite limited papers being available around this topic, the emergent themes were identifiable, and consistent throughout the selected six papers.

Table 5. Thematic table.

		Study Lead Author					
Theme	**Sub-theme**	**Haddad (2010)**	**Spratt (2010)**	**Pryjmachuk (2011)**	**Haddad (2013)**	**Haddad (2018)**	**Doi (2018)**
Knowledge gaps	Lack of training for staff	x	x	x	x	x	x
	SCPHN vs non-SCPHN qualified	x			x	x	
	Low confidence levels			x		x	x
Lack of resources	Heavy caseloads and limited time		x	x			
	Lack of support from CAMHS	x		x			
School nurses are in a unique position	Knowledge of physical health issues		x	x			
	Low levels of stigma	x	x	x			
	Ability to identify and assess risk	x	x		x	x	x

Theme one: lack of knowledge.

The first identified theme was *lack of knowledge* of how to support school-age children with emerging mental health difficulties and diagnosed mental health disorders; school nurses felt this was a barrier to providing effective intervention in all six selected papers. This is reflected in Haddad *et al.* (2010) which reported that 46% of school nurses received no post-registration training in mental health. Pryjmachuk *et al.* (2011) noted that school nurses reported low confidence in dealing with mental health issues that carried greater physical risk, for example self-harm and eating disorders. This finding was corroborated by Spratt *et al.* (2010) who demonstrated that school nurses' current training in mental health was insufficient. Training insufficiency was identified in all of the papers. Doi *et al.* (2018) noted that school nurses feel they can identify mental health issues, but lack knowledge on how to effectively support them. However, it should be noted that this was a study conducted in Scotland which commissions services differently from England; nevertheless, the focus groups' open discussion led the conversation onto mental health in schools, showing how school nurses felt it was a priority (Doi *et al.* 2018).

Theme two: lack of resources.

The second theme identified was *lack of resources* as a barrier to effective intervention and support. These resources include time, staffing, other team pressures, and lack of resources in other services, preventing onward referral and support (Pryjmachuk *et al.* 2011). Both Spratt *et al.* (2010) and Pryjmachuk *et al.* (2011) noted that time pressures were a significant factor in not being able to provide mental health services school-age children. Caseloads and other priorities such as immunisations, sexual health support, and safeguarding were seen to be essential parts of the school nursing service in addition to mental health support (Pryjmachuk *et al.* 2011). Lack of available staff due to many working term-time was

also cited as a factor (Pryjmachuk *et al.* 2011). Spratt *et al.* (2010) expanded upon this, and noted that *lack of training* was due to *lack of resources*, as the time it would take to provide additional training for nurses, would mean their workloads would continue to increase. Moreover, infrastructure was highlighted as an important lacking resource, with limited appropriate clinical space in schools for school nurses to work appropriately (Doi *et al.* 2018). This resulted in nurses being less visible, and thus pupils may be reluctant to seek them out as a source of support (Spratt *et al.* 2010). The absence of CAMHS services supporting school nurse teams is another lacking resource. Pryjmachuk *et al.* (2011) notes that for one school nursing service in 2003, school nurses had regular supervision from CAMHS practitioners, and also ran school-nurse lead mental health clinics. Pryjmachuk *et al.* (2011) compares this to the current situation where these are not ingrained elements of school nursing practice. Haddad *et al.* (2010) noted that CAMHS training would be beneficial to school nurses. However, this study received a low response rate of 37% which is significantly less than the expected 60%, and may not be a representative sample (Fincham 2008). Nevertheless, school nurses not being able to access CAMHS services was a clearly demonstrated in two of the six papers as the thematic table illustrates (Haddad *et al.* 2010, Pryjmachuk *et al.* 2011).

Theme three: school nurses are in a unique position to support.

The final theme identified evidences that school nurses are uniquely well-placed to support school-age children with emerging mental health difficulties or diagnosed mental health disorders. Many reasons for this were identified. Firstly, school nurses are able to identify risk, even if *lack of training* creates a barrier to further intervention (Pryjmachuk *et al* 2011). Doi *et al.* (2018) and Haddad and Tylee (2013) both acknowledge that school nurses are good at identifying emerging mental health difficulties. Furthermore, Pryjmachuk

et al. (2011) demonstrates that school nurses have a good awareness of mental health issues and can identify concerning presentations. This ability to identify risk is aided by the school nurses' knowledge to link mental health to physical heath. Pryjmachuk *et al.* (2011) notes that school nurses are able to notice physical symptoms of mental ill-health, such as aches and fatigue. This is where the role of the school nurse was found to be unique. Although Haddad and Tylee (2013) demonstrated that school-nurse led interventions had positive outcomes via a web-based programme, Pryjmachuk *et al.* (2011) and Spratt *et al.* (2010) both note that school nurses can offer additional supports by understanding the physical symptoms as well, during face to face conversation. In addition to this, school nurses can distinguish between behavioural issues and mental health difficulties, which is another unique aspect to the role (Pryjmachuk *et al.* 2011).

Moreover, school nurses were found to be understanding and have a good awareness of issues surrounding mental ill-health; and thus stigmatise less than other professionals (Spratt *et al.* 2010). Spratt *et al.* (2010) noted how that this may due to be being detached from the school system. Haddad *et al.* (2010) noted the non-judgmental attitude of school nurses and Pryjmachuk *et al.* (2011) noted that school nurses had 'good listening skills'. However, these claims are self-reported by school nurses, and the views of school-age children remain uncaptured.

Discussion

Key findings and themes

The findings from the systematic literature review have provided clarification to the role of the school nurse in relation to supporting school-age children with emerging mental health difficulties or existing mental health diagnoses. Overall, a number of consistent themes were identified, including *lack of knowledge, lack of resources,* and the *unique capacity of*

school nurses. The lack of literature available and risk of bias in the body of literature overall mean the role of the school nurse as found within this systematic review is only partially demonstrated thus further research is recommended. In line with the PRISMA (2009) guidelines, limitations and implications for practice are considered within this discussion.

The first theme identified from this systematic review was *knowledge gaps* for school nurses of how to support school-age children with emerging mental health difficulties and existing mental health disorders, which led to a reluctance from school nurses to provide interventions to those in need of support (Doi *et al.* 2018). Knowledge gaps for school nurses were identified in all six of the studies within this literature review, resulting in low confidence for school nurses in dealing with mental health difficulties. All of the papers identified that lack of training for school nurses was leading to the knowledge gaps, and thus affecting the capability to provide mental health services to children and young people. Haddad *et al.* (2010) noted that nearly half of school nurses had not received any post-registration training in mental health, which may be explained by Brown (2015) which notes there is no statutory requirement for nurses to have mental health training. This is echoed by the RCN (2019) who stated that school nurses could be in a position to provide effective support and early intervention to improve mental health and emotional well-being, but there needs to be more support and training. Pryjmachuk *et al.* (2011) noted this as a main concern from the focus groups, with low confidence levels reported by school nurses, particularly when supporting school-age pupils who may be self-harming. However, using focus groups is potentially self-selecting as not all nurses within the service participated. Nevertheless, even with this potential study limitation, this finding supports the identified theme in other papers (see Spratt *et al.* 2010, Doi *et al.* 2018) that although mental health is seen as a priority, school nurses are not adequately trained in supporting pupils effectively. Moreover, when mental health training was introduced for school nurses, for example training to

identify depression, significant improvements were noted including increased knowledge and confidence (Haddad *et al.* 2018). This compared to the original Haddad (Haddad & Tylee 2013) study where the school nurses received no extra training. Haddad *et al*. (2018) included 115 participant responses which is a significant number of school nurses, and investigated how reliably school nurses can recognise depressive symptoms. This was noted to show that, with subsequent training; school nurses had a 'relatively high level of recognition of depression' (Haddad *et al.* 2018). However, one limitation to this study's methodology is that it did not investigate school nursing skills and proficiency in real-life clinical interaction but rather used computer-delivered vignettes (Haddad *et al.* 2018). This may result in other presenting signs of depression, that rely on face to face clinical observation or assessment skills, being missed (Callard 2014). For example, when nurses are faced with a real-life or face-to-face situation, there may be more scope for further assessment; observation of body language, having access to previous medical history, or discussions with school teachers or parents, may lead to more information being obtained (Callard 2014). All of these elements to clinical assessment cannot be underestimated as they could improve school nurses' recognition rates of not just depression but other mental illness or emotional distress.

Moreover, it is not just the school nurses themselves who are concerned about their limited training opportunities in this area. Spratt *et al.* (2010) notes that school nurses have 'insufficient training' to appropriately support children and young people with mental health difficulties; the participants in this study were not school nurses but rather school nurse managers. Data was also collected from thirteen health boards across Scotland which offers a broad geographical spread, demonstrating that these reported concerns around lack of training are not isolated to specific areas (Spratt *et al.* 2010). Moreover, there is a risk that managers may be under pressure to bias their responses, as they have a vested interest in portraying their services as performing well (Higgins *et al.* 2010). Therefore, the fact that in

spite of this, the managers still identified gaps in school nursing knowledge around mental health and lack of training opportunities, demonstrates just how significant the issue may be (Spratt *et al.* 2010). As this study was across a number of boroughs, it can be assumed that this may be a common trend across many school nursing services in the UK, which correlates to the wider body of evidence around this topic including the scarcity of set government guidelines and requirements (Spratt *et al.* 2010). Doi *et al.* (2018) note that mental health pathways are currently being used more than any other pathway in school nursing. This is corroborated by Haddad *et al.* (2010) which found that school nurses spend a significant amount of time supporting pupils with mental health difficulties. Therefore, the lack of knowledge demonstrated within this systematic review is concerning because the most common area of school nursing practice, supporting school-age children with emerging mental health difficulties and existing mental health diagnoses, is being conducted without sufficient training. School nurses are expected, by health and education bodies, to be providing this service to children and young people and prioritising mental health above other public health needs (see Royal College of Nursing 2019), but the literature review demonstrates there is not sufficient training, confidence or knowledge within school nurse teams to be providing this to a high standard.

However, Haddad *et al.* (2018) demonstrated that implementation of training was associated with significant improvements in knowledge regarding mental health. Haddad *et al.* (2010), Haddad and Tylee (2013) and Haddad *et al.* (2018) all noted that school nurses who had completed their SCPHN qualification were more able to recognise depressive symptoms than those nurses who hadn't taken this qualification. These were the only papers found within the literature search to differentiate school nurses who were practising with different qualification levels, which would be important to explore further. Moreover, both of these papers included data from wide geographical spreads and school nurses from different

healthcare Trusts; this shows that the results are generalisable across school nursing services, and thus the results can be more reliably applied to UK school nursing in general (Haddad *et al.* 2010, Haddad *et al.* 2018). Department of Health and Department for Education (2017), as identified in the background scoping study, supports this capacity for intervention, by noting that school nurses could be as successful as trained therapists in delivering interventions; if they had sufficient training. Even in light of extra training being recommended by government guidelines, it is clear from the results of the literature review that training has not been implemented.

The knowledge gaps for school nurses, however do not seem to include identification of mental illness or emotional distress; but rather the interventions to support young people. Doi *et al.* (2018), Haddad and Tylee (2013) and Haddad *et al.* (2018) and Pryjmachuk *et al.* (2011) all note that school nurses are well-placed and competent to identify mental health difficulties in school-age children. This is reflected in the RCN (2014) guidance that nurses should be able to identify those suffering and provide interventions, as it is not solely up to specialist mental health services. However, more research is required to understand this further. Haddad and Tylee (2013) and Haddad *et al.* (2018) solely focused on school nurses recognising depression and no other CMD or identification of behaviours which may be associated with mental distress. Nevertheless, the main finding from Haddad and Tylee (2013) and Haddad *et al.* (2018) was that training is associated with significantly improved outcomes for nurses identifying mental illness, and thus this finding cannot be underestimated. It can be seen in context of a wider consensus within the literature, that nurses do not have enough training to support school-age children with emerging mental health difficulties or existing mental health diagnoses and are too reliant on referring to other services for intervention (Royal College of Nursing 2016). The lack of NICE guidelines or statutory requirements for mental health training for school nurses is concerning in light of

the evidence found in the selected literature within this systematic review, and demonstrates that school nurses are not receiving the training they need in order to effectively school-age children (see National Institute for Clinical Excellence 2008).

Lack of capacity due to other workload priorities was also identified within the selected literature. Pryjmachuk *et al.* (2011) focus groups noted that school nurses' caseloads and priorities in other areas of the role were superseding the need to support school-age children with regards to their mental health. This was also highlighted by Spratt *et al.* (2010) which noted there are few resources within teams. In context of the wider literature on this topic, the guidance from nursing and government bodies on the school nursing role insist that safeguarding and child protection concerns take priority (Department for Health and Social Care 2009). PHE (2015) note that school nurses have an obligation to identify school-age children who are at risk of abuse and neglect; this is a significant part of the school nurse role. Moreover, the absence of focus on school nurses in some of the identified grey literature and the '6 High Impact Areas,' could be interpreted as meaning the school nurses are better placed to deal with other public health concerns (Department of Health and Social Care and Public Health England 2018). There was ambiguity with what these interventions for the 6 high impact areas should look like, and thus could be open to interpretation. Time pressures as noted by Spratt *et al.* (2010) lack of staff due to many school nurses working term time, both result in there being few resources within teams. However, the data found within Pryjmachuk *et al.* (2011) was collated by using focus groups with a small sample size of 33. Focus groups can be 'self-selecting', however they are often useful for emerging research and investigating unexplored topics to focus future research (Doody *et al.* 2013). Nevertheless, a larger sample size and mixed-method study design would have been beneficial to ascertain what work school nurses are currently doing; rather than self-reported anecdotal evidence from few participants (Doody *et al.* 2013).

Lack of resources also encompasses the scarcity of support from other health professionals, including CAMHS services. Both Haddad *et al.* (2010) and Pryjmachuk *et al.* (2011) noted that school nurses 'appreciated' when CAMHS services worked collaboratively with the school nursing team. Pryjmachuk *et al.* (2011) highlighted that the long waiting list for CAMHS services was putting significant strain on the school nursing services. None of the wider literature noted explicitly that there should be the necessity or requirement for CAMHS services to work in conjunction with school nurses. However, the RCN (2014) did note that specialist services are not solely responsible for delivering interventions to support mental health and well-being of school-age children. Therefore, a partnership between school nursing and specialist CAMHS services should be considered, but school nurses shouldn't rely on them to provide all interventions for school-age children with emerging mental health difficulties and existing mental health diagnoses. Rather, school nurses should instead be trained adequately to provide some interventions themselves (Royal College of Nursing 2019). Moreover, partnership working between agencies is essential to optimum service provision and health professionals are expected to work in partnership (Taylor-Robinson *et al.* 2012). GP's were largely excluded in the findings from the selected six papers within the literature, which demonstrates another gap in linking health services which could be improved upon to maximise outcomes for school-age children. Pryjmachuk *et al.* (2011) noted this but the responses were from an all school-nurse team and thus the opinions from CAMHS practitioners have not been taken into consideration. This was reflected in all of the selected literature; apart from school nurses and school nurse managers, no other professional views were captured, which is a major limitation to the body of research identified in this review.

The final theme is that school nurses were found to be well placed to support pupils with mental health difficulties, and are in a unique position compared to other professionals.

All of the papers identified this as a key factor and aspect to the school nursing role. Doi *et al.* (2018) noted that school nurses have the ability to identify and assess risk; an important aspect of dealing with mental health concerns. This was also supported by Haddad and Tylee (2013) and Haddad *et al.* (2018) who note this as a key strength of the school nurse. School nurses have a background knowledge of physical health issues, which adds to their role within mental health support (Pryjmachuk *et al.* 2011). Both Spratt *et al.* (2010) and Pryjmachuk *et al.* (2011) identified this. Pryjmachuk *et al.* (2011) noted that physical symptoms were a key part of the assessment school nurses use for mental health and emotional well-being, and this puts them in a unique position compared to other non-medical services. Moreover, Spratt *et al.* (2010) supports this by noting that school nurses have access to health records for the pupils which may also support in identifying risk factors for mental illness, or existing symptoms identified by other medical professionals. This enables school nurses to offer a 'holistic' approach as Spratt *et al.* (2010) identifies, to support both the physical and mental well-being of the school-age populations. This is supported by NICE (2009) which noted the important link between physical health and emotional well-being, and the focus on parity between the two, by both the Department for Health and Public Health England (2014).

School nurses were also found to be non-judgmental compared to other professions, and be seen as 'non-stigmatising'. Three of the six papers identified this, with Haddad *et al.* (2010) identifying a 'positive' attitude from school nurses towards mental health, Spratt *et al.* (2010) noting that school nurses are viewed as 'non-judgmental', and Pryjmachuk *et al.* (2011) noting the good awareness around mental health and emotional wellbeing among school nurses. However, a key limitation is that these findings are all self-reported by school nurses themselves or their managers. Thus, further research involving school-age pupils themselves who have sought support from school nurses, is required to corroborate these

findings. However, this view found within the selected papers is supported by the body of wider literature. Both PHE and RCN note that nurses' 'compassion and inclusivity' leads to their ability to intervene appropriately (Public Health England and Royal College of Nursing 2015). Moreover, not only are they non-stigmatising professionals, school nurses often run confidential drop in services (Spratt *et al.* 2010), and thus trusted relationships are built between the school nurses and pupils, meaning more effective support can be offered.

Therefore, this systematic review has demonstrated that school nurses are well-placed to support school-age children with emerging mental health difficulties and existing mental health diagnoses. Department of Health (2014) notes that school nurses are the single biggest workforce trained to deliver public health interventions to school-age children, and thus their capability cannot be underestimated. This view, combined with the non-judgemental attitude, presence of school nurses within schools, ability to identify risk, and offer holistic approaches to mental health and wellbeing have been widely reported throughout the literature identified as part of this review. Therefore, with additional training and improved resources, school nurses should deliver effective interventions in order to identify early on those at risk of suffering from mental ill-health, support those with existing mental health diagnoses, and intervene as appropriate.

Limitations

This systematic review has a number of limitations, all of which will be acknowledged and discussed. Only six papers were included as part of the systematic review which demonstrates scarcity of the literature, thus the findings should be interpreted with caution as they may not be generalisable. Sample sizes were small in three of the studies (see Spratt *et al.* 2010, Pryjmachuk *et al.* 2011, Doi *et al.* 2018) and many of the samples were not representative of the school-nursing population, and were 'self-selecting' (Pryjmachuk *et al.*

2011). Furthermore, whilst study quality was of reasonable standard overall, this subject area is an emerging field of research so many studies were preliminary in nature. This should urge caution with regards to interpreting the findings. Many of the studies were self-reported by school nurses, and whilst the nurses may report an understanding of mental health difficulties, this was only tested against an objective standard in one paper (Haddad & Tylee 2013). Indeed, with nearly half of school nurses receiving no extra training, it is likely that their reported high levels of awareness of mental health issues may be inaccurate (Pryjmachuk *et al.* 2011). Moreover, some of the studies were not robust enough due to low response rates (see Haddad *et al.* 2010). The study utilising a focus group design did not identify if managers were present during the focus group, which could have prevented participants from speaking freely (see Pryjmachuk *et al.* 2011). In addition, it is unknown whether managers were involved in selecting the members of the focus group which could also bias results (Pryjmachuk *et al.* 2011). A further limitation is that only three studies distinguished between qualified SCPHN's and unqualified school nurses (Haddad *et al.* 2010, Haddad & Tylee 2013, and Haddad *et al*. 2018). The SCPHN course contains modules on mental health and offers, at a higher academic level, the rationale underpinning school nurse interventions. Therefore, this differentiation is crucial.

Moreover, the selected studies excluded views of service users. Children excluded from research which investigates their care could be viewed as contrary to part I of the Children's Act, (UK Houses of Parliament 2004), and the United Nations (1989) Convention on the Rights of the Child with regard to the children's right to discourse. The Medical Research Council's (2004) guidelines on using children in research note that where research is being used to 'obtain knowledge relevant to the health, wellbeing or healthcare needs of children', as long as the methods and approach are justified and within ethical guidelines, children should be included. Moreover, research has shown that children seeking support for

their mental health difficulties often feel that their views as service-users are not considered, and there is a lack of understanding of their needs by professionals (Care Quality Commission 2017). School nursing services are expected to provide a universal service to every pupil between 5-19 in the UK, approximately 8.82 million children (Department for Education 2019). Therefore, to not seek children's views regarding their own services could mean that services aren't being targeted as effectively as they could (Care Quality Commission 2017).

An additional limitation is that views of other professionals, such as specialist mental health services were not sought, and thus the finding that CAMHS services aren't available needs to be further investigated, in order to fully understand the complexity of the school nurse role, and what can, realistically, be expected when supporting school-age children. The final limitation is that there is a lack of data to demonstrate how school nurses are currently practicing. Many of the selected studies did not quantitatively capture the prioritisation of school nurses' work, except for Doi *et al.* (2018). Auditing numbers of CAMHS referrals, number of pupils in drop in clinics, and any therapeutic interventions by school nurses were not noted in the remaining papers; it is clear from the qualitative data found that school nurses are doing these as part of their roles, but some numerical data would add to the body of research.

Implications for practice and recommendations for future research

The findings from this systematic review have many implications for school nursing practice, and recommendations for future research. The first is that school nurses need more training and competency development in order to support school-age children with emerging mental health difficulties and existing mental health diagnoses. It was clearly noted in Haddad *et al.* (2018) that when this training is put in place, it can produce positive results and

thus this needs to be prioritised. Not only does this need to be implemented on a local level within individual school nurse teams, based on their own demographics and commissioned services, but national guidance needs to be filtered down to local teams. The guidance overall is clear that school nurses should play a pivotal role in supporting the school-age population with emerging mental health difficulties and existing mental health diagnoses. The RCN (2019) provide guidelines for managing self-harming and have developed a school nursing toolkit which includes information about supporting pupils with mental health difficulties. However, it is not clear from the literature identified within this systematic review whether school nurses have access to these resources and if it is robust enough to guide a service plan. Moreover, to assess knowledge gaps, it is recommended that both national and local quantitative research is conducted to assess school nurses' current level of knowledge and competency. This is necessitated to build on the findings from this systematic review and ascertain if school nurses are currently practicing safely and within their competency.

Another recommendation for practice is linking safeguarding and mental health in context of the findings from this systematic review. The background scoping study demonstrated a need for school nurses to support pupils where there are safeguarding concerns and therefore have a higher chance of developing mental health conditions; this was not reflected in the literature identified (Public Health England 2016). Indeed, the lack of discussion of this issue within the selected literature is concerning for practice. Pryjmachuk *et al.* (2011) noted that safeguarding work takes priority over other aspects to the school nursing role including mental health; but given that children being abused are more likely to experience mental health difficulties than those who aren't, mental health support should be embedded within safeguarding practice for school nurse teams (Department of Health & Department for Education 2017). Thus, understanding why this is a knowledge gap would be

important for improving practice in light of the above evidence, and improving outcomes for school-age children.

A recommendation for practice is that school nursing services should collaboratively work with other Tier 1 and Tier 2 providers of mental health services. For example, CAMHS and GP services were frequently referenced in the legislation and guidance (see Department for Education 2018), but the literature review showed lack of coherence between these services, which was resulting in limited inter-agency working and negative feelings towards CAMHS (see Pryjmachuk *et al.* 2011). Indeed, GP's were scarcely mentioned within the six papers. Assessing the views of GP and CAMHS services would be vital in moving forward and improving school nursing practice. Local audits and research could be utilised, as national guidance already obliges agencies to work together (Taylor-Robinson *et al.* 2012). Because of the changing nature of Clinical Commissioning Groups, local rather than nationally focused research is required (Allan *et al.* 2017).

The final recommendation for future research is to provide evidence for the claims in government legislation and guidance that school nurses *are* the best placed service to support school-age children with emerging mental health difficulties and existing mental health diagnoses (Department of Health and Public Health England 2014). This systematic literature review has demonstrated lacking evidence concerning this, and school nurses' scope of practice needs to be ascertained at both local and national levels. Utilising service-users and other professionals in future research is recommended, as it would assist in ascertaining if school nurses are the best-placed professionals to support school-age children. The legislation and guidance as identified as part of the background to this literature review has not been supported by evidence-based literature as this systematic review has noted, which is a key knowledge gap.

Conclusion

This systematic review is the first to investigate the role of the UK school nurse in relation to supporting school-age children with emerging mental health difficulties and existing mental health diagnoses, specifically. This is, therefore, an original contribution to this research area. This systematic review was necessitated by insufficient evidence to support government directives and public body recommendations in relation to the school nurse role and support for school-age children. A systematic approach to reviewing the literature using Whittemore and Knafl (2005) integrative review methodology, in line with the PRISMA (2009) checklist, identified six papers for inclusion. Although this resulted in somewhat limited data to review, coherent findings were identified from the selected papers which contribute to knowledge around this topic. Namely that school nurses lack training to effectively support school-age children with emerging mental health difficulties and existing mental health diagnoses. Furthermore, limited resources within school nursing and mental health services result in barriers to providing effective intervention. Therefore, whilst school nurses were found to be uniquely placed to support school-age children, there are significant barriers to be overcome. These findings were mostly consistent with the background scoping study, which demonstrated that school nurses are expected to provide mental health services to school-age children as a public health priority.

In conclusion, this systematic literature review has demonstrated that the role of the school nurse, in supporting school age children with emerging mental health difficulties and existing mental health diagnoses, is an important one, given the rising prevalence of mental illness in the UK school-age population (Department for Education 2018). However, there is not enough evidence to ascertain the specific nature of this role, or how it can be best utilised as there are many gaps in the returned literature that requires further research. This systematic review has demonstrated that supporting school-age children with emerging mental health

difficulties and existing mental health diagnoses is a common area of practice for school nurses and, therefore, the lack of training and knowledge within this clinical subject area is an urgent cause for concern. Further research and subsequent improvement to school nursing training and practice is necessitated to ensure optimum outcomes for school-age children with emerging mental health difficulties and existing mental health diagnoses.

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Appendix

PRISMA checklist

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	2
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	4
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	8
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	13
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	14
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	15
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	17
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	18
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	19
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	21

Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	N/A
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	21
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	N/A
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	21

Section/topic	#	Checklist item	Reported on page #
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	21
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	N/A
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	21
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	24
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	29
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	25
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	26
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	29
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	N/A
DISCUSSION			

Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	34
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	40
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	43
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	N/A