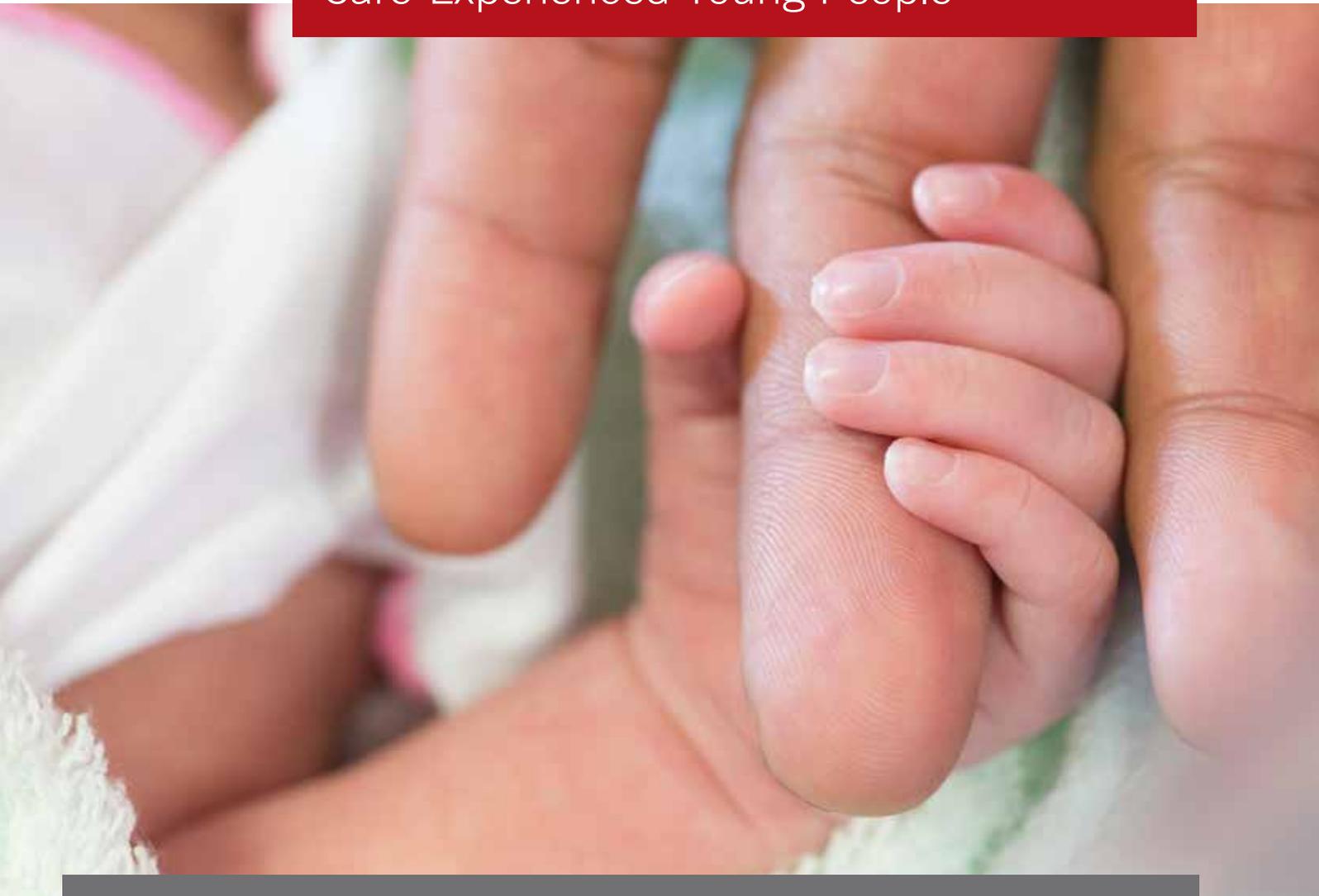


Preventing Unplanned Pregnancy and
Improving Preparation for Parenthood for
Care-Experienced Young People



A comprehensive review of the literature and critical appraisal of intervention studies.
Dr Debbie Fallon & Professor Karen Broadhurst of the Universities of Manchester and
Lancaster on behalf of Coram.

October 2015

The Project Team

This review was undertaken by a research team with expertise and experience of working on and researching issues of health and social care with children, young people and families.

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Karen is Co-Editor in Chief of the journal: Qualitative Social Work but equally works with larger-scale quantitative datasets. Karen is particularly interested in how the data infrastructure for child welfare practice might be improved both nationally and internationally. Karen's work is extensively published in social science, law and health journals.

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Erin assisted with this project following the completion of her MA. This involved some initial searching activity and the development of an early draft of the background section of this report. Erin is currently employed as a social worker in the Greater Manchester area.

About CORAM

Coram is one of the UK's first children's charities. Their mission is to develop, deliver and promote best practice in the support of vulnerable children and young people. Their vision is that every child has the best possible chance to lead a fulfilling life, and they aim to develop as a National Centre of Excellence for Children featuring services for children who face particular challenges. These include: children who cannot remain safely in their birth family or who are in care; children in need of access to justice; refugee, migrant and trafficked children; children and young people who have experienced trauma or whose behaviour places them at risk; emotionally vulnerable young people leaving care or in their transition to parenthood and independence.

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Abstract and Recommendations

It is now widely acknowledged that care-experienced children and young people are at increased risk of poor life outcomes including low educational attainment, unemployment, homelessness, and poor physical and mental health when compared to peers who have not spent time in a care setting. They are also at heightened risk of teenage pregnancy, which significantly increases the likelihood that these disadvantages will be transferred to the next generation. The latter issue is the subject of this research review, which aims to establish the scope and quality of published literature on the topics of pregnancy and parenthood for this population of young people, including evaluative evidence from intervention studies.

Although there is growing awareness of the causes and consequences of early childbearing for young people who are care-experienced, our engagement with the research literature found many calls to action but scant reporting of interventions developed to address the issue. We have therefore approached this review with a broad lens. Part one provides a comprehensive overview of published work on key issues in this area including the perceived pathways to pregnancy, experiences of pregnancy and parenthood, and experiences of sexual health and relationships education. Part two provides a critical appraisal of a small body of published studies that describe the content and outcomes of intervention studies.

Throughout, our overarching interest has been to understand the reasons why care-experienced children and young people are at heightened risk of early and often unplanned transition to parenthood, as well as to garner insights about promising interventions that may deliver better outcomes for this social group. However, as we conclude from this review, progress towards tried and tested, preventative and empowering solutions for care-experienced youth is slow as an international trend. New developments are in progress as outlined in sections of this report, but far more investment is needed to build on promising new directions and ensure their translation into effective evidence-informed practices that deliver better outcomes for children and young people in and leaving care.



Although there is growing awareness of the causes and consequences of early childbearing for young people who are care-experienced, our engagement with the research literature found many calls to action but scant reporting of interventions developed to address the issue.



1. Introduction and Background



The purpose of this review was:

1. To provide an overview of recently published work that broadly focuses on pregnancy and parenthood in care-experienced young people.
2. To report on the scope and range of interventions developed specifically for looked after children and young people or care leavers and which is related to avoidance of unplanned pregnancy or enhancing the experience of early parenting.
3. To provide an appraisal of intervention study designs and discuss any outcome evidence.
4. To consider the potential transferability of these interventions to wider health, social care and educational systems in England.

Throughout, our overarching interest has been to garner insights that will inform the design or further roll out and testing of interventions that may deliver better outcomes for young people who are care-experienced.

Looked After Children and Care Leavers in the UK

In this report we refer to 'care-experienced' children and young people to denote the following populations:

Children and young people who:

- a. are in care on a compulsory basis or accommodated on a voluntary basis, and classed as looked after children
- b. have spent a period looked after but exited care before the age of 16
- c. are care leavers.

By way of background, it is useful to provide some basic facts about looked after children and young people.

Health and Social Outcomes for Looked After Children and Care Leavers

Many looked after children and young people have experienced significant material deprivation and inadequate emotional support in their young lives before they enter state care (DfE, 2006a; Chase et al., 2006).

It is now acknowledged that this group are at increased risk of poor life outcomes, including low educational attainment and unemployment (Bluff et al., 2012), homelessness (Action for Children, 2014) and poor physical (Rodrigues, 2004) and mental health outcomes (Mental Health Foundation, 2002; Meltzer et al., 2003; McAuley and Davis, 2009). Indeed Mooney et al. (2009) report that looked after children and young people experience significantly higher rates of mental health disorders than their non-care-experienced peers. Compared to 10% of the general population aged 5-15 years, the rate of mental health disorders in the looked after population is 45%, which rises to 72% for those in residential care (Royal College of Paediatrics and Child Health [RCPCH] 2015).

Furthermore, since effective family support systems are less likely to be in place for this group when they make their transitions to adulthood (Courtney & Dworky, 2006), care leavers also tend to fare worse in terms of life outcomes than their non-care-experienced peers. As might be expected, these outcomes include low educational attainment (Barn and Mantovani, 2007), unemployment and economic hardship (Courtney et al., 2006), poor physical and mental health (Dixon, 2008; Mooney, 2009), substance use (Courtney et al., 2006; Everson-Hock et al., 2011), risk of early pregnancy (Becker and Barth, 2000; Knight et al., 2006a; Craine et al. 2014; Vinnarsljung et al., 2007; Wade, 2008; Matta Oshima et al., 2013; Maxwell and Chase, 2008; Mendes, 2009) and of contracting sexually transmitted infections (Ahrens et al., 2010, Becker and Barth, 2000) when compared to peers who have not spent time in a care setting. In the UK, between 15-23% of young care leavers have also experienced homelessness (Everson-Hock et al., 2011).

It is particularly noteworthy that early childbearing increases the likelihood that these disadvantages will be transferred to the next generation, and since looked after children and care leavers are at increased risk of teenage pregnancy (SEU, 1999; DfE, 2013c; Becker and Barth, 2000) this is a key issue. In the UK, findings from the Millennium cohort study indicate that this group are also more likely to experience poor pregnancy related outcomes when compared to peers without a care history (Botchway et al., 2014). These include smoking during pregnancy, having a low birth weight baby, being a single parent, and experiencing symptoms of depression.



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Transition to Independence

Care leavers are expected to become self-sufficient much earlier than their non-care-experienced peers (Fauth et al., 2012). Although there is a statutory duty in the UK to offer care-experienced children and young people support to help them prepare for independence (Geenen & Powers, 2007) this support can be patchy (Hiles et al., 2013). In 2012 the Children's Rights Director for England surveyed 308 young care leavers and found that nearly half felt badly prepared for independent life after care (see Fauth et al. 2012). As Fauth et al. (2012) also note of the 2011 Children's Care Monitor (Ofsted, 2012), only 60% of UK care leavers engaged in their

pathway plan whilst 12% stated that they did not have a plan. Many care leavers feel stigmatised by services, express a lack of trust in them, or suggest that they are too bureaucratic. Of course, support for transition is vital when young people are pregnant or have already made the transition to parenthood.

No doubt there are pockets of very good practice in the UK, but interventions that support transition to independence have not been widely or consistently reported. Thus, it is not possible to gain a consistent view of the national landscape in respect of the availability, quality and effectiveness of services that support transition. The international picture is similar, as Everson-Hock et al. (2011) describe in their systematic review of the literature. They found only seven published studies related to interventions that support transition to independence for young people leaving care, and it was difficult to compare these interventions since they differed greatly in terms of what was offered, outcome definition and measurement. Young care leavers with additional disadvantage such as those with disabilities, asylum seekers, those from BME communities and those who have their own children, receive even less research attention (Fauth et al., 2012; Geenen & Powers, 2007). This highlights the need for further research into the needs of young people in care who are making the transition to adulthood, the interventions which support them and the impact of such services later in adult life.

What we do know is that barriers to effective transition for care leavers include a lack of family support, inadequate personal finances, and service budget deficits (Fauth et al., 2012 citing Ofsted, 2012; Courtney and Dworksy, 2006). The supporting role of family can be complex for young care leavers in transition since family may include foster parents as well as birth family members, and birth family support can vary greatly depending on individual situations and relationship expectations. Managing personal finances may also be difficult because many young care leavers in the UK find available grants to be inadequate and there is often confusion about how to access monetary support (Fauth et al., 2012). Foster parents may offer practical support with budgeting but this is inconsistent (Geenen and Powers, 2007). Significantly, support that

incorporates budgeting skills and financial education have been noted as beneficial by both Ofsted (Fauth et al., 2012) and young care leavers themselves (Haight et al., 2009). A similar picture emerges in the US where young care leavers are twice as likely to report financial difficulties when compared with their non-care peers (Courtney and Dworksy, 2006). Finally, the fiscal climate clearly impacts on the ability of agencies to meet the needs of the care leaver population. Serious budget constraints have impacted negatively on many local authorities, independent and voluntary sectors, resulting in an overall picture of much reduced levels of service (Fauth et al., 2012). In austere times, young people whose transition to independence also includes becoming a parent may feel formal support shortfalls all the more acutely, given the added pressures that parenting brings.

Teenage Pregnancy

Teenage pregnancy is a public health issue that has received much policy attention since the publication of the Teenage Pregnancy Strategy for England and Wales (Social Exclusion Unit, 1999). This milestone strategy document aimed to effect a downward trend in conceptions among children and young people aged under 18 in England with a target to halve conception rates for those under 16 by 2010. The strategy also aimed to achieve a reduction in the risk of long-term social exclusion for teenage parents and their children, which was to be measured by sustained participation rates in education, employment or training.

This strategy provided a platform for research into the causes and consequences of early childbearing, cultivating a body of evidence that identified the key risk factors for early childbearing. These factors included growing up in poverty, being a child in care, being the child of a teenage mother or having low educational achievement (SEU, 1999). Later evidence (Crawford et al., 2013) drew attention to the relationship between early pregnancy and persistent school absence by year 9, and slower than expected progress between KS2 and KS3 (years 7-9 or ages 12-14). Free school meal eligibility was also seen as an indicator, with multiple pregnancies occurring

most often in girls in this category. Evidence related to poor outcomes for young parents and their children such as higher rates of low birth weight and infant mortality (Chen et al., 2007), poor educational attainment, unemployment and poverty (Crawford et al., 2013) also came to light.

The following decade saw the publication of professional guidance and various health and social policies that focused on addressing these issues (e.g. DfES 2006b; 2006c; DCSF 2007; DH/DCS&F 2008; 2010). A number of evaluations were commissioned to provide feedback on, and ensure progress beyond the original strategy (DfES 2006; DH/DCSF 2010). Following the election of the coalition government in 2010, teenage pregnancy was included under the auspices of the Framework for Sexual Health Improvement in England (DH, 2013) and the Public Health Outcomes Framework 2013-2016 (DH, 2012, updated 2014). The National Institute for Health and Care Excellence (NICE) also produced clinical and public health guidance related to teenage sexual health (NICE 2005, 2007, 2014a 2014b).

As a result of this policy and research activity, concerns about care-experienced young people increased. It was noted that the key risk factors associated with teenage pregnancy are found more often in children and young people with a care history (SEU, 1999; SCIE, 2004 updated 2005). Indeed, looked after children and care leavers are three times more likely to become mothers before the age of 18 than peers who have not experienced state care (Haydon, 2003). More recently it has been acknowledged that some of this group may also have experienced additional risk factors such as asylum seeking (Royal College of Paediatrics and Child Health, 2015). The needs of looked after children and young people have become more visible in public health policy; for example, emotional wellbeing and reduction of under 18 conceptions in this group are now indicators of achievement (Health Improvement, Domain 2) in the Public Health Outcomes Framework (DH, 2012). Reducing teenage conceptions remains a key objective in the Framework for Sexual Health Improvement (SHI) (DH, 2013) which not only advocates improving SRE and access to sexual health advice for all children across all settings, but also emphasises building

confidence, resilience and providing services for vulnerable young people.

Overall, the UK as a whole still compares poorly with many of its European Union neighbours in terms of the number of live births to women aged 15-17 years; however, much progress has been made. The under 18 conception rate in England in 2012 was reported to be the lowest since 1969 having fallen by over 40% since 1998 (ONS, 2014). As the figures improve, there are calls for more targeted interventions that are tailored to meet the needs of those most at risk, including those who have experienced the care system (DfES, 2010).

Whilst prevalence data for the UK is not robust enough to give a clear picture of the extent to which children and young people in and leaving care experience higher rates of teenage pregnancy, there is certainly sufficient evidence to give cause for concern as we discuss in part one of the review.

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2. Search Method



The review focuses on the topic of prevention of unplanned pregnancy or effective preparation for parenthood in a specific population – care-experienced children and young people. The review began with a systematic search of full text, peer reviewed papers published between January 2000 and December 2014 which helped to identify the body of work available. We then critically appraised and synthesised this literature with a view to:

1. Establishing the key reported issues for care-experienced children and young people in respect of avoidance of unplanned/early pregnancy or transition to parenthood
2. Scrutinising the scope and quality of published work focused specifically on interventions designed to prevent unplanned pregnancy and improve parenting outcomes
3. Determining the potential service delivery implications of our findings for health and social care services
4. Charting potential new directions for future research

Strategy

The search strategy, which was developed in consultation with an information scientist at the University of Manchester, is outlined in more detail in the appendix (page 41). In summary, our search aimed to find papers that:

- a. Focused on looked after children and young people and/or care leavers
- b. Considered the issues of unplanned pregnancy or preparation for parenthood/readiness for parenting in this group
- c. Discussed or described an intervention designed to address this issue and which was specifically developed for looked after children and young people

We searched for full text, peer reviewed papers that were published in English between January 2000 and December 2014. Non-English language publications were excluded due to insufficient resources for translation. At this point 1685 papers were identified.

We then excluded papers where the focus was not on looked after young people or care leavers (but on the general adolescent population, or on parents/ carers) and those that did not focus on avoiding unplanned pregnancy, early parenting or preparation for parenthood. At this stage the total number of papers remaining was 32. Through following up relevant articles in the reference lists of the 32 papers, and via direct communication with authors, we retrieved 18 further papers which were also included in the review, giving a total of 50 papers overall.

It was clear from the outset that very few of the papers we retrieved actually described interventions specifically designed to reduce early pregnancy or to enhance the parenting experiences of this population. Indeed, of the 32 papers listed, only 7 met these criteria. However, many of the papers, whilst not describing an intervention, provided useful context and background (for example, studies of prevalence or the young person's perspective on pregnancy and parenthood). Hence a decision was taken to review the full text of all 50 papers in order to determine some key messages regarding the topics in question, followed by a focused critical review of the intervention papers. Thus the review falls into two sections – the first provides a discussion of the broader literature, and the second provides a detailed appraisal of published work that focuses specifically on interventions.



It was clear from the outset that very few of the papers we retrieved actually described interventions specifically designed to reduce early pregnancy or to enhance the parenting experiences of this population.



3. Thematic Summary of Issues



Key Messages

Prevalence data is limited, but the weight of available international evidence suggests that children in care or leaving care are at elevated risk of teenage pregnancy and early transition to parenthood. Much key evidence derives from US studies.

There are several key messages from the literature that point to four opportunities for potential investigation and intervention.

1. Pre care experiences

There appear to be several indicators for increased risk of teenage pregnancy that are present prior to the care experience. For example, material deprivation has been linked with increased risk of teenage pregnancy and many looked after children and young people experience material deprivation prior to entering

the care system.

Similarly, poor educational attainment has been linked with increased risk for teenage pregnancy and many looked after children and young people experience poor educational experiences even prior to entering the care system.

Young people in care may also experience disrupted, neglectful or abusive family relationships which are also factors associated with teenage pregnancy and early transition to parenthood.

There is some acknowledgement of the vulnerability of this group in terms of their mental health and wellbeing, which is discussed in terms of both pre-care and care experiences. Although the literature points to potential links to early parenting (in terms of both cause and consequence), further research is required in terms of the development and evaluation of interventions to address this issue.

2. Within the care system

Once in care, young people may also become vulnerable to additional risk factors. For example, they may experience heightened peer pressure to engage in early sexual behaviour, particularly in residential childcare settings. This may also be linked to other risk taking behaviours such as substance abuse or engaging in criminal activity. These increased risks suggest that a holistic approach is needed to improve a young person's self-care/protection skills and awareness of the consequences of behaviours.

Young people in care face a variety of barriers to effective sexual health advice and support. They also have increased chances of missing out on effective mainstream sex and relationship education due to placement moves, gaps in schooling or lack of an adult confidante. Furthermore, they do not always feel able to seek sexual health and relationships advice from their foster carers.

Sexual health and relationships education provided within the context of a trusted relationship appears to improve its effectiveness. Where young people have a close and trusted relationship with a mentor or supportive adult during the transition to independence, they may be less likely to have an unplanned pregnancy. Overall, we need to better understand the specific sex and relationships needs of looked after children and young people so that we can provide tailored information and support.

Staying in care beyond the age of 18 is also thought to be protective in terms of preventing early transition to parenthood.

4. When pregnant

Young people with a care background appear more likely to choose to continue with a pregnancy – even when it is not planned – than their non-care peers. There are a variety of reasons put forward to explain this. For example, there is some suggestion that young people with a care background may be seeking to

compensate for a lack of emotional fulfilment in their own childhoods through parenting but can be ill-prepared for the demands of parenting. Other evidence suggests that when young people become pregnant they do not always know who to turn to if they are considering termination of pregnancy.

5. When parenting

Care experienced young people who become pregnant and make an early transition to parenthood may perceive help from agencies as excessive scrutiny and monitoring. Skilled work is necessary to overcome issues of mistrust which can characterise care-experienced young people's relationships with agencies.

Having a child of one's own can be a positive turning point following a childhood of adversity where young people leaving care are able to access consistent support.

Overall, further research is needed to gain a far more robust picture of prevalence of teenage pregnancy in this population and to more clearly establish the outcomes and factors associated with positive/negative outcomes of early transition to parenthood based on representative samples.

There is a dearth of robust longitudinal studies that follow up care-experienced youths into parenthood.



Young people with a care background appear more likely to choose to continue with a pregnancy.



Introduction

The papers were considered with a view to identifying common themes that reflected the key issues for this group, and the following 5 themes resulted from this process:

1. Prevalence of Pregnancy and Teenage Parenthood in the Looked After Children and Care Leavers Population
2. Perceived Pathways to Early Pregnancy and Parenthood
3. Childhood Caregiver Experiences and Attachment
4. Sex and Relationships Education
5. Experiences of Pregnancy and Parenthood

3.1. Prevalence of Pregnancy and Teenage Parenthood in Looked After Children and Care Leavers

A number of articles offer insights into the prevalence of pregnancy among young people in care, those who are care-experienced or those leaving care (Carpenter et al., 2001; McGuinness et al., 2002; Courtney et al., 2006; Vinnarsljung et al., 2007; Wade, 2008; Maxwell and Chase, 2008; Mendes, 2009; Dworsky and Courtney 2010; Matta Oshima et al., 2013; Botchway et al., 2014; Craine et al., 2014;). These articles reflect a growing international interest in establishing the extent to which this population is at heightened risk of early/unplanned pregnancy, poor reproductive health outcomes and early transition to parenthood compared to their non-care-experienced peers. This literature underlines the difficulties that researchers have encountered in deriving estimates of pregnancy rates among young people either in care or leaving care, though there remains a general consensus that this population is over-represented amongst teenage parents in a number of countries. These countries include Australia (Mendes, 2009), Wales (Craine et al. 2014), Sweden (Vinnarsljung et al., 2007) and the US (Matta Oshima et al., 2013; Dworsky and Courtney, 2010). In particular, there are concerns that whilst rates of overall adolescent births have been declining in a number of high resource countries, young people with a care history remain at elevated risk.

Some key evidence concerning prevalence of pregnancy among young people with a care background derives from the US. Matta Oshima et al. (2013) conducted a longitudinal study where 325 of the participants were looked after young people. They concluded that youth in the foster care system are at high risk of early pregnancy regardless of maltreatment history, religiosity or school connectedness particularly in the years between 17 and 19. They also found that males who left the foster care system before the age of 19 were also more likely to father a child as teenagers. Similarly, Dworsky and Courtney (2010) in their study of teenage pregnancy risk amongst foster youth from the States of Illinois, Iowa and Wisconsin, found that whilst 20% of the general population of young females become pregnant by the age of 19 in the US, this figure rose to 50% in their sample of care leavers. They also observed that repeat pregnancy was common within this social group, commenting that the risk for parenting difficulties can increase where pregnancies follow in quick succession (Dworsky and Courtney, 2010). Interestingly, the issue of rapid repeat pregnancy is also implicated in recent research on parents who lose successive infants to public care and adoption in England, some of whom are care leavers (Broadhurst and Mason, 2014).

In the UK, there is a dearth of robust studies regarding the prevalence of teenage pregnancy or the consequences and outcomes of pregnancies for our population in question. In this context, the recent work of Craine et al., (2014) marks an important step forward in providing an audit of teenage conception rates and outcomes across Wales amongst 'currently looked after' children. The study found that the proportion of looked after children who recorded a pregnancy (5%) was significantly higher than those not in care (0.8 %). Moreover, the study found that young people in care were more likely to continue with a pregnancy than their non-care peers (70% vs. 25%). However, it is important to note that this audit focused on those in care aged 14-17 years, rather than the broader population of care-experienced youth. Arguably, it is care leavers who may be more at risk of pregnancy and this is certainly suggested in the US literature. Broadhurst and Mason (2014) suggest that those 'on the edge

of care' should also be considered as an important group at elevated risk of pregnancy, particularly when they are homeless, missing or otherwise disconnected from family. Craine et al. (2014) make the important point that statutory agencies could greatly aid our understanding nationally if they were to systematically collect data on pregnancy and outcomes. Significantly, whilst these authors provide important insights about the Welsh context, there are no similar UK-wide studies. As Barn and Mantovani (2007) highlight, there is a paucity of robust prevalence and outcome data regarding pregnancy and early transitions to parenthood in the UK, despite repeated concerns regarding care-experienced youth.

Overall, the available studies illustrate the elevated risks for teenage pregnancy among youth in or leaving care. However, the body of work is small, and drawing comparisons between countries is problematic because of the varied study designs and different cohorts. That said, there is sufficient evidence to warrant concern about elevated teenage pregnancy risk and rapid repeat pregnancy in this population to undertake further research. Clearly though, more work is needed to establish robust population-wide estimates based on the range of relevant sub-populations of young people, i.e. in care, left care before the age of 16 and those formally classed as care leavers.

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For many looked after children and young people the issues of material deprivation and poor educational access are ubiquitous.

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3.2. Pathways to Early Pregnancy

A substantial body of work has focused on what might be described as 'pathways' to pregnancy for this social group. That is, studies that have identified some of the factors or processes associated with unplanned pregnancy and early transition to parenthood including early experiences of deprivation and subsequent impact of life chances, or events that have had a negative effect on mental health. Within this body of work are studies that have elicited important first person accounts from young people themselves.

Deprivation

The publication of the Teenage Pregnancy Strategy (SEU, 1999) firmly established the link between teenage pregnancy and deprivation in the general adolescent population, and this link continues to date. In a recent study, Crawford et al. (2013) considered the correlations between maternity and abortion data and the education records of girls attending state schools in England to provide important insights into the individual, school and area-level risk factors associated with teenage conception and the decision to continue with a pregnancy. From a quantitative analysis of the linked datasets, they observed that the population characteristics most associated with a decision to continue with a teenage pregnancy were eligibility for free school meals and persistent absence from school. To a lesser extent, low educational achievement was also associated with heightened risk of conceiving as a teenager but deterioration in academic performance between the ages of 11 and 14 emerged as a strong risk factor. Even after accounting for individual or school characteristics, teenage pregnancy rates were found to be higher in deprived areas. In less deprived areas, individual deprivation was a strong risk factor for teenage conception and pregnancy outcomes. Perhaps of little surprise, young people attending higher performing schools were found to be less likely to conceive and more likely to have an abortion if they did conceive. Although these authors caution that the factors they identified should not be treated as causal, they nevertheless provide important indicators for policy and practice. We have included this paper in the review because the link

between deprivation and care experiences make the observations drawn by Crawford et al. (2013) highly relevant.

For many looked after children and young people the issues of material deprivation and poor educational access described above are ubiquitous (Wade et al., 2008; Barn and Mantovani, 2007) and it important to bear this in mind when considering the various factors potentially impacting on early pregnancy in this population.

Education

Barn and Mantovani (2007) found that over a quarter of young mothers with a care history had left school early or without qualifications, indicating that effective support that might enable them to achieve in education was lacking at home, in their foster placements and in school. The resulting low educational achievement is recognised as having long-term negative implications such as increased risk of unemployment or of remaining in unskilled, low paid jobs. However, further research is needed to better understand the relationship between deprivation, educational attainment and early transition to parenthood for care-experienced youth, in light of what we know about life chances for the general adolescent population.

Poor mental health

In addition to poor education and material deprivation, care-experienced children and young people may also have experienced abuse (Revens, 2003; Mendes, 2009) or disrupted family relationships (Connolly et al., 2012; Wade, 2008) that impact negatively on their mental wellbeing. Not only does this population have significantly higher rates of mental health disorders than their peers (Mooney et al., 2009) but they may also experience a sense of rejection, fear or abandonment by both caregivers and the care system which can further result in psychological distress and emotional vulnerability (Chase et al., 2006; Connolly et al., 2012) and these experiences of poor mental health and low self-esteem have been linked to increased risk of early pregnancy (Chase et al., 2006; Knight et al., 2006a). Furthermore, internal mental distress has been highlighted as a common experience for many young care leavers who have become pregnant at an early

age – irrespective of pregnancy outcomes (Coleman-Cowger et al., 2011). Indeed, Barn and Mantovani's (2007) study of post-care outcomes found that 17 out of 55 young mothers had attended psychological therapy at some point.

Sexual risk taking

Looked after children and young people are also more likely to engage in sexual risk taking which may include having multiple sexual partners, engaging in sex when using substances or having sex in exchange for money (Ahrens et al., 2013). A number of published outputs from a single corpus of data collected through in-depth interview work with care-experienced youth, reported findings that particular care environments are problematic, specifically residential care settings (Knight et al., 2006b; Maxwell et al., 2008; Chase et al., 2006). These authors draw attention to the increased peer group pressure to become sexually active at an early age within these settings. It has also been suggested that a lack of supervision in residential care settings may contribute to the prevalence of substance use, which was reported as a common feature in the testimony of young people in studies by Barn and Mantovani (2007), Knight et al., (2006b) and Chase et al., (2006) and which may also contribute to risky sexual behaviour. Findings from young people's self-report data indicated that risky sexual behaviour was linked to intoxication, which may also correspond with a lack of parental boundaries or the new-found freedom for some children and young people in care (Maxwell et al., 2008). It is also important to consider risky sexual behaviour as potentially linked to other risk-taking behaviours (Kerr et al., 2009); for example, heightened risk of teenage pregnancy is also found among girls convicted of criminal behaviours. Such thinking underpins approaches to intervention that stress a multi-systemic approach (Kerr et al., 2009).

Protective factors

The literature does point to some protective factors for this group in terms of reducing risk of unplanned or early transition to parenthood. There is some consensus that the development of a close relationship between the young person and a trusted individual is critical to more positive outcomes.

For example, factors associated with pregnancy prevention and reduction of sexually transmitted infections include the support of a specific mentor or friend during transition to adulthood (Ahren et al., 2013) or extending the period of formal care past 18 years (Ahren et al., 2013; Dworsky and Courtney, 2010). According to Dworsky et al. (2010), a large proportion of participants who left care before they were 18 were already parents whereas those that stayed on past 18 were less likely to enter parenthood early. The authors acknowledged that becoming pregnant may have been a catalyst for leaving care but stated that 79% of their sample had already left care before they discovered their pregnancies. They concluded that remaining in care and sustaining a positive relationship with a foster family, residential worker or social worker may reduce the chances of becoming pregnant at a young age. Similarly, Mendes (2009) identified stability and continuity in care, flexible transition arrangements and after care programmes as important issues for future policy and practice.

Of course funding for such support has not always been available even if the young person expresses a preference to stay with supportive foster parents (Knight et al., 2006b). That said, recent policy initiatives, specifically 'Staying Put' (HM Government, 2013), aim to see more children and young people in care having the option of staying longer with foster carers. This also resonates with the 2013 NICE guidelines and the Intercollegiate Role Framework (Royal College of Paediatrics and Child Health, 2015) that outline the need for all professionals working with care-experienced children and young people to consider their emotional as well as physical health needs. Indeed NICE (2013) make specific reference to care leavers who are recognised as requiring time and support to prepare for and adjust to independent living/adulthood.

3.3 Childhood Caregiver Experiences and Attachment

Meeting emotional needs

Findings from many of the studies retrieved suggest that for care-experienced youth, the motivation to have a child is connected to the need to address

a lack of love and attachment from their own parents (Connolly, et al., 2012; Knight et al., 2006; Mantovani & Thomas, 2014; Maxwell & Chase, 2008; Maxwell et al., 2011; Redwood et al., 2012; Reeves, 2003; Svoboda et al., 2012). These papers offer some insight into the relationship between care-experienced youth's own attachment experiences and attitudes towards/experiences of parenthood, drawing on qualitative findings. The meta synthesis of international qualitative studies by Connelly et al. (2011) reported that many young mothers with a care background choose to have a child or continue with a pregnancy to meet their own emotional needs. Similarly, five out of the six young mothers in Maxwell et al. (2011) study who were care leavers in the UK described their own negative experiences of being cared for as children as a key reason for choosing to make an early transition to parenthood. The study by Redwood, et al. (2012) of the experiences of teenage pregnancy in a group of 'at-risk' young parents (which included those with a care history) also found that the care-experienced youth in their sample 'strongly expressed' the 'human requirement for love as a reason to plan a pregnancy' (p22).

Three further papers drew on the same data set from interviews with 63 UK care leavers who were either parents or pregnant (Knight et al., 2006; Maxwell & Chase, 2008 and Tyrer et al., 2005). With the exception of Tyrer et al., (2005) who focused on young fathers, this group of articles highlight the emotional needs of the vulnerable young mothers. Knight et al., (2006) noted the loneliness felt by care leavers, firstly as a result of removal from their families and then due to frequent moves within the care system. These authors claim that this may increase the likelihood that these young people become sexually active at an earlier age. Furthermore, on discovering they were pregnant, many young women who were interviewed mentioned the desire to have someone in their life to love or be there just for them (Knight et al., 2006).

Pregnancy as a positive experience

Knight et al. (2006a) suggest that where care-experienced children and young people differ from their peers is how the experience of being looked after may influence the decisions they take when faced with confirmation of a pregnancy. So, for

example, if a young person's care experience was punctuated by feelings of loneliness, abandonment or rejection, their pregnancy may provide an opportunity to establish a loving bond that they felt was missing from their lives (Knight et al., 2006a). Connolly et al., (2012) describe pregnancy in this context as 'filling an emotional void' (p169) and Pryce (2010) describes it as an opportunity for healing. Even with a reported lack of support from birth or foster parents, or feelings of pressure to terminate the pregnancy, many care-experienced youth in the study undertaken by Knight et al., (2006a; 2006b) continued with their pregnancy with their own experiences of the care system influencing their choices. This is significant and explains why caring for a child can be a positive and stabilizing experience for care-experienced youth where they have sufficient informal and formal supports (Connolly et al., 2012).

Indeed, successful parenthood can provide a sense of achievement (Knight et al., 2006a; 2006b) and some studies report that care-experienced young parents describe having a child as marking a positive turning point in their lives (Barn & Mantovani, 2007; Connelly et al., 2012; Knight et al., 2006; Mantovani & Thomas, 2014; Maxwell et al., 2011; Tyrer, 2005). For example, Maxwell et al., (2011) found that the young mothers saw success in raising their own children as evidencing their personal strength and resilience in the face of difficult experiences. Mantovani and Thomas (2014) examined this issue in relation to a population of looked after young black women in London and also found that some of their respondents perceived their pregnancy and impending parenthood as improving their motivation to do well in life. These young women reported increased motivation to engage in further education or employment and to reduce criminal activity. The positive influence of becoming a parent was also true for many of the young men interviewed by Tyrer et al., (2005) who reported a reduction in anti-social behaviour and substance misuse.

3.4. Sex and Relationships Education

In terms of sex and relationships education, a picture emerges of a group of socially and psychologically

vulnerable young people who are potentially exposed to sexual activity at an early age and for whom early transition to parenthood may also appeal in terms of potential emotional fulfilment. This raises the question of what knowledge and resources care-experienced youth draw on to make informed decisions about both contraception and the timing of parenthood.



There is some agreement in the literature that the circumstances of care-experienced children and young people can pose very real, practical and emotional barriers to accessing sexual health information and services.



Barriers to accessing information

There is some agreement in the literature that the circumstances of care-experienced children and young people can pose very real, practical and emotional barriers to accessing sexual health information and services. In particular, self-report data indicates that young people can feel stigmatised by their circumstances which impacts on help seeking (Billings et al., 2007). Additionally, in terms of confiding relationships, children and young people in care do not always feel able to turn to the professionals in their lives, such as GPs, social workers (Chase et al., 2006) or indeed foster carers (Chase et al. 2006, Dale et al., 2010), or to seek information about contraception (Knight et al., 2006; Billings et al. 2007) or advice about sexual health matters and relationships. Importantly, the lack of communication between health care agencies and social care agencies can lead to the unique needs of this group being overlooked (Robertson, 2013). Such

findings are confirmed by Dale et al., (2010), who have described the isolation that care-experienced children and young people can feel when it comes to discussing sexual health and relationships.

Of particular note is the finding that the effectiveness of sexual health interventions for children and young people in care such as school-based education and advice from health professionals, is related to the quality of relationships young people have with practitioners and carers, as well as consistent attendance at school (Dale et al., 2010; Billings et al., 2007). However, for care-experienced youth, these circumstances are unlikely to characterise their lives; rather they may have experienced both school and placement moves. All this significantly influences the opportunity to develop effective relationships with both carers and primary health care providers (Hudson, 2012; Robertson, 2013; Billings et al., 2007). Moreover, as Hudson (2012) notes, children and young people in care may not feel comfortable with engaging in discussions around sexual health when attending health appointments with foster carers for fear that their actions will be disclosed to children's social care services.

The evidence suggests that the lack of effective sex and relationships education is a key factor in increasing the chances of pregnancy at a young age in looked after young people and care leavers (Knight et al., 2006a; Maxwell & Chase, 2008; Tyrer et al., 2005; Billings et al., 2007). It is well documented that care-experienced children and young people are more likely to have gaps in their general education due to placement moves (Knight et al., 2006a) which impact not only on their general education but also on the uptake of any formal sex and relationships provision that takes place in schools. Since looked after young people gain the majority of their sexual health knowledge from school and from their peers (Hudson, 2012) this is a concern. Robertson's (2013) review of US literature indicates a similar picture. A number of studies both from the US and the UK confirm gaps in sexual health knowledge and misconceptions around contraceptive use among care-experienced youth (Dale et al., 2010; Hudson, 2012; Matta Oshima et al., 2013; James et al., 2009; Tyrer et al., 2005). Both Matta Oshima et al., (2013) and James et al., (2009) found that although their

participants reported condom use, pregnancy rates were still much higher in those with a care history when compared to the non-looked after population. There is some evidence that some young men encourage each other to use condoms in order to prevent unintentional pregnancy (Maxwell & Chase, 2008) but they may misunderstand the need to use contraception consistently to prevent pregnancy (Tyrer et al., 2005).

In addition, as Knight et al., (2006) point out, looked after children and care leavers (alongside many adolescents from the general population who are disengaged from education or not living with both parents) often engage in limited and sporadic use of contraception and have a degree of ambivalence about pregnancy. These studies indicate important gaps in terms of contraceptive knowledge, intent or effective use of contraception. Despite these findings, there is relatively little attention given to addressing (rather than identifying) the specific sexual health needs of young looked after people in research or policy (Dale et al., 2010).



The evidence suggests that the lack of effective sex and relationships education is a key factor in increasing the chances of pregnancy at a young age in looked after young people and care leavers.



A need for information tailored to their specific circumstances

Sex and Relationships Education (SRE) forms part of the wider Personal, Health and Social Education (PHSE) offered in schools. The provision of SRE

in UK schools has been consulted on by various governments over the past two decades (Fallon, 2009), the latest of which was carried out by the Commons Education Select Committee in February 2015. The Select Committee set the context for successive consultations by highlighting the fact that PSHE required improvement in 40% of schools. Furthermore, although National Survey of Sexual Attitudes and Lifestyles (NATSAL) data from 2010-2012 indicated that 39% of young people cite school lessons as their main source of information about sexual matters, many young people consistently report that the Sex and Relationships Education (SRE) they receive is inadequate (Tanton et al., 2015). Of particular note is the fact that the needs of looked after children did not feature greatly in this consultation. There is only limited reference to the vulnerability of care-experienced youth to sexual exploitation, and that school may be the only reliable provider of SRE for this social group. However, the conclusion to the report stated that delivering high quality SRE is particularly important for the most vulnerable children, including looked after children, LGBT children and those with special educational needs.

Billings et al., (2007), in a study of looked after young people's views of SRE and sexual health services, described this group as 'mobile, wary, and isolated' (p48) who feel 'different' from other pupils which impacts on their ability to engage with what was often described as poor SRE provision in school. There may also be barriers to seeking information from foster carers as reported by young people in a study by Knight et al. (2006a). The authors found that the sexual health information this social group received from foster carers was too vague, or that there was a clash of values and understanding between young people in care and their foster carers. Dale et al., (2010) surveyed children and young people in care aged 12-19 and found that they wanted more information and opportunity for discussions around sexual health and that it needed to be delivered or made available in ways that suited their lifestyles. This included helping them to develop the confidence to assert themselves around safer sex and to access health services. This is supported by Billings et al., (2007) who suggest that the significant emotional upheaval that this group can experience

spills over into their relationships with authority figures, impacting on their ability to seek confidential advice.

Given that evidence clearly indicates that care-experienced youth are at heightened risk of become sexually active at an early age, the deficits in mainstream SRE and potential communication difficulties that may arise for this group with authority figures, suggests the need for an alternative mentoring or supportive relationship (Knight et al., 2006; Maxwell & Chase, 2008; Tyrer et al., 2005).

3.5. Experiences of Parenthood

An important theme within the literature is the experience of pregnancy and parenting for care-experienced youth. We have already discussed how the literature gives a sense that care-experienced youth want to overturn a negative history by doing better for their own children. However, as several of the authors describe, pregnancy and transition to parenthood can compound the difficulties young care leavers face when moving into independence and the realities of parenting can be very demanding in the face of limited informal support. A number of qualitative studies have sought to understand young care leavers and looked after children's experiences of becoming pregnant and entering parenthood (e.g. Haight et al., 2009; Mantovani et al., 2014; Maxwell et al., 2011; Pryce et al., 2010; Reeves 2003; Tyrer et al., 2005).

Support networks

The family and professional support networks that young looked after people turn to when making decisions around sex and pregnancy have been explored by a number of authors (Knight et al., 2006, Mantovani & Thomas, 2014; Reeves, 2003; Svoboda et al., 2012 and Tyrer et al., 2005). Understandably, birth family and partner support may vary according to the individual (Reeves, 2003). For example, many young parents in or leaving care report a lack of support concerning their decisions about whether or not to continue with pregnancies. Whilst some felt under pressure to choose to have an abortion (NCB, 2006; Maxwell and Chase, 2006), other young people indicate that their foster parents advised them against

having an abortion due to similar past experiences of their own (Knight et al., 2006). Unfortunately there is also confusion among professionals and foster carers as to who is responsible for providing this support (Knight et al., 2006) and many young parents reported a lack of support during pregnancy and upon becoming a parent (Maxwell et al., 2011; Tyrer et al., 2005). Young fathers in particular felt that children's social care, midwives and GPs were all very negative in their judgements about their potential as parents. This perceived negativity led them to disengage from services and from their role as an involved parent (Tyrer et al., 2005). Individual local authorities provide support to foster carers about their role in providing sexual health and relationship guidance, as well as how to respond to pregnancy. However, there is an absence of systematic analysis of the effectiveness of this advice (Knight et al., 2006).

Increased scrutiny

When care-experienced young women become pregnant, they commonly feel under increased scrutiny by children's social care – especially regarding child protection (Chase et al. 2004; 2006. NCB, 2006; Sale, 2007). This was also acknowledged by social work professionals interviewed by Chase et al. (2006) which is perhaps unsurprising given the evidence to support the claim that young parents who have experienced abuse in their childhoods are likely to face particular or additional challenges when becoming parents themselves (Mullins-Geiger and Schelbe, 2014; Lieberman et al., 2014). It has been suggested that a higher level of more intensive support that builds on young parents' strengths is required for parents who are in or leaving the care system in order to prevent intergenerational cycles of abuse or neglect (Mullins-Geiger et al., 2014). However, support needs to be delivered in such a way that it is not perceived simply as excessive scrutiny. Providing help and support for this group is complex, suggesting the need for highly skilled and sensitive practice to ensure effective engagement (Chase et al., 2004; NCB, 2006). The NCB (2006) maintain that greater transparency from children's social care services about their procedures would reduce some of the anxiety for young, vulnerable parents. Research is needed

to test out different ways of working with care-experienced young parents to overcome potentially lengthy histories of mistrust of authority figures and the emotional issues that are likely to surface when care-experienced youths become parents.

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When care-experienced young women become pregnant, they commonly feel under increased scrutiny by children's social care – especially regarding child protection.

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4. Intervention Focused Studies



Introduction

In this part of the review we discuss the published articles that specifically report on interventions designed to prevent unplanned pregnancy and/or support improved transitions to parenthood for young people in or leaving care.

It is clear from part one of the review that general universal approaches to sexual and reproductive health may not always meet the needs of young people in or leaving care. The body of work that we have identified for review acknowledges the unique needs of those in care or leaving care. However, published intervention studies are few in number as are final reports of any evaluative studies. In the following section we provide a focused critical review of the available literature, retrieved through systematic search of key databases, and follow up references through personal communication with research teams currently piloting and testing interventions.

Our aims were:

1. To report on the scope/range of the literature that focuses on looked after children and young people or care leavers related to avoidance of unplanned pregnancy or to enhance the experience of early parenting, cognisant with the reported literature.
2. To provide an appraisal of the study design and discuss any outcome evidence.
3. To consider the potential transferability of these interventions to wider health, social care and educational systems in England.

Key Messages

There is a scarcity of published evaluations of specific interventions that aim to address the issue of unplanned pregnancy and preparation for parenthood in the care experienced population – particularly in the UK. However, it is unlikely that this is a reflection of the work taking place, rather an indication of the need for a robust scoping exercise, more evaluation of interventions and dissemination of findings.

Many of the interventions reviewed were undertaken in the US and some were developed originally to address the specific needs of African American adolescents. This may point to some issues with transferability to a UK social care context.

Overall, the available evidence indicates that work to develop and test interventions designed to reduce teenage pregnancy, or to improve pregnancy and parenting outcomes for young people with a care background, is in its infancy. There remains a lack of focus on the care-experienced population.

Several of the interventions reviewed have highlighted relevant findings for this population but as part of a wider group. Drawing conclusions about care-experienced young people from these wider populations is limited and points to the need for interventions designed specifically for their needs.

Curriculum-based studies feature heavily in the review but this is possibly a reflection of the fact that these interventions are less complex in nature and thus, easier to develop and evaluate than (for example) focused foster care interventions. There were examples of very simple curriculum-based interventions (e.g. Peebles, 2000) underpinned by a health promotion perspective that are often undertaken opportunistically by wider professional groups; however, the quality and impact of such interventions is doubtful. In contrast, it is clear that curriculum-based interventions are now advancing, becoming more complex, and being evaluated in a more robust way and using randomized controlled trials with larger, targeted populations to provide a sound evidence base for the future. Examples of more advanced curriculum interventions tailored to

the unique needs of care-experienced children and young people included in this review are: Power Through Choices (Becker and Barth, 2000) and Making Proud Choices (Cronin et al., 2014).

Curriculum-based interventions designed to meet the unique information and skills needs of care-experienced youth are part, but not all of the solution. The relationship needs of care-experienced children and young people in the longer-term must be addressed. These issues were touched upon in Griffiths' (2012) paper that highlighted the importance and impact of tailored outreach services, and are being looked at more closely by Mezey et al. (2011) whose intervention focuses on peer mentoring. Again, this approach is in its infancy.

Perhaps the most complex set of interventions are those that involve focused foster care. In terms of this evaluation these interventions were often targeting care-experienced young people who had many other related health or social care needs (which often led to their residential status) and as such it is very difficult to generalise to the wider care-experienced population. However, the evaluations do indicate some success with these approaches.



There is a scarcity of published evaluations of interventions that aim to address the issue of unplanned pregnancy and preparation for parenthood in the care experienced population – particularly in the UK.



The review begins with a small body of work reporting curriculum-based and another covering intensive fostering interventions.

Given the dearth of available UK evidence, we additionally include two projects that were on the boundaries of our inclusion criteria. The first is a paper that outlines a nurse-led practice model that aims to promote the sexual health of young people in care (Griffiths 2012). We also include a UK proposal for a peer mentoring intervention (Mezey et al., 2011) that is at the stage of published research protocol rather than an evaluative study. A decision was taken to include this in our review as it was based in the UK and the authors are planning to progress to a randomized controlled trial which may yield important evidence in the future.

Overall, the available evidence indicates that work to develop and test interventions designed to reduce teenage pregnancy or improve pregnancy and parenting outcomes among young people with a care background is in its infancy with evaluations designs of varying robustness.

4.1. Curriculum-Based Studies

There were four papers that focused on curriculum-based interventions (McGuinness et al., 2002; Becker and Barth 2000; Peebles 2000; Cronin et al., 2014) and all were based in the United States. Curriculum-based interventions are programmes comprised of focused sexual health and relationships education, which often varies in terms of content and the time devoted to delivery. The claimed success in any evaluation should also be read with caution at times, taking due account of the criteria by which this success is measured.

a) *'BART' Becoming a Responsible Teen (Mc Guinness et al., 2002)*

Mc Guinness et al. (2002) describe the evaluation of Becoming a Responsible Teen (BART) which is designed for use with African American adolescents (St Lawrence et al., 1998 in Mc Guinness et al., 2002) but delivered in this study to a group of young people in residential foster care in Alabama (US). In recognition of the increased risk for young people in foster care of unintended pregnancy or of contracting

sexually transmitted infections, the intervention aims to improve sexual health knowledge, including knowledge of HIV risk and condom awareness.

The study used a pre and post-test design with a mixed ethnicity group of 15 girls aged between 12 and 17 years. The participants had spent between 3 months and 8 years in residential care.

Significantly though, the participants in this study had a complex health and care history. Over half of the girls had one or more diagnosed (DSM-IV) mental health problems, recorded histories of exposure to prenatal alcohol and/or drugs or had at least one parent with a history of substance abuse. Nine participants reported being sexually active at the time of the BART programme and two reported no history of sexual activity. The average reported age of first sexual activity for the total sample was 8.7 years, which the authors suggest was probably indicative of early sexual abuse.

The BART curriculum itself is comprised of eight 2-hour sessions delivered one week apart – in this case at the foster care facility. This curriculum was underpinned by Social Learning Theory. The sessions consisted of a range of sexual health related communication skills such as risk recognition, negotiating safer sex, safe exit techniques and practical skills such as the correct use of condoms and spermicides. The intervention was delivered by two nursing students as a nursing intervention. A sample of 15 girls from the foster care facility began the 8 week with full data on 13. The effect of the intervention was measured using two instruments. The first was the Condom Attitude Scale – Adolescent version A (CAS-A) that assesses attitudes towards condom use (McGuinness et al., 2002). The second tool was the AIDS Risk Knowledge Test (ARKT), designed to assess practical knowledge of HIV risk behaviour and misconceptions regarding HIV transmission. The authors state that this tool has a Kuder-Richardson estimate of internal consistency (reliability) of .75 (Kelly et al., 1989).

The authors reported that average pre and post-test scores on both the CAS-A and ARKT scales indicated 'significant improvement' following the 8 week intervention and concluded that health promotion methods can have positive impacts on foster care

youth. The authors claimed BART to be a feasible, cost effective and easy to implement curriculum and that nurses with a health promotion remit could use strategies such as BART to make a difference to the sexual health of youth in care.

Design strengths include that the curriculum had been tested in a previous group and had a stated underpinning theoretical framework. However, this was not a programme developed specifically for young people in foster care

However, the sample was a small purposive group of 13 girls drawn from a single residential care facility. The population might also be described as a particularly high risk group this limits generalisability to the target population.

In terms of programme fidelity, it was also not clear how rigorously the curriculum was followed by those delivering it. This raises questions about whether the curriculum was delivered as intended which would impact on the intervention effect. Given that the post-test data was collected at the last session, information at that point was likely to be fresh in the minds of participants and in the absence of any follow-up, there is no evidence to indicate whether the information was retained at a later point in time or indeed whether the information impacted on behaviour in any way.

b) Power through Choices (Becker and Barth, 2000)

The Power through Choices programme is a curriculum-based intervention that was developed by the Family Welfare Research Group at the University of California, Berkeley, and which built upon learning from focus groups with looked after young people, interviews with staff, site visits and pilot testing (Becker and Barth, 2000). The goal of the programme is to provide looked after young people aged between 14 and 18 years with specific skills and information to help them avoid high risk sexual behaviour and to avoid teenage pregnancy. The original design of the programme comprised 10 sessions, each lasting 90 minutes. The authors recommend that the whole programme is delivered within the time frame of one month or less to facilitate information retention and the development of effective group dynamics. The programme is

designed to help young people recognise and make choices related to sexual behaviour, find and use local resources, and develop effective communication and relationship skills.

This article discusses an innovative approach to curriculum delivery which is based on a series of fictional characters that were developed in collaboration with youth in out of home care. Young people participating in the programme have the opportunity to role play different characters and consider the consequences of taking particular forms of action. The programme emphasises the development of risk reduction techniques in respect of sexual health and provides young people with opportunities to actively practice new skills. '*Power through Choices*' is underpinned by theoretical models derived from health psychology that include the Health Belief Model, Self-Regulation Theory, the Theory of Reasoned Action, and Social and Cognitive Learning Theory.

The paper also provides brief findings from a preliminary evaluation of the programme when it was previously tested with 42 looked after young people in 1997 who completed both pre and post-test, satisfaction surveys and participated in focus group discussions. However, in terms of post-test results, the authors reported that the young people understood the curriculum message that abstinence is the only 100% guarantee of avoiding pregnancy or STI and that safer sex takes planning. More importantly perhaps the young people also indicated that they felt increased control over their lives and were significantly less likely to engage in unprotected sex than at pre-test. This indicates that the programme potentially impacts on decision-making rather than simply improving knowledge. User survey results indicated that 94% of those surveyed thought it would be easier to practice safe sex after participating in the curriculum and 82% rated the programme as being either very good or excellent with facilitator teaching style impacting on how the programme was received by the young people.

In terms of quality assessment the strength of the Becker and Barth (2000) paper is that the curriculum was developed specifically for this population. However, this paper is focused mainly on describing the curriculum. Recruitment, sampling,

measurement tools and data analysis are not discussed in this paper, making it difficult to judge its potential. This paper demonstrates the strength of the intervention in terms of its development rather than in the testing or evaluation.

However, through targeted personal communication with the authors and related research teams, we have established that this programme is now being subject to roll out in four sites in Oklahoma (US) and is being evaluated more rigorously. The estimated study end date is July 2015. This evaluation is part of a broader appraisal of the Evaluation of Adolescent Pregnancy Prevention Approaches (PPA) by the Oklahoma Institute for Child Advocacy and the University of Oklahoma Health Sciences Centre (OUHSC). This is a cluster randomized designed to evaluate the impact of the Power Through Choices. The curriculum is being trialled against no intervention/ universal services amongst young people aged 13-18 years of both genders who are living in foster care in 4 counties in the US. The estimated enrolment number is 1,080. The primary outcome measures are consistent contraceptive use and sexual initiation (time frame 12 months) with secondary outcome measures of a) knowledge of contraceptive use and reproductive health; b) intention to delay sexual initiation and unprotected sex; c) attitudes towards sexual activity and contraceptive use; and d) scores on scale of self-efficacy to avoid risky sexual behaviours. The time frame for all is 6 months. This study has great promise in terms of evaluating this intervention.

c) Birth control education for parenting/pregnant teens in residential treatment (Peebles, 2000)

Peebles' (2000) paper outlines a small study with a group of young women who are already pregnant or parenting teenagers living in a residential facility in Missouri. The study aimed to test the hypothesis that education will increase knowledge about birth control options in a group of pregnant or parenting young women in residential care. The intervention was a 1 hour information presentation about birth control options which was delivered to 3 out of 11 pregnant or parenting young women aged 14-20 years living in a residential facility for young women. No

theoretical basis for this intervention was discussed. The data was collected via an 18 item questionnaire which served as both a pre-test and a post-test but only 3 attended the intervention. Peebles (2000) reports positive results, indicating that scores for the post-test increased for all 3 participants who attended the educational intervention. With such a small convenience sample it is not possible to draw conclusions or generalise in any way to a wider population.



Making Proud Choices is a flexibly delivered sex education programme consisting of 8 lessons that can be delivered in 1 day or over a number of weeks.



d) Making Proud Choices (Cronin et al., 2104)

This paper presents evidence about the 'Making Proud Choices' (MPC) intervention which is a curriculum-based teen pregnancy prevention programme. In the paper the author's main aim was to describe a 3 component fidelity tool created for the MPC programme in order to measure how closely it is being implemented as intended for the target audience and to demonstrate how fidelity information can be used to inform facilitator training. Interestingly though, programme fidelity was measured via participant surveys, facilitator led student attendance logs, facilitator curriculum fidelity logs, and facilitator surveys.

Making Proud Choices is a flexibly delivered sex education programme consisting of 8 lessons that can be delivered in 1 day or over a number of weeks. It was designed for a group of 6-12 participants. The aim of MPC is to increase knowledge of sexually transmitted infection (STI) and HIV and their

prevention; to promote safer sex and abstinence; and to provide tools to facilitate responsible decision making about their own sexual behaviour. The programme was originally developed with a focus on African American adolescents.

Of interest to this review is that 3 organisations were community-based organisations serving fostered young people, and 23 implementations of MPC were held with fostered young people.

In terms of measures, the authors sought to measure programme implementation as well as participant outcomes. Pre-programme data about knowledge, attitudes and beliefs about pregnancy and STI/HIV prevention were collected from 241 of 288 youths (84% response rate), 66% of which were in foster care. The authors found that facilitators delivered the programme with a high degree of fidelity but implementation scores were lower due to low student numbers and shortened lessons.

The authors discussed participant outcomes using 2 measures.

1. Knowledge about pregnancy and STI prevention.
2. Intention to use condoms.

Outcome 1 was measured using 10 true/false questions which were analysed using paired t-test. Overall, the authors reported a significant increase in knowledge Outcome 2 was measured using a single item/question 'intention to use a condom at next sex' and the authors reported a statistically significant increase in willingness to use a condom for the second outcome. The authors therefore concluded significant gains in terms of knowledge and intent to use a condom.

In terms of quality assessment, one strength is that the MPC curriculum has been previously tested in a randomized controlled trial in Philadelphia with pre-test and follow up assessment, with positive results. However, the authors have not designed an evaluation of the programme based on participant outcomes, reducing our ability to assess the quality of the programme in general using this paper.

The MPC intervention was not designed specifically for use with care-experienced young people and this evaluation was not designed specifically to test the success of MPC with this population. However,

the paper does separate out results for foster care youth in the data tables. That said, the sample was unlikely to be representative of the target population, reducing generalisability of the findings.

Overall, a variety of curriculum-based studies focus on knowledge acquisition, with only Power Through Choices (Becker and Barth, 2000) and Making Proud Choices (Cronin et al., 2014) broadening out to decision-making skills. In summary, there may be some promising approaches here. It is important to note that the interventions were not always developed specifically for looked after young people, but may have been tested with this population. All of the curriculum-based interventions described here were developed and tested in a US context which also has implications for transferability to the UK.



All of the curriculum-based interventions described here were developed and tested in a US context which also has implications for transferability to the UK.



4.2. Peer Mentoring

a) The CARMEN study (Mezey et al., 2011)

The information for this UK project proposal (Mezey et al. 2011) was gleaned from the National Institute for Health Research/Health Technology Assessment programme website. It describes a proposal for The CARMEN study which involves a targeted literature review, scoping exercise as well as the development and initial pilot of a peer mentoring intervention to reduce teenage pregnancy in looked after children. The peer mentoring intervention

involves the recruitment and training of young people whose experience of post-care life has been positive and will act as mentors to looked after children considered to be most vulnerable – those that have had three or more placements. The study involves 3 Local Authorities in England and it is proposed that 24 looked after young people aged 14-18 years will receive peer mentoring and 24 to receive usual support.

The proposed pilot study consists of a 3 month study of methods for recruiting mentors and mentees and the delivery of the intervention and an exploratory randomized controlled trial (RCT) to assess the feasibility of evaluating the effectiveness of the intervention in a definitive trial.

The primary outcome measure was pregnancy in the mentee/care as usual group during the one year of the intervention. Proxy measures of pregnancy were collected which were: age at first intercourse; contraception use and incidents of unprotected sex in the past 3 months; number/nature of sexual relationships and STI's. Data was also collected on self-esteem, anxiety and depression, help-seeking, locus of control and attachment style. Measures were also applied to the mentors' pre and post-intervention.

The publication date for the project report is June 2015 and at the time of writing this review the papers from this project were not yet published. The proposal is available at: www.nets.nihr.ac.uk/projects/hta/082003 and the abstract for one of the papers (Developing and piloting a peer mentoring intervention to reduce teenage pregnancy in looked after children and care leavers) is in press and is available at: www.academia.edu/8900301/_Developing_and_piloting_a_peer_mentoring_intervention_to_reduce_teenage_pregnancy_in_looked_after_children_and_care_leavers_

The abstract indicates that the mentor training programme could be manualised and replicated. However, recruitment for both the project and the exploratory trial was difficult. Problems also occurred because of the delay between training and the start of the intervention. The authors indicated that a further trial was not feasible since, the intervention as designed was not appropriate for this context. Local Authorities lacked the infrastructure or resources

to manage the project intervention effectively and social workers found it difficult to prioritise research demands over their generic work. Social workers did not always understand or accept the inclusion criteria and sometimes acted as informal gatekeepers which impacted on recruitment. Mentees valued the intervention but found weekly meetings difficult. Mentors also found it difficult to set up meetings or comply with their responsibilities. Only 1 in 4 of the relationships continued for the full year.

Given that this is a research proposal rather than a published article, it has obvious limits in terms of quality assessment as the study is not yet complete and results are not published. However it is one of the more robust designs we reviewed.

4.3. Interventions Involving Focused Residential Services

a) *The Threshold Mothers Project (Vorhies et al., 2009)*

Vorhies et al. (2009) describe the evaluative findings of a US Transitional Living Programme (TLP) called the Threshold Mothers Project (TMP) and provide preliminary evidence for the effectiveness of this intervention. The service is described as a wrap-around service for pregnant and parenting foster care youth with severe mental illness or emotional disturbances. The 'mission' of the TMP is to supply the residents with the skills to live independently and to care for themselves and their children. A primary goal of the TMP is to prevent child maltreatment and custody loss.

The facility houses 30 young women who are wards of the state, are economically or educationally disadvantaged, come from Black or Minority Ethnic (BME) communities, and have not succeeded in less intensive programmes. TMP comprises a drop in centre and three residential settings with 24 hour staff support, employment and education services, and mental health services. There is a licensed therapeutic nursery, medical centre care, case management, child development classes, parent coaching and Theraplay® Services are individualized in terms of frequency and intensity.

The study/evaluation was undertaken with 25 participants aged 18-21 years from the facility. They all had MH issues such as mood disorder, Post-traumatic Stress Disorder (PTSD), co-morbid mood and behaviour disorders, anxiety disorders, and substance misuse disorder.

The programme effectiveness was determined by tracking monthly status changes such as education, employment or hospitalizations and by comparing scores on 4 bi-annually administered standardized assessments of parenting competency and stress, child maltreatment risk, and mental health symptoms.

A retrospective analysis of this assessment data was undertaken. 10 weeks after starting the programme and 10 months into the programme). 16-18 participants completed the assessments.

The reported outcomes of the evaluation are that there was a statistically significant increase in potential abuse scores suggesting strong impression management. The authors suggest this is an area for engagement and early intervention.

There was a consistent increase in school enrolment for the duration of the study suggesting that the intervention is effective in keeping mothers in school. There was also an increase of school enrolment and employment rates during the last 6 months but this may have coincided with an incentive programme introduced in the summer of 2008 which tied participation in school and employment to allowance allocations.

Nearly half of the participants had unexplained programme absences. The authors suggest that these findings indicate that whilst the incentives may have worked for some, the structure of the incentive programme may have been challenging for others.

During the data collection there were 13 new pregnancies, 5 custody changes and 3 terminations of pregnancy. For the last 6 months of the study 24% of the participants maintained consistent employment and 16% were actively seeking employment which is up from 0% on these activities. Hospitalizations were consistently low during the study. In terms of legal activity there were 9 arrests, 7 incidents of serving time, and 2 reported misdemeanours. The findings indicate that

programme participation is associated with positive changes in participants' familial relationships, family responsibility and care, proper parenting behaviour and feelings, and parental distress and competency, but no change in mental health symptoms. Positive behaviour changes associated with programme participation were observed in education, employment, and low numbers of suspected and substantiated child maltreatment reports. Negative behaviour changes associated with the programme were the frequency of AWOL incidents and subsequent pregnancies. The findings provide support for previously suggested treatment guidelines including access to comprehensive support services such as childcare, education and stable housing. Critical programme ingredients include housing, accessible services that emphasize attachment, community interaction, financial planning and free childcare.

This is clearly a complex intervention aimed at improving the parenting skills of a very specific sub-section of the looked after population and this is the first study to formally evaluate a programme designed for this very unique population.

In terms of quality assessment, it was limited in that it involved a single group with no control. In terms of selection bias this was also a small purposive sample of 25 young women with complex mental health needs. As such, the study has limited generalisability as the participants were unlikely to be representative of the looked after population as a whole.

Overall, this paper highlights the complexity of evaluating multifaceted interventions with a very specific sub-group of the looked after population.

b) Multidimensional Treatment Foster Care (Kerr et al., 2009)

The intervention described in this US paper is Multidimensional Treatment Foster Care (MTFC). The authors aimed to test the hypothesis that MTFC reduces pregnancy rates amongst juvenile justice girls mandated to out of home care when compared to Group Care (GC), and to establish whether a MTFC as a behavioural intervention aimed at delinquency impacts on pregnancy rates amongst this group.

166 girls participated in one of two consecutively run trials conducted between 1997 and 2006 to contrast MTFC and GC conditions. The girls were aged 13-17 years, had at least one criminal referral in the last year, were not currently pregnant, and were placed in out of home care within one year of referral. The girls were randomly assigned to MTFC or GC. MTFC girls were placed in 22 highly trained and supervised homes with state certified foster parents. Experienced programme supervisors with small caseloads supervised all clinical staff, co-ordinated all aspects of the placement and maintained daily contact with the MDFC parents to monitor treatment fidelity. In the control group, the GC girls were placed in 1 of 35 community-based care programmes representing typical out of home care services for girls referred by the justice system.



During the data collection there were 13 new pregnancies, 5 custody changes and 3 terminations of pregnancy.



The basic components of MTFC are described in the paper and include: daily telephone contact with MTFC parents to monitor case progress and adherence to the model; weekly group supervision and support meetings for foster parents; individualised in-home, daily point and level programme for each girl; individual therapy for each girl; family therapy (for the aftercare placement family) focused on parent management strategies, close monitoring of school attendance, performance and homework completion; case management to co-ordinate interventions in the foster family, peer and school settings; and 24 hour on call staff to support family and biological parents, and offer psychiatric consultation as needed. In Trial 2 the MTFC condition

also included an intervention component that targeted HIV risk behaviours (e.g. information on dating and sexual behaviour norms and HIV risk behaviours, decision-making and refusal skills).

Data collection consisted of a baseline criminal referral history, self-report baseline sexual activity, baseline pregnancy history, and follow up pregnancy.

The authors report that fewer post-baseline pregnancies were reported for MTFC girls (26.9%) than for GC girls (46.9%) and that this effect remained significant after controlling for baseline criminal referrals, pregnancy history, and sexual activity.

The authors suggest that the findings supported the hypothesis that MTFC decreases pregnancy rates amongst juvenile justice girls in out of home care and support the long-term preventive effects of MTFC on adolescent girls' pregnancy rates. The findings are consistent with the notion that programmes that target delinquency by impacting general risk behaviour pathways and contexts may more successfully prevent teen pregnancy than those that directly target sexual behaviours.

In terms of quality assessment, as a randomized controlled trial of MTFC versus GC the trial is robust in that it reports a clear recruitment strategy, randomized selection and blinding at baseline and subsequent interviews.

In terms of results, the findings indicated that the odds of getting pregnant for GC girls were nearly two and a half times those for girls assigned to MTFC. However, the authors acknowledge that results may not generalise to urban or more ethnically diverse samples of juvenile justice girls. In terms of this review, it is also clear that the sample was not representative of the looked after population as a whole. The US context also raises questions about transferability to the UK.

Again, this was a complex intervention designed for a specific sub-group of the looked after population in the US juvenile justice system. The intervention itself actually targeted delinquency as a primary outcome but the authors were testing the hypothesis that the intervention would also be protective in terms of pregnancy.

c) The Florida Independent Living Programme (Georgiades, 2005)

This paper outlines an evaluation of an Independent Living (IL) Programme in Florida, US that was designed to promote positive foster youth adjustment in adulthood. IL Programmes were developed following a class action suit filed in 1986 by previous foster wards in New York City who, living homeless as adults, claimed that the city's child welfare system had failed to prepare them for independent living (Georgiades, 2005). The programmes target teenagers in foster care whose permanency plans are neither family reunification nor adoption. A review of IL programmes for young people leaving the care system (Montgomery et al., 2006) explains that they are initiatives designed to provide young care leavers with skills to aid their transition to adulthood. The programmes generally focus on personal development and independent living, and include educational assistance and social skills support such as communication, decision-making, anger management, job skills, budgeting, and household tasks.

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Georgiades' (2005) study is using a comparison group and is including a follow up of 8 years, evaluating both self-report and case record data.

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Georgiades (2005) paper focuses on the Florida district 11 Independent Living (IL) Programme which caters for all children in foster care aged 15 years and older. This programme offers life skills training classes covering employment, money management, community resources, communication, and decision-making/problem solving. The Subsidized

IL (SIL) programme allows those over 16 to live in an approved setting and receive a monthly stipend for living expenses. In turn they must attend school full time and have a 2.0 grade point average, work part time and participate in supervision by the Department. The Aftercare Programme is a voluntary programme for former foster youth between the ages of 18 and 21 years. These young people are assessed, have the opportunity to request services, and have a plan written. Referrals for services (such as housing assistance) aim to complement the young person's own efforts to achieve self-sufficiency.

Georgiades' (2005) study is using a comparison group and is including a follow up of 8 years, evaluating both self-report and case record data.

There were ten outcomes measured in this study which included education, employment, finances, transportation, housing, social support, physical and mental health, substance abuse, and criminality as well as early parenting and parenting competence outcomes and sexual risk taking outcomes.

The participants were all the young adults aged between 18-26 who were eligible for IL services during their stay in foster care in Florida's district 11. A convenience sample of 49 individuals from the treatment group and 18 from the comparison took part, who were not exposed to any of the IL services prior to emancipation.

Data was collected using the Daniel Memorial Institute (DMILA) Assessment plus another questionnaire, that assesses a range of IL skills including money management, job seeking skills, job maintenance skills, interpersonal skills.

In terms outcomes the non-IL group were reported to be much more likely to lack a high school diploma, be unemployed, endure economic hardship, and have unstable housing conditions. Further, the non-IL group had more children, reported lesser ability to control anger, were more likely to be arrested and less likely to perceive themselves as successful.

In terms of the outcomes related to early parenting, the author reports that the IL group were three times less likely to have children than the non-IL group and two times less likely to have two children or more. However, the author acknowledges that this may be because parenting foster youth do not participate

more frequently in IL programmes due to child care commitments. IL programmes may therefore need to provide free child care to improve uptake. Since 15% of non-IL respondents and 11% of IL respondents rated their parenting ability as fair or poor the author also suggests that IL programmes may need to place a stronger emphasis on parenting skills.

The authors acknowledged that the study was limited by the small convenience sample (especially the non-IL group) which was almost entirely made up of SIL clients, meaning that the conclusions related to the IL programme are limited. They also acknowledged a lack of randomization in the 2 groups which raised the possibility that the differences between the groups may be due to undetected baseline differences.

Recruitment took place via foster parents and community professional contacts which the authors acknowledge might have introduced sampling bias.

In terms of measurement, the DMILA assessment and additional questionnaire constructed by the researcher were acknowledged by the author to be non-standard. The self-report nature of the data also raises concerns of subjectivity and desirability bias especially for items addressing substance use or sexual risk-taking. The questionnaire was administered by post and response rates can be low.

One inconsistency noted is that the authors suggest that there were no substantial differences reported between the 2 groups in terms of alcohol or drug use, sexual risk-taking, or self-perceived parenting ability, indicating that the study did not provide evidence that IL participation is associated with parenting competence or sexual risk-taking prevention outcomes. However, they also report that the non-IL group were more than three times more likely to have unprotected sex with a stranger (23%) than those in the IL group (7%) and suggest that IL programmes need to assess foster youth on an individual basis for sexual risk-taking and tailor interventions to meet their sexual safety needs.

4.4. A Nurse-Led Health Promotion Model

The Brighton nurse-led sexual health promotion model for young people leaving care (Griffiths, 2012)

In this paper Griffiths (2012) describes a nurse-led service set up as part of a Leaving Care (16+) Team and within the Young People's Asylum Service in Brighton, England. Although this published paper is largely a description of the service and offers no robust evaluative evidence, it has been included in this review as it highlights a potentially promising approach to meeting the needs of this group. The stated aim of the service is to reduce teenage pregnancy and rates of sexually transmitted infection and to provide evidence regarding service effectiveness in respect of this aim.

The service began as a pilot specialist nurse post based between the main contraceptive and sexual health clinic in the city but also entails a yearly general health assessment that takes place in the young person's home which may be foster care, residential units or independent accommodation. The home visit may entail offering contraceptive advice or fitting contraceptive implants, referral to termination of pregnancy services, sexual health testing or fitting of an IUD. The nurse also acts as a bridge between the young person and other mainstream services, aiming to help the young person to increase confidence in service use.

Reduced pregnancy rates are reported. The strength of this approach is that the service designers are able to bridge a variety of services for this group and are attuned to the barriers they face when accessing sexual health services.

We anticipate that this type of good practice is very likely to be taking place across the UK but is typically under reported. We therefore suggest that there is huge potential for a robust scoping exercise of this type of activity with a view to identifying promising approaches for further evaluation.

Summary

In summary, part two of this review has highlighted the scarcity of published evaluations of interventions that aim to address the issue of unplanned pregnancy and preparation for parenthood in the care-experienced population – particularly in the UK. We acknowledge that this is not necessarily a reflection of the work that is taking place, but suggest that services working with care-experienced

young people are disadvantaged by the lack of dissemination of this activity.

Given the lack of published work we approached our review with a broad lens. We found that although the interventions fell into 5 broad categories, most of the publications focused on 2 of these categories: curriculum-based interventions, and complex residential services. Here, the primary outcomes ranged from simple knowledge acquisition right through to complex behavioural changes in specific sub-groups of the care-experienced population. This in itself illustrates the challenges with the development and evaluation of such interventions that realistically may only partly address the complex issues that (as we outlined in part one) looked after children and young people face. The impact of both formal and informal supportive relationships for this group in terms of the impact on their life choices appears to be largely unexplored. In this regard the peer mentoring intervention reviewed is a promising approach in terms of providing more than knowledge for these young people. Similarly, Griffiths' (2012) description of the development of the service in Brighton also points to a valuable approach that is potentially taking place in a variety of forms across the UK but that have not been evaluated or published.

Conclusion: Promising Directions

There are two key messages to be gained from part two of this review. The first is that if there are interventions being carried out to address the issue of looked after young people's and care leavers' sexual health then they are not always being published. This means that successes cannot be replicated and mistakes are likely to be repeated. Certainly there is very little published evidence that such activity is taking place in the UK. The second message is that what is published is not always evaluated in a robust manner. This all points to a very limited literature that reports on the design and testing of interventions specifically tailored to looked after children and young people and specifically aiming to reduce unplanned pregnancy and improve parenting outcomes.

We have highlighted that two main areas of activity are curriculum-based interventions and interventions based on complex residential services. Unsurprisingly, all of the curriculum-based interventions have primary outcomes that relate to improving sexual health knowledge and skills, and all report improvements. However, the quality of the interventions in terms of design, length of time and type of delivery were all very varied. They ranged from a 1 hour session to a 90 hour curriculum delivered over 10 weeks and the fidelity of delivery was not discussed by any of the authors. Furthermore, the age range of the participants in all of the studies ranged from 12 years to 20 (extended to 26 in Georgiades study) yet the developmental and cognitive differences between early and late teens was not addressed in any of the discussions by the authors.

The evaluations were also very limited in terms of small sample sizes which made generalisations difficult and raised questions about whether the samples are representative of the looked after children and young people or care leaver population as a whole. Indeed the populations described in the studies by McGuinness et al. (2002) and Peebles (2000) are unlikely to be representative of the target population. Furthermore, the published interventions were predominantly undertaken in the US which also raises questions about whether they would be transferrable to a UK context.

That said, the interventions did have strengths. Kirby (2007) argues that curriculum-based interventions that focus on sexual attitudes and behaviours in the general population have little impact on reducing teenage pregnancy rates, but it was clear from the papers reviewed here that targeted health promotion interventions were of some benefit to this group. It was also notable that the Power Through Choices (PTC) and Becoming a Responsible Teen (BART) curricula benefitted from expert advice and service user input in their development and were strengthened by recognised theoretical underpinnings. They had also been tested elsewhere with other populations.

The interventions based on residential treatments were complex interventions and as such it is difficult to provide any comparisons. Again, the participants

in each of the interventions are unlikely to be representative of the looked after population as a whole given that the population in Vorhies (2009) had severe mental illnesses and in Kerr et al. (2009) had complex criminal histories. The interventions took place in the US, raising questions of cultural differences and transferability to the UK.

That said, there are some promising insights that could be further developed. The three curriculum-based projects suggest that targeted sexual health promotion can have some beneficial effects since all reported an increase in knowledge and confidence in youth.

Despite the criticism of the design, given that several of the papers were brief reports and reported on pilot endeavours, it would be premature to dismiss promising evidence on this basis. Both BART and PTC offer well developed curricula and PTC is currently being widely rolled out and tested in the US, so it will be important to follow up the results.

Clearly what these have to offer is that they compensate for deficits in general sex and relationships education that looked after children and young people experience. Activities that are interactive and that take their personal context into account seem to yield positive results. Griffiths' (2012) paper, despite being a brief overview of a nurse-led model, highlights the importance of the relationship between health professionals and looked after young people and the importance of taking the services out to those who struggle to access mainstream services.

However, what is missing is any longitudinal follow up of the study participants – whilst the programmes may report some immediate benefits in terms of knowledge, what we don't know is whether the programmes have any direct impact on delaying pregnancy/improving the number of planned pregnancies, improving pregnancy outcomes, or improving sexual health for this group of young people. Furthermore, any attempt to prevent unplanned pregnancy and improve preparation for planned pregnancy in care-experienced young people must address both information and relationship needs in this population. Young people's own testimonies provide an important source of

guidance regarding intervention design and indicate that the causes of unplanned or early transition to parenthood are multi-faceted and unlikely to be remedied by curriculum based interventions alone. Similarly the complexities of young people's care histories will no doubt impact on how they engage with services as parents themselves. The following recommendations are suggested regarding further research to include the design and testing of interventions:

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Furthermore, the published interventions were predominantly undertaken in the US which also raises questions about whether they would be transferrable to a UK context.

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Recommendations to Improve Knowledge

- 1) Given the dearth of published evidence from the UK, a scoping exercise is needed to bring together key stakeholders in order to (i) establish an evidence base of interventions taking place with looked after children and young people related to reducing unintended pregnancy or effectively preparing for parenthood and (ii) to exchange information about any interventions that are as yet unpublished and (iii) to share any emerging evidence.
- 2) Commissioners and providers should further reflect on the promising evidence emerging from the work on 'Power through Choices' with a view to considering the merits of adapting and testing this model in the UK context, in combination with a relationship-based approach to prevention of unplanned pregnancy. It will be important to keep abreast of emerging findings from the current US trial of this initiative and to learn from US colleagues.
- 3) Further research is needed to ascertain barriers to and identify good practice in out of home care settings that can improve young people's uptake of contraception and their preparation for parenthood.
- 4) Evidence suggests that pregnant or parenting young people who are care-experienced require special consideration within services, given that they bring the legacy of their care histories to relationships with services. Further research is needed to understand how sustainable support networks might be fostered to provide trusted support on parenting choice and practice.



Consider testing and adapting the Power Through Choices model in the UK context.



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Appendices

1. Method

Search Strategy

Eligible papers for this review were identified through a comprehensive literature search conducted between September 2014 and January 2015. The strategy for the search was developed in consultation with an information scientist at the University of Manchester. As with any systematic review, despite using comprehensive methods to undertake the search, it is possible that some research was missed. Readers are therefore invited to contact us with relevant published or unpublished studies in this area to add to the evidence base.

Key elements for the review question

Table 1: PICOS Framework

Population	Young people who have experienced any form of state care, and who had become pregnant or a parent during their time in care or on leaving care.
Intervention	Any intervention related to pregnancy prevention, parenting preparation, or improving parenting experiences designed for and/or reported on with specific reference to young people in or leaving state care (which includes residential care and foster care).
Comparisons	Young people who have not lived outside of the birth family environment.
Outcomes	Any physiological, attitudinal, behavioral or knowledge outcomes.
Study Design	All study designs were considered.

Table 2: Search terms used

Search Terms/Synonyms	Combined With	Combined With
Looked after child*	OR	AND
Child*in care		
Foster care		
Residential care		
Kinship care		
State care		
Corporate parent*		
Care leaver*		
Transition* from care		
Leaving care		
Out of home care NOT adult		
Ageing out of care		
Young people	OR	
Young person		
Teen*		
Adolescent*		
Youth*		
Intervention*	OR	
Prevent*		
Experience*		
Support*		
Prepare*		
Service*		
Social Support		
Program* or programme*		
Peer support		
Peer mentor*		
Sex* education		
Parent*		
Mother*		
Father*		
Pregn*		
Teen* pregn*		
Teen* conception		
Reproductive health		

Databases

Table 3: 1st and 2nd stage database search results

Database	1st Stage Results for all terms. Date range January 2000 – December 2014	De-duplicated	2nd Stage Titles/Abstracts screened Re: ANY Looked After Children and Young People/ Pregnancy Avoidance/ Preparation for Parenthood
EBSCO <ul style="list-style-type: none"> • Social Sciences full text • Humanities Abstracts • CINAHL 	624	605	7
PROQUEST <ul style="list-style-type: none"> • ASSIA • British Humanities Index • British Nursing Index • ERIC • IBSS • Social Science Abstracts • Social Services Abstracts 	420	420	9
OVID <ul style="list-style-type: none"> • PsychInfo • Maternity and Infant Care • Medline 	847	660	16
	1891	1685	32

Quality Assessment

It was our original intention to consider the strengths and weaknesses of the intervention papers in part two of the review using the Effective Public Health Practice (EPHPP) tool (see http://www.ehphp.ca/PDF/Quality%20Assessment%20Tool_2010_2.pdf) as this is recommended in the Cochrane handbook for appraising the quality of available evidence. However, given the range and often limited quality of the published intervention studies, this proved too ambitious as many of the publications lacked the detail required to complete the template or scoring. Our quality appraisal was therefore also further guided by the Critical Appraisal Skills Programme (CASP) checklist and tools (available at <http://www.casp-uk.net/#!/casp-tools-checklists/c18f8>).

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