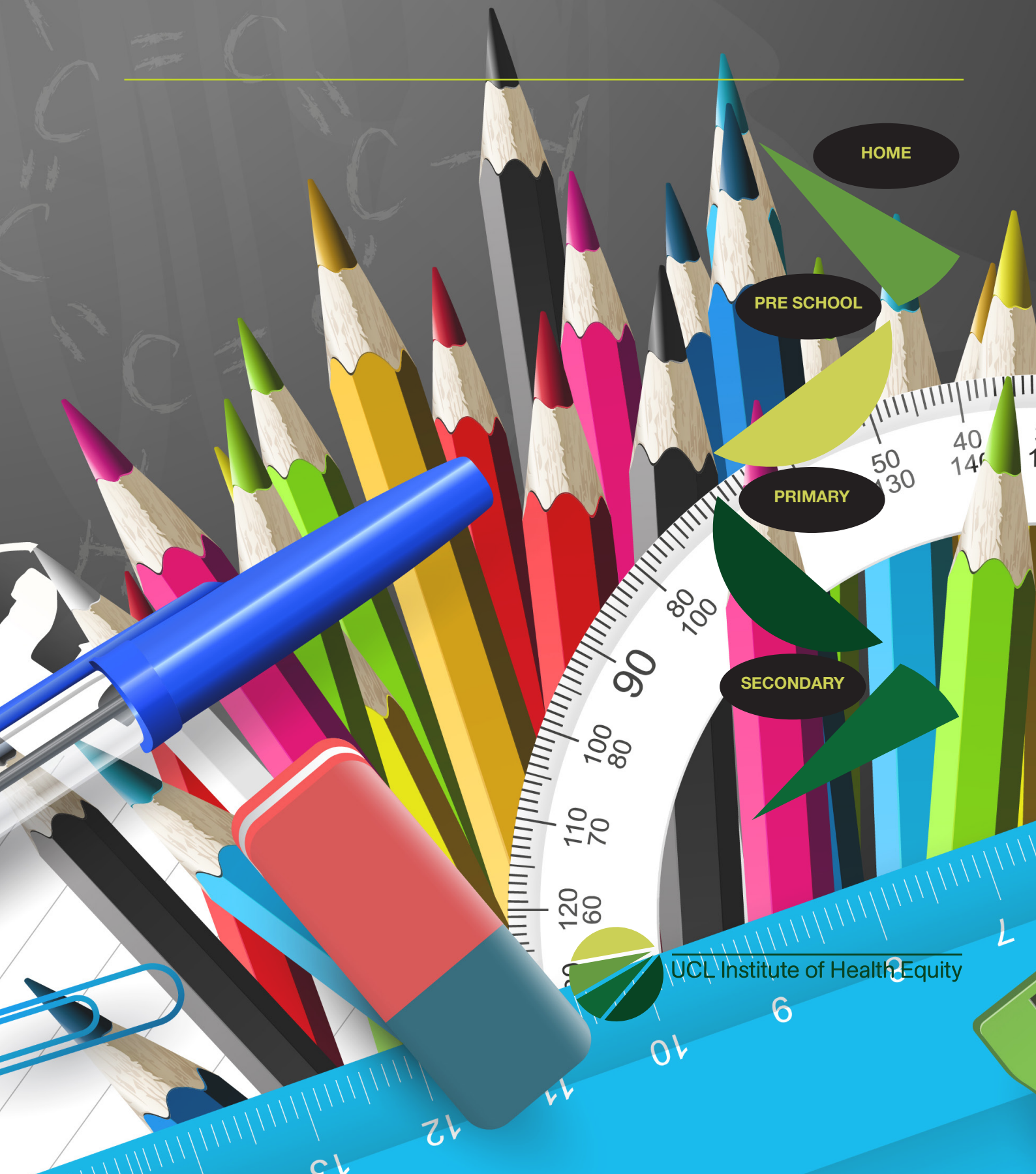# Improving School Transitions
For Health Equity

HOME

PRE SCHOOL

PRIMARY

SECONDARY

UCL Institute of Health Equity

HOME

PRE SCHOOL

PRIMARY

SECONDARY

Improving school transitions for health equity

UCL Institute of Health Equity

About the Department of Health

The Department of Health (DH) helps people to live better for longer through leading, shaping and funding health and care in England, making sure people have the support, care and treatment they need, with the compassion, respect and dignity they deserve. The Department takes a comprehensive approach to tackling health inequalities that addresses the wider social determinants, along with differences in access to and outcomes from health services, and one that promotes healthier lifestyles for all. DH has commissioned the UCL Institute of Health Equity to build on the work of the post-2010 strategic review of health inequalities (the Marmot review), to develop the evidence base around the wider social factors that shape health outcomes and contribute to health inequalities, and to support programmes and policy making at local, national and international level.

About the UCL Institute of Health Equity

The Institute is led by Professor Sir Michael Marmot and seeks to increase health equity through action on the social determinants of health, specifically in four areas: influencing global, national and local policies; advising on and learning from practice; building the evidence base; and capacity-building. The Institute builds on previous work to tackle inequalities in health led by Professor Sir Michael Marmot and his team, including the Commission on Social Determinants of Health, Fair Society Healthy Lives (the Marmot review) and the Review of Social Determinants of Health and the Health Divide for the WHO European Region.
www.instituteofhealthequity.org

About this report

This report was written for the Department of Health by Jill Roberts of the UCL Institute of Health Equity.

The author is grateful to the Department of Health and to all of those who contributed to the programme of work and commented on the report. A list of these expert reviewers and other contributors is provided in an Appendix.

CONTENTS

EXECUTIVE SUMMARY

This paper summarises the latest evidence on school transitions to determine the nature of and extent of their impact on health outcomes. It also considers whether or not school transition interventions and strategies can help to reduce health inequalities.

School transitions are the moves children and young people make into, between and from schools. These times of change can be stressful and challenging periods for children, young people and their parents or carers as they worry about academic expectations, and about negotiating new environments and social relationships (1-3). However, school transitions can also provide important opportunities for pupils to build resilience (4). Resilient pupils are more able to deal with difficulties and adversities, and are therefore more likely to experience conditions which are positive for health (5). School transitions can thus be both a threat and opportunity.

In 2013/14, 40% of children were not deemed 'ready for school' (6, 7). Additionally, an estimated 16% of pupils do not feel prepared for the move from primary to secondary school each year (6-8), and around 5% of all pupils move schools at 'non-standard' times (8). However, given that a range of personal, family background, school and community factors influence pupils' experiences of school transitions (4, 9-20), the numbers at risk of experiencing poor school transitions are likely to be considerably higher than these estimates.

For most pupils and their families, pre-transition worries tend to diminish within the first year of starting at the new school (3, 7, 14, 21-23). However, children from disadvantaged backgrounds, with special educational needs (SEN), English as an additional language (EAL), low prior academic attainment, and shyness, low confidence and self-esteem, as well as looked after children (LAC) are most at risk of experiencing poor school transitions and not settling in well at school (1, 21, 24-28). This is because they are already vulnerable as a result of accumulated risk in their early experiences (1, 21, 24-28).

There is limited evidence of a direct link between school transitions and health outcomes. However, negative associations with health can be inferred by looking at what is known about the effects of school transitions. School transitions can negatively affect pupils' social, emotional and academic outcomes, as shown by lesser school engagement, lower academic attainment, reduced confidence and self-esteem, and increased anxiety, feelings of loneliness and conduct problems (21, 27, 29-31). These often interrelated effects are in turn associated with adverse health outcomes, including increased risk of mental health problems (29) (7), suicide and self-harm (32), risky health behaviours (33, 34) and a range of diseases in adulthood (including cardiovascular disease and stroke) (32, 35, 36) (See Figure 1). As vulnerable and disadvantaged pupils are at greater risk of experiencing poor transitions, it is therefore likely that poor school transitions can further exacerbate health inequalities.

School transition programmes are in place to help pupils and their families have a smooth and successful transition process. They have been linked to better outcomes for pupils and their families, particularly for at-risk groups (37, 38); therefore they have a role to play in reducing health inequalities and can be considered a protective factor. Although lower household socioeconomic status is known to contribute to educational attainment and mental health functioning (9-11), such background factors become less important for school success during times of transition (9-11), suggesting that school transitions are opportune times to re-engage vulnerable or disadvantaged pupils.

To have the greatest impact, school transition interventions and strategies need to address and influence wider factors affecting the school transition process, the transition process itself and the effects of school transitions. Interventions and strategies therefore need to be implemented before, during and after key school transitions.

Pre-school transition	*Before the transition to formal education, schools, parents and carers, early years and linked services need to work together to support families and give every child the best start in life.*
	Services need to be well integrated to provide cohesive support to children and families. This will involve having open communication channels and sharing clear, accurate and timely information about identified at-risk pupils' background and personal characteristics, for service planning and implementation.
	Evidence-based strategies, including early education and home visiting programmes, particularly the Family Nurse Partnership (FNP) (39) and the High Scope Preschool/Perry Preschool programme (40, 41), could help to reduce risk of poor transitions, if implemented pre-transition.
School transition	*Effective and promising interventions for the transition process itself include targeted brief interventions for pupils identified as at increased risk of poor transitions, to help minimise discontinuities, as well as familiarity lessons and induction arrangements, open days, and staggered school starts and lunch breaks.*
Post-school transition	*Post-transition, school engagement strategies, particularly those that incorporate practical or vocational elements into the curriculum, or that have more intensive one-to-one support, can help to reverse or minimise the impact of a poor school transition by re-engaging pupils, or can help to ensure a sustained, successful transition.*

To help identify and develop the most effective school transition interventions and strategies, large-scale research is needed to detect school-level policy differences relating to transition success. Further research is also needed to better understand the relative importance of each of the factors that affect a successful school transition, and the direct and indirect links between school transitions and health outcomes, and thus how school transitions can reduce or exacerbate health inequalities.

Figure 1. Negative health outcomes associated with the negative effects of poor school transitions
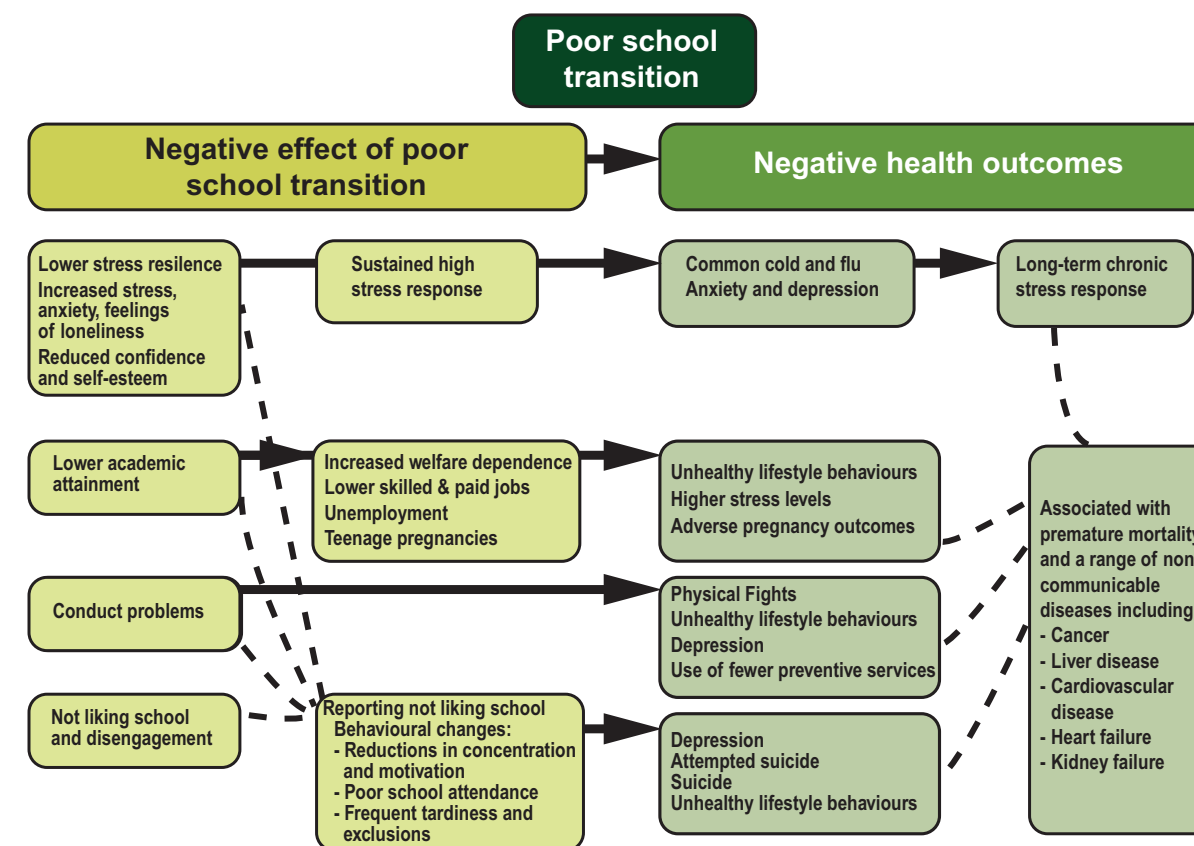
SUMMARY OF RECOMMENDATIONS

- To have the greatest impact, school transition interventions and strategies need to address and influence wider factors affecting the school transition process, the transition process itself and the effects of school transitions.

- Interventions and strategies therefore need to be implemented before, during and after key school transitions.

- Progressive universal interventions in the early years (universal interventions but with a scale and intensity that is proportionate to the level of disadvantage), to improve 'school readiness' for the home to school transition, can reduce absolute socioeconomic inequalities in poor academic attainment between the least and most disadvantaged groups by 15.7% (effect size 0.8 SD) (41).

- Early years and education, social care and health services need to work closely together and involve parents and carers to support families and give every child the best start in life. This will involve focusing on children's physical, cognitive, communication and language, and social and emotional development, while simultaneously supporting parents and carers to provide a safe, healthy and active learning environment, with positive parenting. The education, health and care plan can help facilitate effective partnership working.

- Schools and early years services need to be well integrated to provide cohesive support to children and families. Services need to have open communication channels and share clear, accurate and timely information about identified at-risk pupils' backgrounds and personal characteristics, in order to plan and implement additional or targeted evidence-based school transition programmes and strategies.

- During the school transition, there are a number of evidence-based and effective strategies that can help to minimise the pre-transition concerns held by the majority of pupils and their families, with targeted support for those that need it the most.

- Post-transition, school engagement strategies can help to reverse or minimise the impact of a poor school transition, or to ensure a sustained, successful transition. There is evidence that incorporating practical or vocational elements into the curriculum can help to re-engage the disengaged, as can flexible provision and more intensive one-to-one support.

- To help identify and develop the most effective school transition interventions and strategies, large-scale research should be commissioned to better understand the relative importance of each of the factors that predict a successful school transition, and to detect school-level policy differences. Further longitudinal research is also needed to provide evidence of the direct and indirect links between school transitions and health outcomes, and thus how school transitions can reduce or exacerbate health inequalities.

INTRODUCTION

This review is part of a collection of evidence reviews commissioned by the Department of Health (DH) and written by the UCL Institute of Health Equity (IHE). It is intended to promote stronger partnerships between public health and educational services and communities, and to be a source of information on approaches to consider when devising local programmes and strategies to help improve school transitions.

This review summarises the latest evidence on school transitions: what they are; the factors that affect their success; who is most at risk and why; their effects and associations with health outcomes; and which interventions and strategies are most effective at ensuring a sustained, smooth transition for all – but particularly for vulnerable and disadvantaged pupils – and thus for achieving health equity.

Transitions are the moves children and young people make into, between and from schools. They can be stressful periods for children, parents and carers.

For most pupils, pre-transition worries tend to diminish within the first year of moving school. But for pupils who are already vulnerable as a result of the accumulation of risk in their early experiences, concerns and difficulties are more likely to persist. For these vulnerable pupils, school transitions can be among the most difficult times in their lives.

A range of personal, background, parental, school and community factors affect school transitions. School transitions can negatively affect pupils' social, emotional and academic outcomes. However, more research is needed to evidence the direct and indirect links between school transitions and health outcomes.

Nevertheless, negative associations with health can be inferred by looking at what is known about the effects of school transitions. Adverse health outcomes from poor transitions might include an increased risk of mental health problems, suicide and self-harm, risky health behaviours, a range of diseases in adulthood and premature mortality.

This paper draws attention to the finding that transitions can be both a threat and opportunity for pupils, particularly disadvantaged or vulnerable pupils. Good school transition programmes have been linked to better outcomes, particularly for at-risk groups; therefore they have a role to play in reducing health inequalities.

Schools, parents and carers, in partnership with early years and linked services, have an important role to play in addressing, at the earliest possible opportunity, the factors that make some pupils and groups of pupils vulnerable to poor school transitions. But for maximum effect, interventions and strategies must also support pupils and their families throughout the transition itself and beyond. Evidence-based initiatives and strategies to be implemented before, during and after school transitions are identified later in the review.

1. WHAT ARE SCHOOL TRANSITIONS?

1

> *I am starting secondary school soon and I am so scared but I have no idea why. I have loved my time at primary school which makes moving up even harder. Please help.*
>
> **Contact to ChildLine, 2013**

School transitions are the moves children and young people make into, between and from schools.

The main school-related transitions of focus in this paper are the:

- home to school transition, which is the move from home or early years settings into primary school, and particularly Key Stage 1 (ages 5–6) (4)
- move from primary to secondary school
- moves between schools, particularly in-year transfers (moving schools outside of normal times)

School transitions are not a fixed point event (for example, the first day of school). They occur before the start of or changing of schools, and continue for some time after the physical move has happened.

HOME

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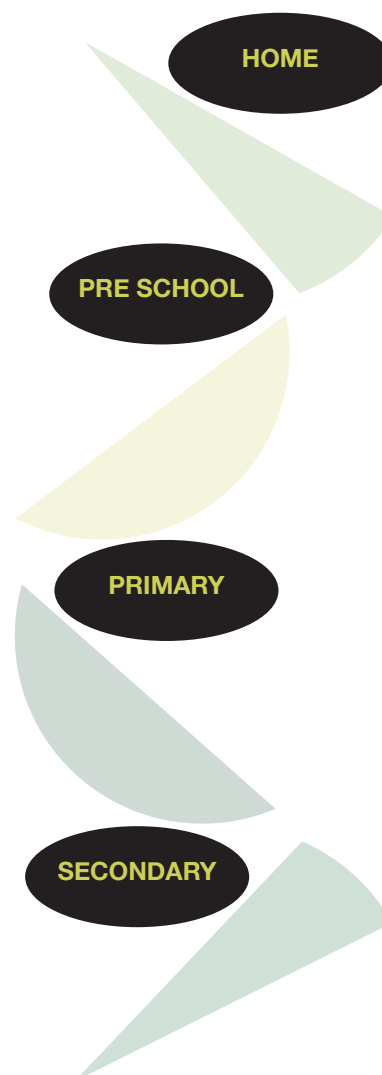
THE EXPERIENCE OF SCHOOL TRANSITIONS

2

2.1 Pupils' experiences

School transitions can be stressful and challenging periods for children, young people and their parents or carers as they worry about the unknown, academic expectations, and about negotiating new environments and social relationships (1-3).

> *Dear Sam, I've left my primary school and am going on to big school. None of my friends are going to be in my class. I feel really sad. What should I do?*
>
> **Contact to ChildLine, 2013**

> *I just moved to a new school and it's kind of new for me, new subjects and language. I am worried about the exams and really confused.*
>
> **Contact to ChildLine, 2013**

Children entering formal schooling may struggle with the change to more formal teaching and learning styles, a greater emphasis on work, less time for play and fewer opportunities for child-centred and initiated activities (24).

Nearly all pupils express some concerns prior to the primary to secondary school transition (29). Pre-transition concerns are commonly related to change, higher academic expectations, more difficult homework, exams, getting lost around the school, following a timetable, losing and making friends, being exposed to many more (older) pupils, bullying, and problems at home that can make it hard to concentrate – all of which can cause emotional difficulties (3, 7, 14).

For most pupils, transition concerns – particularly those associated with navigating the school environment and bullying – tend to diminish during the first year, or even term, at the new school (3, 7, 14, 21-23). A UK study found that nearly three-quarters of children reported feeling happy a term after starting their new school, with a further 16% feeling excited (16). However, for some pupils, concerns and difficulties persist (29).

In 2013/14, 40% of children (amounting to n = 256,532), did not achieve a good level of development at the end of the early years foundation stage (EYFS), and were thus not deemed 'ready for school' (6, 7).

Research also suggests that 16% of pupils – equivalent to 83,000 children in England – do not feel prepared for the move from primary to secondary school each year (7). Furthermore, around 5% of all pupils (n = 300,000) move schools at 'non-standard' times each year (8) and although moving school during the school year can be a positive experience, in-year moves are known often to have a disruptive impact on pupils (8).

It is clear that a sizeable proportion of children and young people are unprepared or feel unprepared for starting their new school, and are thus at risk of experiencing poor school transitions. However, as shown in Section 3 below, a number of factors influence pupils' experience of school transitions, so the number of children and young people at risk of poor school transitions is likely to be far higher than the above estimates suggest.

2.2 Parents' and carers' experiences

Parents and carers may also find school transitions difficult. Their most common concerns during the primary to secondary transition are known to be about bullying, safety, quantity of homework, and their child's ability to make new friends and adjust to having lots of new teachers (14). Other concerns include their child's behaviour and academic skills, ability to follow instructions, and their child's happiness (42, 43).

Parents and carers with complex support needs, for example those with a disabled child or from socioeconomically disadvantaged backgrounds, may also worry about their ability to provide the resources and experiences they believe their children might need to succeed at school (42).

However, once parents and carers become familiarised with the routine at the new school, they report feeling less worried (14).
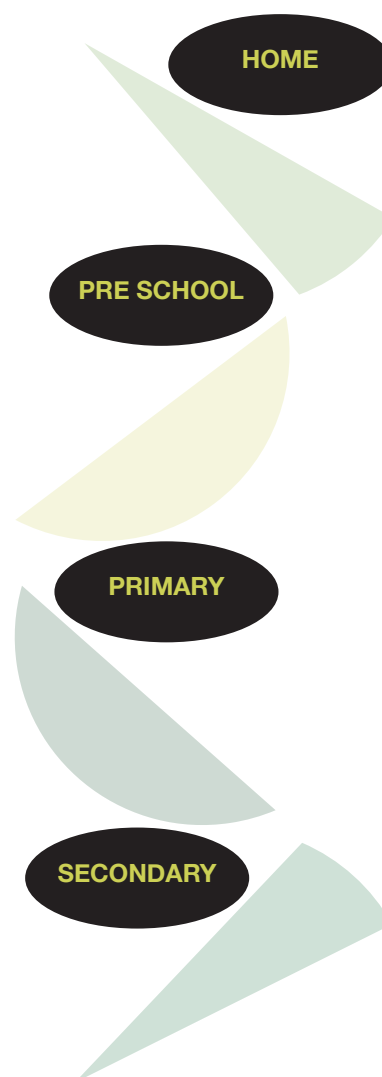
> *Hi, my DS's [dear son, 9 years old] start to the new school year has been disastrous. Went in first day and refused subsequent two days. Those two sentences give little idea of how difficult the last two days have been! The school has handled the transition terribly. Just wondered what transition support has been offered to children with ASD [autistic spectrum disorder] in other schools?*
>
> **Mumsnet.com post, 2013**

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FACTORS AFFECTING THE SUCCESS OF SCHOOL TRANSITIONS

3

The greatest influence on pupils' experiences of school transitions is the size of the change they experience (24). A range of personal, family background, school and community factors can influence this degree of change, and whether or not a pupil has a successful or poor school transition. Furthermore, the relative importance of each factor is likely to differ depending upon the stage of transition (home to school, primary to secondary, or in-year transfer).

This section provides an overview of the factors that predict the success of school transitions. Section 4 then explores how such risk and resilience factors are associated with different groups of children.

Figure 2 – Factors affecting the success of school transitions
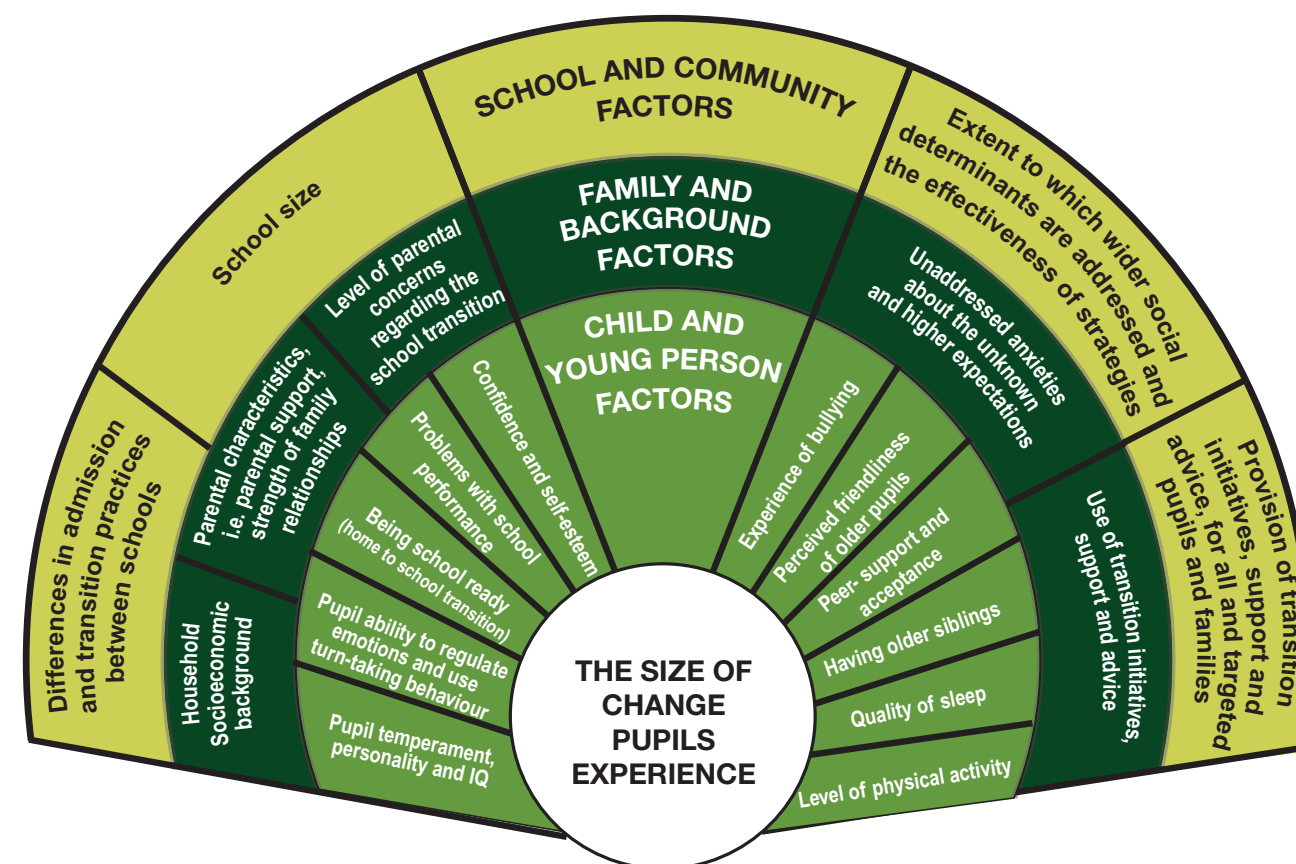
3.1 Child and young person factors, and family and background factors

An international research study found that background factors (household socioeconomic status, disability and gender) explain 14.2% of the variation in pupils' academic attainment and 21.4% of the variability in mental health functioning six months prior to the transition from primary to secondary school (9-11).

However, six months after the transition has taken place, personal (child and young person) factors have less of an impact on academic attainment, explaining only 5.1% of the variation (although the impact on mental health functioning remains largely the same at 20.1%). This indicates that factors other than personal background, such as school, community and individual factors, become more influential during times of school transitions (9-11). It thus follows that school transitions have the potential to be particularly beneficial to the academic success of some vulnerable or disadvantaged pupils (9-11). School transitions can therefore be said to be both a risk and opportunity for pupils, particularly vulnerable or disadvantaged pupils.

A child or young person's temperament and personality, IQ and ability to respond appropriately to different situations, including how they regulate emotions and use turn-taking behaviours, are known to influence their ability to successfully navigate relationships, deal with stress and anxiety, and succeed academically – all of which affect the success of school transitions (31). There is known to be substantial individual variation in pupils' responses to environmental and social changes (21, 44, 45).

Socioeconomic background and parental characteristics, including having parental support, strong family relationships and higher maternal level of education and attitudes to learning, also positively impact a child's development, which can influence how a child or young person experiences school transitions (12, 13, 31). Being 'ready' for school reduces the risk of pupils experiencing a poor transition. School readiness includes a broad range of health and development factors, such as physical and mental health, academic skills and personality characteristics, including emotional self-regulation and turn-taking abilities (46). As well as being predictive of good school transitions, school readiness also predicts good academic attainment during school years (47), long-term academic success and securing high-quality employment (48).

Recent research has also found that children whose parents have high concerns during the school transition have poorer school, social and emotional adjustment further to the transition (14). It is thus critical that school transition strategies address the needs of parents and carers.

Furthermore, having friends and being able to get support from peers is known to be a protective factor for children going through school transitions (15-17). One study found that remaining in the same friendship groups can help children adjust to the new curriculum and teaching methods (16). Another study found that pupils who keep the same group of good friends across the transition from primary to secondary school make slightly better academic progress than those who change friends (14). However, a recent study found that even those pupils who did not go to their family's first choice of secondary school, and thus might not have transferred with their friends, are mostly just as settled as their peers by the end of the first year (Year 7) (14). The perceived friendliness of older pupils, and having older siblings who can offer help and advice, can also buffer against poor school transitions (15-17).

Peer acceptance – the extent to which pupils report liking their classmates at the start of the academic year – has similarly been found to predict whether or not a pupil reports liking school by the end of the school year (18). This indicates that transition interventions to improve peer acceptance and friendships may help to improve school liking and, in turn, pupil engagement with school.

Overall, girls, pupils with higher prior academic attainment, and pupils from higher socioeconomic backgrounds (not eligible for free school meals [FSM]) are known to have better school adjustment, and older pupils and those with higher prior academic attainment have better social and emotional adjustment during the primary to secondary transition (14).

Finally, sleeping well and being physically active are known to help prevent poor school transitions, by promoting health and school performance (19).

3.2 School and community factors

Research has found that school contextual factors – including school size and organisation type – are known to explain only a small proportion of school transition success (measured by academic attainment and mental health functioning): 3.1% pre-transition, and an additional 5.4% six months after the transition has taken place (9). However, there is evidence that school size is positively associated with increased risk of being bullied (49) – understandably, an inhibitor of successful school transitions.

Schools can therefore help vulnerable pupils build resilience (4) through promoting engagement with learning and pupil confidence (4). For pupils who transition or transfer to a new school without their peers, getting involved in extracurricular activities can help build resilience and minimise the risk of a poor transition (20). Furthermore, curriculums that engage pupils with learning are also protective of good school transitions (15-17).

Childhood services, including schools, children's centres and health services, with wider partners including adult learning, housing, Jobcentre and the voluntary sector, have an important role to play in addressing the wider social determinants of children's health and development, and in changing the balance between risk and resilience in pupils' lives.

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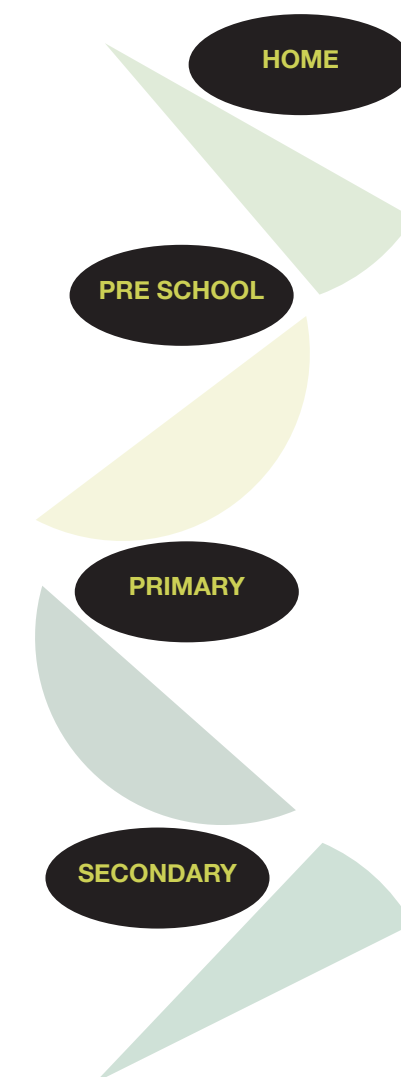
PUPILS VULNERABLE TO POOR SCHOOL TRANSITIONS

4

This section identifies the pupils and groups of pupils at particularly high risk of experiencing poor school transitions.

Some children and young people are more susceptible to poor school transitions because of heritable and biological variations. For example, some children are naturally shyer and less bold than others. Other pupils and groups of pupils, however, are more likely to have poor school transitions because they are already vulnerable as a result of the accumulation of risk in their early experiences (environmental risk factors). For example, some pupils are more likely to be affected by multiple risk factors associated with increased vulnerability, such as low self-esteem and emotional or behavioural problems that make it difficult to make friends. They might also have fewer opportunities to build resilience because, for example, they lack adequate support from their family and peers, are not school ready or because they frequently move schools, leaving friends behind.

Although the majority of children have successful school transitions (1, 16), some vulnerable groups of children and their families are more likely to find transitions challenging and are less likely than their peers to settle in well, and will therefore need additional or tailored support. Explored further below, these include children and young people:

- from socioeconomically disadvantaged families

- from transient families

- with special educational needs (SEN)

- with lower prior academic attainment

- with English as an additional language

- with poor socio-emotional skills, low self-esteem or low confidence

- who are the youngest pupils in the school year

- who are looked after (1, 21, 24-28)

There is also some evidence that children from certain black and minority ethnic (BME) groups may experience more difficulties than others during school transitions (50).

4.1 Children, young people and families from socioeconomically disadvantaged backgrounds

Overall, children from disadvantaged areas are less likely to be school ready than their better-off peers, and are thus more at risk of experiencing poor school transitions. In 2013/14, just 45% of children eligible for free school meals (FSM) achieved a good level of development in the early years foundation stage (EYFS); compared with 64% of pupils not eligible for FSM (6): a difference of 18.9 percentage points. Furthermore, 53% of children in the 30% most deprived super output areas in England achieved a good level of development, compared with 65% of children in other areas – a gap of 12 percentage points (6).

Several studies have found that children from disadvantaged socioeconomic backgrounds experience more problems before, during and after school transitions (16, 27, 51, 52). For example, more disadvantaged pupils are less likely to adapt to their new school routines with ease than their peers (72% and 50% reported not getting used to school routines, respectively), and are less likely to settle in well (58% and 39% reported not settling in, respectively) (16). Poorer pupils are also more likely to exhibit behavioural and emotional problems during early education (53).

Socioeconomic hardship during a child's early years can undermine aspects of children's health and development, including cognitive development, physical and mental health and academic attainment (54). The parenting that surrounds the child, in particular the type of home communication and learning environments that are provided, and the context in which that parenting takes place, including parents' health, social networks, financial resources and knowledge about parenting, have been found to be the best predictors of outcomes for children (55). However, insufficient income or poor quality work will increase parental stress and mental health issues, and makes it more difficult for parents to adopt positive parenting skills and to bond with their children. This increases the risk of children not developing well, not being ready for school and experiencing poor school transitions. Furthermore, the ability of parents in financially disadvantaged families to invest in advantageous experiences and environments for their children is constrained, and this can impact upon their children's cognitive outcomes (56) (see Figure 3).

Parents from certain ethnic and social groups are less likely than others to engage with school and their children's learning (57). This might be because such families are under-served by support services. For example, poorer families are more likely to miss out on transition support as fewer transition activities are offered by schools in disadvantaged areas than in better-off areas (58), and as a result, compared with middle-class pupils, working-class pupils are more likely to feel isolated during times of transition (59).

In-year transfers (moving schools outside of normal times) have similarly been found to disproportionately affect pupils from more disadvantaged backgrounds (8). Nearly half of all in-year movers (46%) in 2013 were eligible for the pupil premium compared with a national average of 25%, and the percentage of in-year admissions among pupils receiving free school meals is increasing over time (8). Children from poorer backgrounds are more likely to move house and schools during the school year because of changes to housing benefit rules (8).

For further information on how parenting can affect the home to school transition, please see: Donkin, A. (2014) Good quality parenting programmes and the home to school transition, London: IHE

Figure 3 – Improving children's later life outcomes– a positive pathways model
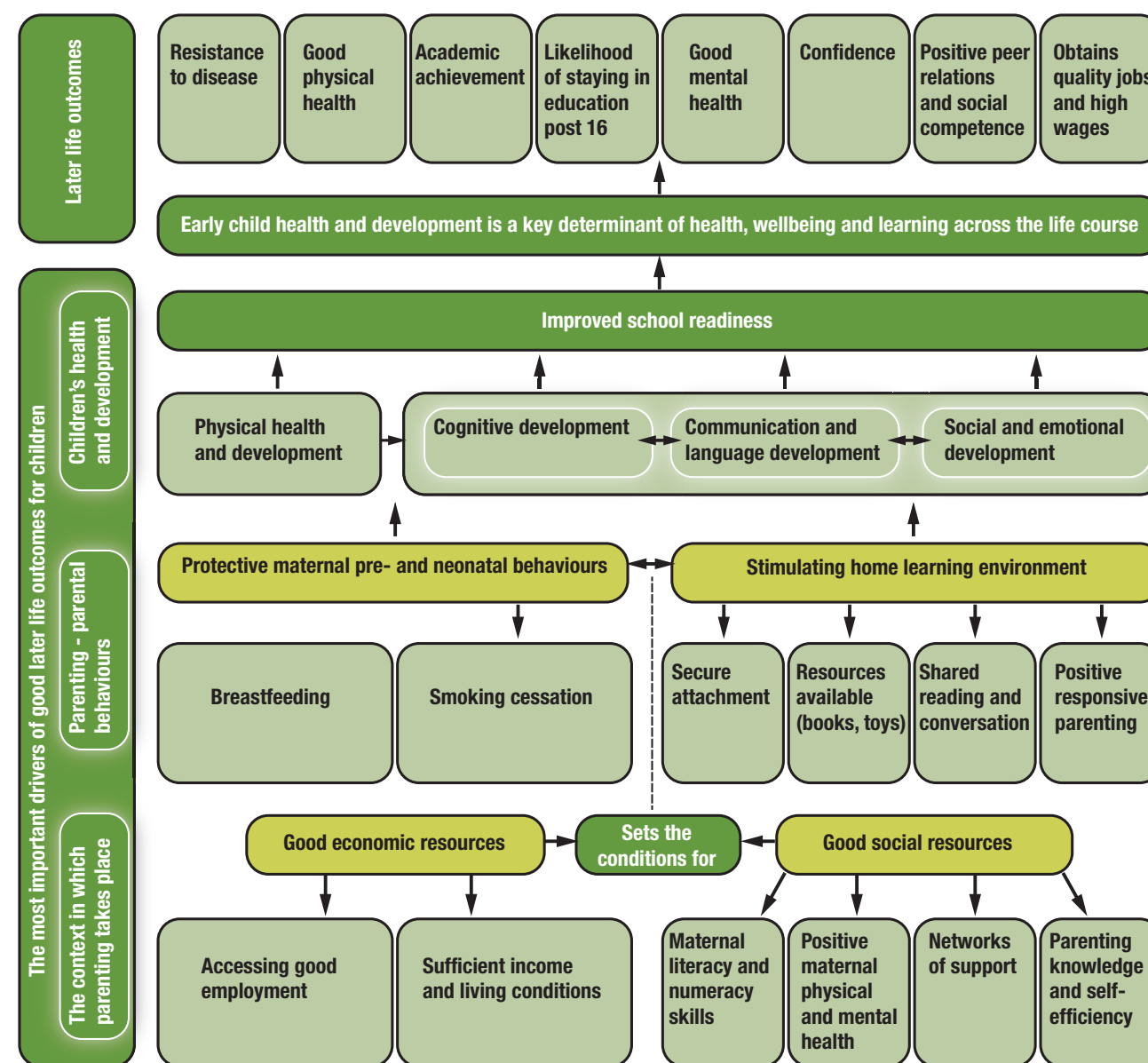
4.2 Ethnic minority and transient families

There is limited research evidence on the association between ethnicity and transitions. Some studies have found that pupils from a range of ethnic backgrounds have more transition concerns and adjustment problems than their peers (50, 60) but separating the impact of ethnicity from socioeconomic status is challenging (27).

Pupils who move schools outside of the normal school admission period are known to be more ethnically diverse than their age cohort as a whole (8). Additionally, traveller and Irish heritage, Gypsy and Roma children, young people and families, as well as children and young people of armed forces personnel, homeless children, and young people and families affected by family breakdown or domestic abuse, are more likely to move schools outside of normal times.

A disproportionate number of in-year school movers are also in the care system (8). These groups of children and young people are thus more likely to miss out on typical school transition initiatives, experience more curriculum and school discontinuities and have to change friends more regularly than most.

Poorer outcomes are most pronounced for those pupils who move school frequently. This is thought to be because in-year moves can cause disruption to learning and social relationships: they can prevent pupils from accessing high-performing schools that become fully-subscribed before the start of the school year; and because pupils who move in-year are more likely than average to have more challenging home environments and circumstances (8). Pupils also report the emotional toll that frequent moves have on them, which manifests as increased anxiety and feelings of anger and embarrassment, particularly if they perceive they have fallen behind their peers in terms of grades (8, 61).

Figure 4 – Ethnicity of pupils moving in-year, and all pupils

Non-standard admissions **All pupils**

Source:(8)
Children and young people living in areas with acute school place shortages, such as London, are also at increased risk of transition concerns as groups of friends are rarely able to transfer to new schools together (62). Research has also found that white children are more likely than their non-white peers to move to secondary school with most of their friends – a protective factor for smooth school transitions (16).

4.3 Children and young people with special educational needs (sen)

School transitions can be more stressful and demanding for children with SEN than for their peers because they often have to negotiate bigger changes during transition and often underestimate the size of the change and challenges ahead (14, 63, 64). Research also suggests that for children with autism spectrum conditions, a negative school transition can have long-lasting effects that are difficult to reverse (65).

Transition concerns and difficulties for pupils with SEN are thought to be attributed to factors including deficits in cognition, language and communication and social skills, which can make it particularly challenging to make new friends and have good relationships with teachers, as well as to the effects of medication, psychological impacts and lifestyle risk factors (9). The change from the child-centred environment of early years and primary school education to the less personal setting of secondary school where children have many teachers can be particularly challenging for pupils and can affect their sense of belonging and connectedness (66, 67), which is strongly associated with wellbeing (68-70). And for children moving to special provision, leaving their friends behind, as well as the acquisition of a new 'special' identify, can be difficult to come to terms with (71).

The Effective Pre-school, Primary and Secondary Education (EPPSE) 3–14 sub-study on school transitions also found that children with SEN were more likely to be bullied (37% out of 110 reporting to be bullied, compared with 25% of their peers without SEN), which is a key inhibitor of successful transitions (16). These findings are supported by other studies (66). Another study found that teachers reported pupils with SEN to react to experiences of stress differently to their peers (72). Students with SEN have more internalising behaviour, which is behaviour directed towards the self, such as social withdrawal or feelings of sadness (72). They also have more externalising difficulties, which are more observable behaviours, such as physical aggression (72).

Only 19% of children with SEN provision achieved a good level of development in the EYFS in 2013, compared with 66% of children with no identified SEN, or 60% of all pupils: an attainment gap of 47.1 percentage points. This indicates that children with SEN are less likely to be school ready and are thus at increased risk of having a poor school transition.

4.4 Lower ability pupils

Pupils with lower prior academic attainment are known to experience more stress and anxiety during school transitions than their more academically-able peers (14, 27, 28). Consequently, pupils with lower prior academic attainment have worse school, social and emotional adjustment during and after school transitions (14, 27).

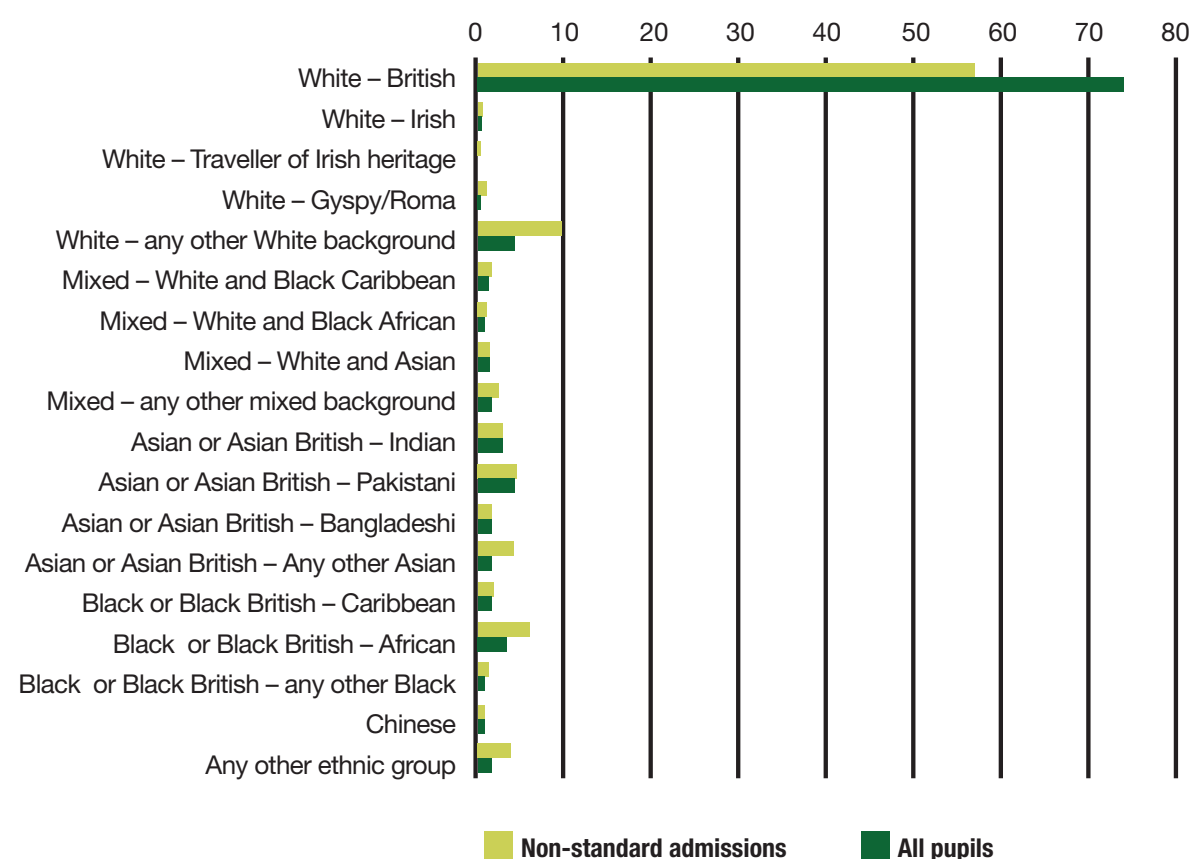## 4.5 Children with english as an additional language

Children with English as an additional language (EAL) are less likely to be school ready than those with English as their first language, and are thus at greater risk of experiencing poor school transitions. In 2013/14, 53% of children with EAL achieved a good level of development in the EYFS, compared with 63% of pupils with English as their first language (6). This indicates an attainment gap of 10.2 percentage points (6).

4.6 Children and young people with poor socio-emotional skills, low self-esteem or low confidence

Shy and withdrawn children are more likely to experience bullying in school, which is associated with lower self-esteem (73) and heightened anxiety during school transitions (7). Children with poor socio-emotional skills, low self-esteem or low self-confidence may be particularly vulnerable during transition due to a lack of skills that would otherwise provide them with stronger stress resilience to help them cope with new learning expectations and social relationships (4).

Competencies needed to ensure a successful home to school transition, such as turn-taking and the ability to respond appropriately to different situations, may be more difficult to develop for children who have had limited opportunities to socialise and regulate their emotions (4, 74). Experience of a poor home learning environment, for example, can limit such opportunities.

WHY ARE SCHOOL TRANSITIONS IMPORTANT FOR HEALTH? **5**

Summary of key effects of school transitions

Some pupils and groups of pupils are more likely to have poor school transitions because they are already vulnerable as a result of the accumulation of risk in their early experiences, and are thus more likely to experience one or more of the following key negative effects of poor school transitions:

- Increased stress, anxiety and feelings of loneliness
- Lower stress resilience
- Reduced confidence and self-esteem
- Lower academic attainment
- Conduct problems
- Not liking school and disengagement – shown by reporting not liking school or finding school a waste of time, or through behavioural changes (reduction in concentration and motivation, poor school attendance, frequent lateness and exclusions)

All of these effects are, in turn, associated with negative health outcomes, including mental health problems, increased risk of suicide and self-harm, risky health behaviours and reduced stress resilience, which are associated with a number of non-communicable diseases and premature mortality.

As vulnerable and disadvantaged pupils are at greater risk than others of experiencing poor transitions, it is likely that poor school transitions can further exacerbate health inequalities.

School transitions can negatively affect pupils' social, emotional and academic outcomes, as shown by lesser school engagement, lower academic attainment, reduced confidence and self-esteem, and increased anxiety, feelings of loneliness and conduct problems (21, 27, 29-31).

These often interrelated effects are, in turn, associated with adverse health outcomes.

These associations are shown in Figure 1 on page 5, and some of these links are investigated below.

5.1 Direct associations between school transitions and health outcomes

Stress resilience

School transitions can provide a key opportunity for children and young people to build stress resilience (4) – how susceptible people are to stress and how well they cope with it.

Concerns about school transitions are known to influence physical stress responses in pupils (36). A study exploring the association between school transitions and health outcomes found that levels of the stress hormone cortisol can be high up to six months before children start formal schooling. Cortisol levels can further increase at the time of starting school, but for most children levels drop significantly six months later, indicating a smooth transition and adaptation to the new school environment (36).

Children who are better able to focus their attention and inhibit impulsive behaviour when at school experience less of a stress response during the school transition. Short-term stress responses can have a positive effect on health by minimising the risk of catching the common cold and flu. Conversely, continued stress can have negative effects on health.

Vulnerable children for whom a new school environment may provide a social challenge, and more extrovert children who experience social isolation after starting school, have higher cortisol levels at six months further to starting school – indicating failure to adapt to the school environment – and are more likely to get ill with the common cold and flu during this time because their immune systems continue to be suppressed (36).

Pupils with a sustained high stress response are also more likely to have emotional symptoms, including anxiety and depression (29). For example, research has found that school and peer concerns have a significant influence on depression (7). Children and young people with a sustained high stress response are also at increased risk of developing a long-term chronic stress response, which is associated with a higher risk of cardiovascular disease, stroke, heart failure, kidney failure and heart attack in adulthood (35, 36).

Furthermore, recent research has shown that low stress resilience in adolescence is associated with depression and anxiety later in life, and an increased risk of suicide (32). It is also associated with increased risk of developing coronary heart disease (a CHD incidence rate per 1,000 person-years of 2.61, 1.97 and 1.59 for low, medium and high stress resilience respectively) (32). There is also evidence that low stress resilience can alter associations with other factors. For example, high intelligence is associated with lower depression and suicide risk but low stress resilience removes any benefit of high cognitive function (32).

5.2 Indirect associations between school transitions and health outcomes

School transitions are also related to noticeable changes in pupils' academic performance, engagement with school and attitudes to learning. Behavioural problems can also become evident after key school transitions. These transition effects are directly and indirectly associated with short- and long-term health outcomes.

Academic attainment

Associations with transitions

A post-transition 'dip' in academic attainment has been well documented (75). Poor school transitions are known to be associated with lower levels of attainment in some academic subjects (notably English, science and maths) (37, 38).

Research has also consistently shown that in-year movers tend to have lower prior attainment and achieve less well academically as a result of moving (8). Only 27% of pupils who move schools three times or more during their secondary school career achieved five A* to C grade GCSEs compared with the national average of 60%, and only 57% of pupils achieve level 4 or above in English and maths at Key Stage 2, while the national average is 80% (8).

West et al (2010) found that lower academic attainment at ages 15 and 18/19 was linked to increased pupil concerns about workload and having different teachers at school transition, and to a lesser extent relationships with other pupils (7). But a series of studies by Galton et al found that the often-seen attainment dip post-transition to school was more closely associated with a simultaneous dip in school enjoyment and motivation than with pupil anxiety (21, 51). These studies suggest that mixed school transition initiatives that address pupil anxiety and relationships while also promoting pupils' enjoyment of school and motivation are likely to be the most successful.

There is, however, evidence that pupil IQ strongly predicts academic attainment further to school transitions (31). The relationship between the effects of school transitions and academic attainment is therefore bidirectional: poor school transitions predict academic attainment and academic attainment predicts pupils' experience of school transitions.

Regardless of the direction of the association, it is clear that smooth and successful school transitions are integral to ensuring that every child has the best start in life. A positive school transition can help prevent or reverse the compounding effects of educational inequalities over time.

Associations with health

The empirical link between education and health is firmly established (76). In the long-term, poor educational outcomes – including failure to complete school or low academic attainment – is associated with increased welfare dependence (77), lower skilled jobs with lower rates of pay (78), unemployment, mortality and poorer health outcomes (79-81). Poor academic attainment in primary and secondary school, and in particular a lack of progress during the first few years of secondary school, are also strong risk factors for teenage pregnancies (82).

Unsurprisingly, evidence suggests that higher school attainment correlates with a greater likelihood of finding 'good work' (81), which includes higher-paying, stable employment. Generally, people with higher levels of education are more likely to be in good work and to be paid more than those who leave school with low-level or no qualifications (81).

Good work enables people to afford a healthier lifestyle. For example, with more money, a person or family can afford to buy goods or services that support health, such as fruit and vegetables, fuel to heat the home and gym membership. People with higher qualifications tend to be healthier and in turn, model healthy behaviour for their children (83).

The stress associated with low or no income, or poor quality work, including unstable or antisocial working hours, can result in biochemical changes in the body that is linked to poor physical and mental health (84). People on low incomes are also more likely to adopt unhealthy behaviours, such as smoking, drinking and drug use - often linked to increased stress - and to use fewer preventative medical appointments, such as cancer screening (85).

Spending time not in employment, education or training (NEET) has also been shown to have a detrimental effect on physical and mental health, including risk of depression, suicide and premature death. The link between time spent NEET and poor health is partly due to an increased likelihood of unemployment, low wages, or low quality work later on in life. Being NEET can also increase the likelihood of engaging in unhealthy behaviours such as alcohol and drug misuse and smoking, as well as involvement in crime (86).

School disengagement

Associations with transitions

Disengagement from school and learning is a known adverse effect of poor school transitions (17, 24). For example, one study found that pupils who report feeling concerned during times of transition are more likely to report not liking school and feeling lonely at school (31). Pupils may feel a lack of control and belonging during and post-transition, and feel anxious about being less socially and academically able than their peers, resulting in disengagement from school (19). Falling behind in the core skills of language, literacy and numeracy can also make children feel disengaged from school and learning (87).

Pupils show disengagement from school and learning either by reporting that they do not like school or find it a waste of time, or that they feel lonely; or through behavioural changes including reductions in concentration and motivation, poor school attendance, frequent lateness and exclusions (24, 29, 88).

Children from poorer backgrounds are known to be at greater risk of school disengagement than their better-off peers, which is shown through rates of exclusions. Pupils eligible for free school meals are nearly three and four times more likely to be temporarily and permanently excluded, respectively, than their peers. There is also a strong negative linear association between persistent pupil absence and level of income deprivation affecting the family (see Figure 5).

For further information on the links between times spent NEET and health outcomes, see: See Allen, M. (2014) Reducing the number of young people not in employment, education or training (NEET), IHE.

Figure 5

Pupil absence in schools by income deprivation affecting children index (IDACI), 2012/13, six half terms

INCOME DEPRIVATION AFFECTING CHILDREN INDICES
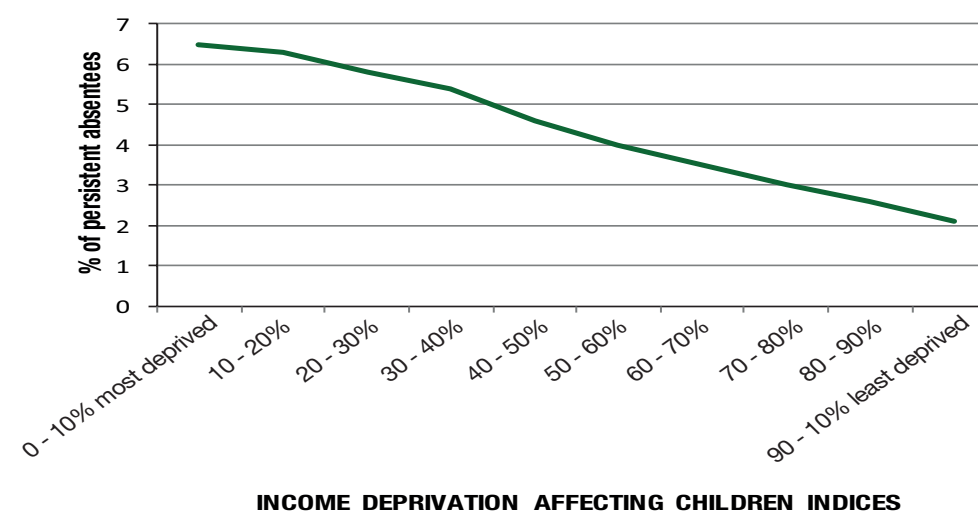
Source: School census, DfE

Persistent unauthorised school absence is similarly consistently higher among children eligible for free school meals than their peers (11.9% and 8% respectively across all schools) (see figure 6).

Figure 6

Characteristics of persistent absentees (unauthorised absence) – Free school meals
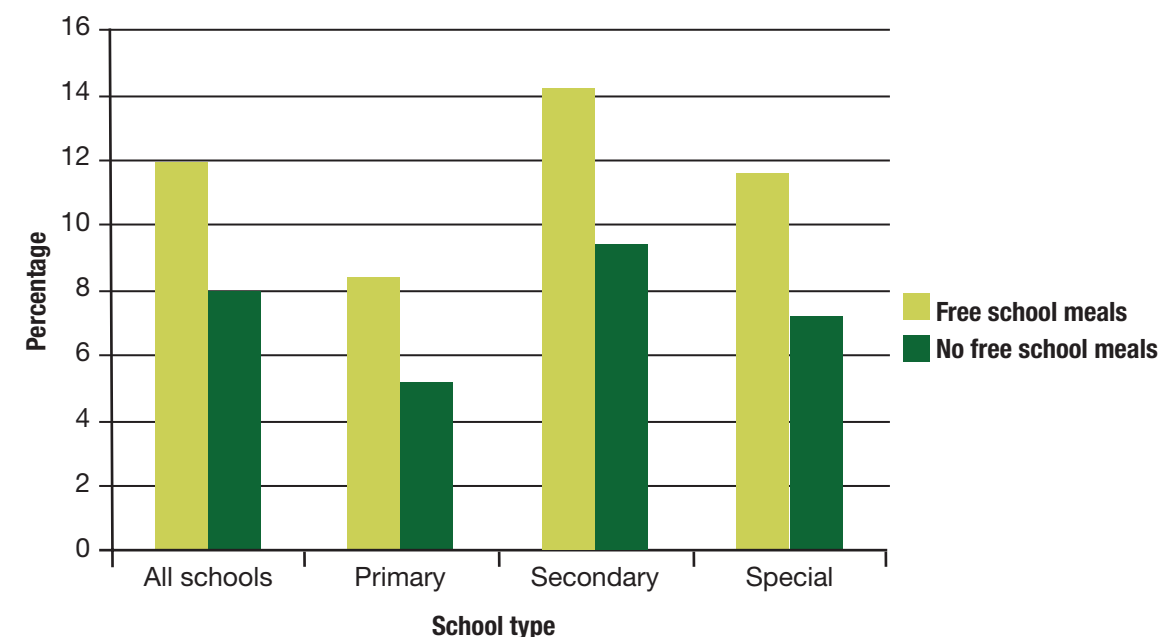
Source: school census, DfE

Traveller and Irish heritage, and Gypsy and Roma pupils, are also more persistently absent from school than pupils from all other backgrounds (89). The overall absence rates for Traveller of Irish Heritage and Gypsy /Roma ethnic groups are 21.4 per cent and 15.3 per cent respectively (89) (see figure 7).

Figure 7

Characteristics of persistent absentees (unauthorised absence) – ethnic background

Source: School census, DfE

Children and young people with SEN are also slightly more likely to be persistently absent from secondary school (10.8% with SEN, 10.1% no SEN), but are less likely to be frequently absent than their peers in primary school and in special schools. Children with English as an additional language are also slightly more likely to be persistently absent from primary and secondary schools compared with their peers – although not from special schools (see figure 8).
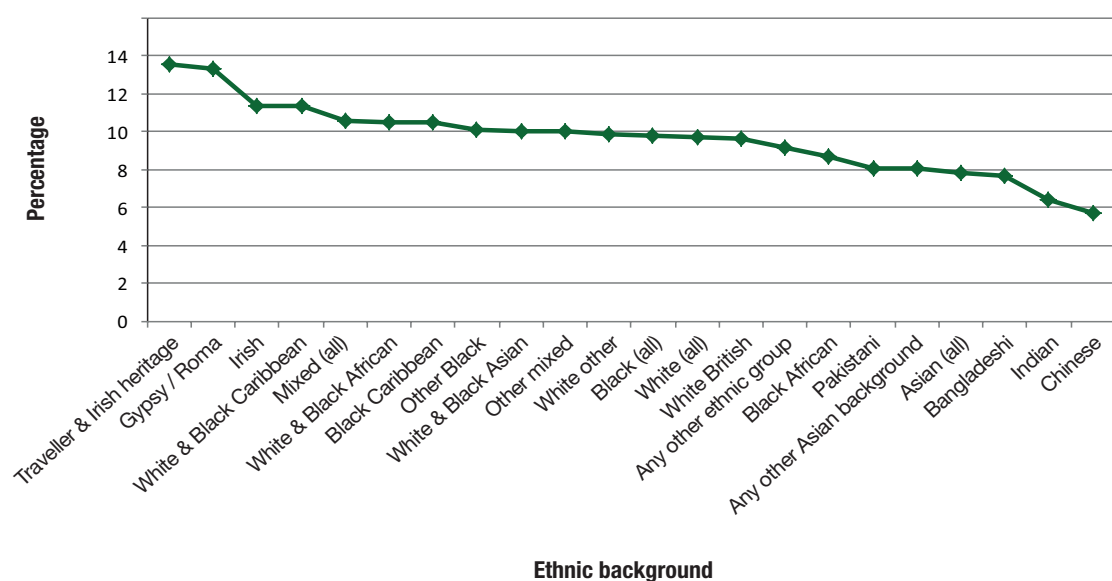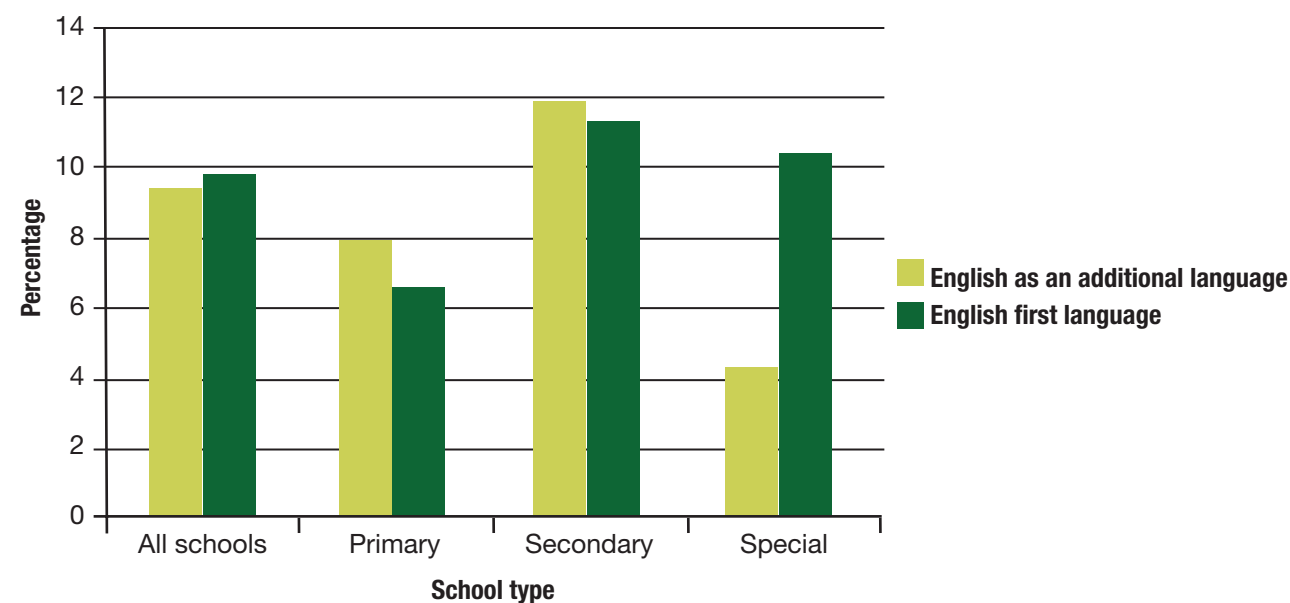
Figure 8

Characteristics of persistent absentees (unauthorised absence) – English as an additional language

Source: School Census, DfE

Pupils with persistently poor school attendance are unlikely to succeed academically and are seven times more likely than their peers to not be in education, employment or training (NEET) at the age of 16 (90).

Associations with health

School disengagement is associated with suicide, suicide risk and self-harm, and risky health behaviours, as well as with poor academic attainment and difficulties finding quality work, which are empirically linked to health. These associations are discussed below.

Depression, suicide, suicide risk and self-harm

Being engaged with and liking school is associated with good mental health and wellbeing (3, 91, 92). Conversely, disengagement with school and learning is linked to poor mental health.

A study by West et al (2010) found that school disengagement at age 11 is associated with increased odds of depression at age 15 (7). Other research has found that attempted suicide, suicide risk and self-harm are more likely among pupils with low school engagement ('don't like school', 'school a waste of time'). For example, one study found that for each standard deviation change in engagement, pupils have a 15–18% increased likelihood of self-harm, suicide and attempted suicide (93).

Mental health issues are also strongly associated with previous school avoidance. There is evidence that frequently missing school is associated with a higher prevalence of mental health problems later in life (94). Poor school attendance early in a child's life is a significant predictor of eventually dropping out of school early (95). Research suggests that most students who drop out of school are expressing an extreme form of disengagement from school that often follows other indicators of learning withdrawal such as poor attendance, and unsuccessful school experiences such as academic or behavioural difficulties (95) – known effects of poor school transitions.

Mental health issues and school absenteeism influence each other over time (96, 97). Therefore, national and local efforts to address the social determinants of mental health, such as poor housing and poverty, as well as inequalities in exposure and vulnerability to unfavourable social, economic and environmental conditions, may help to prevent the emergence of persistent absenteeism. Similarly, working to help students who are frequently absent from school to improve their engagement with and enjoyment of school may help improve emotional wellbeing (98).

Risky healthy behaviours

There are links between school disengagement (as shown by school absence) and smoking, drinking and drug use, as well as a decline in self-reported physical activity.

In line with previous years, the latest survey on smoking, drinking and drug use among young people in England found that pupils who reported having ever truanted from school or having been excluded were more likely to report frequent drug use than those who reported that they never truanted or been expelled (10% and 1% respectively). They were also three times more likely to smoke regularly and over twice as likely to have drunk alcohol in the past week. Similarly, pupils who reported that they had ever truanted or been excluded were more likely than those who had never skipped school sessions or been expelled to have taken Class A drugs in the last year (8% and 1% respectively) (33). People who had been excluded from school in the past year were almost three times more likely to smoke regularly (33). Another study found that 11–14 year olds who did not like school were twice as likely to have drunk alcohol than those who enjoyed school (99).

Frequently drinking alcohol is a strong predictor of truancy, but truancy also predicts taking up drinking among young people (although the link is less strong in this direction) (100). The association between school disengagement and risky lifestyle behaviours may also be because of a rejection of school values or because of an increase in unsupervised time.

Risky health behaviours, including smoking, alcohol consumption and drug use, are associated with poor mental and physical health and an increased risk of early death from some of the leading causes of premature mortality, including cancer, cardiovascular disease and cirrhosis.

A recent study also found that children's self-reported physical activity behaviour declines over the period of school transitions, and that the transition from primary to secondary school itself is a factor in these declines (34). The study suggests that learning environments may not be meeting the needs of children as they develop, with a lack of opportunities for physical activity (34). A lack of physical activity is associated with increased overweight and obesity, which, in turn, is associated with a number of adverse mental and physical long-term health outcomes, including depression, diabetes and fatty non-alcoholic liver disease (see the supporting evidence review: Roberts, J. (2015) Social inequalities in the leading causes of early death: A life course approach. London, IHE).

Academic attainment and finding quality work

An association between school transitions and poor academic attainment, via school disengagement, has also been identified in the literature. Being engaged with school and learning is reciprocally associated with subsequent improved academic attainment (which is empirically linked to health), especially for boys (3). Pupils who report liking school at the start of Year 7 do better academically by the end of the school year (but good attainment at the start of Year 7 also influences whether or not pupils later report liking school) (3).

Although the link between transitions and academic attainment, via school disengagement, is not causal, we do know that the groups of children already vulnerable as a result of the accumulation of risk in their early experiences are at greatest risk of experiencing poor transitions and becoming disengaged from school, and are also more likely to have poor academic attainment and difficulties in securing quality work.

For example, disadvantaged pupils are 2.3 times more likely than children from high socioeconomic backgrounds to not achieve five or more GCSEs or equivalent at grades A*–C (41). It is thus not surprising that the likelihood of not being in education, employment or training (NEET) is also not equally distributed throughout society – those who are already facing disadvantage are more likely to become NEET (86).

A number of studies have also found that pupils with SEN or a disability have lower academic success compared to their peers (9). This is thought to be attributed to factors including deficits in cognition, language and communication, and social skills, as well as the effects of medication, psychological impacts and lifestyle risk factors, which can be compounded by poor school transitions (9). Compared with their peers, looked after children (LAC) similarly achieve considerably lower grades at both Key Stage 2 (just 54% of LAC achieve level 4 or above in English and maths, compared with 80% of all children), and at GCSE (only 24% of LAC achieve five or more GCSEs at A*–C or equivalent, including maths and English, compared with 60% of all children) (8).

Behavioural problems

Behavioural problems often become evident after key school transitions (101). Behavioural adjustment further to school transition is strongly predicted by child IQ and socioeconomic factors, including free-school meal eligibility (31).

Pupils with behavioural problems are more likely to get involved in physical fights, to play truant from school, and to take risks with their health and safety than those without (102). For example, studies suggest that early onset persistent conduct problems (from age 4) predict adolescent risk-taking behaviour (smoking, drug-taking and engaging in risky sexual behaviour) (103), which in turn predict adult conduct problems, health risk behaviours, depression and service use (104).

Conduct problems are also associated with school disengagement and school liking (29), and subsequently academic attainment, which impacts on lifelong health and wellbeing (29, 105-108).

6

SUPPORTING SMOOTH SCHOOL TRANSITIONS FOR HEALTH EQUITY

Markers of a smooth and successful school transition for children and young people include:

- development of new friendships

- not experiencing bullying

- improved self-esteem

- not feeling sad, afraid, worried or alone

- perceived security and sense of belonging and ease at school

- increased interest in school and learning (liking school)

- good attendance

- good classroom behaviour

- curriculum continuity

- academic attainment, as measured by school grades (16)

School transition interventions and strategies

As evidenced above, to help pupils have a smooth and successful school transition, interventions and strategies need to address more than the school transition process itself. To have the greatest impact, interventions and strategies need also to address and influence wider factors known to affect the success of school transitions, such as self-esteem, confidence, mental health, peer relationships and school readiness, as well as the effects of school transitions, including school disengagement.

Interventions and strategies therefore need to be implemented long before each key transition takes place, and at the earliest opportunity, to prevent accumulative risk. They also need to continue for some time after the transition itself has taken place.

HOME

PRE SCHOOL

PRIMARY

SECONDARY
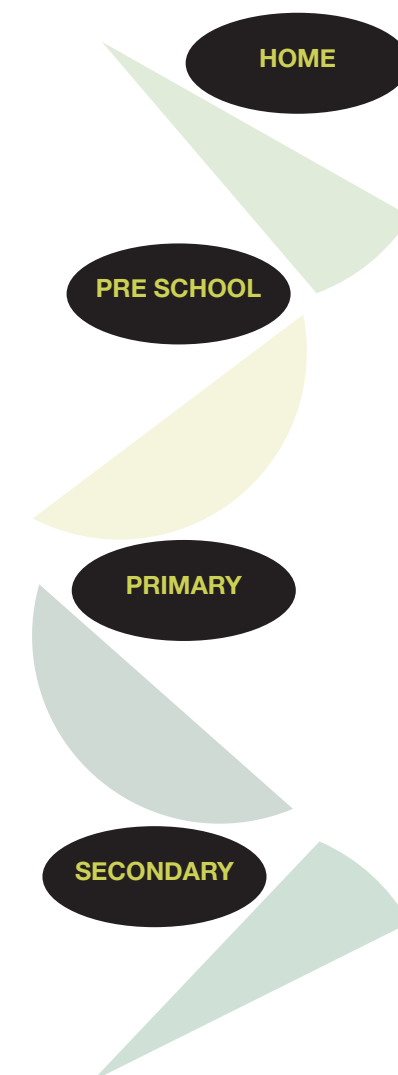
Recap – key factors affecting the success of school transitions

- The size of the change pupils experience
- Household socioeconomic status
- Parental characteristics, including parental support, strength of family relationships and level of mother's education and attitudes to learning
- Level of parental concerns regarding the school transition
- Pupil temperament, personality and IQ (whether or not shy or withdrawn, and pupils' prior attainment)
- Pupil ability to regulate emotions and use turn-taking behaviour
- Mental health
- Being school ready
- Confidence and self-esteem
- Bullying
- Perceived friendliness of older pupils
- Peer support and acceptance
- Having older siblings
- Quality of sleep and how physically active
- Anxieties about the unknown and higher expectations
- School performance
- Access to transition initiatives, support and advice
- Differences in admissions and transition practices between schools
- School size
- Extent to which wider social determinants are addressed and the effectiveness of strategies

A school transition programme or strategy for pupils and their families is typically defined as such if it impacts on the school transition itself. This can include programmes or strategies that encourage familiarity with the new school environment and curriculum continuity, such as transition bridging units – projects started at primary school and finished at secondary school, to promote continuity – which have been found to be particularly effective at encouraging continuity (109, 110). However, interventions and strategies that positively influence both factors that affect the success of school transitions and the effects of school transition can also impact school transitions.

Overall, good school transition programmes have been linked to better outcomes, particularly for at-risk groups (37, 38), which means that they have a role to play in reducing health inequalities. School transition interventions and strategies must therefore be universal but with a scale and intensity that is proportionate to the level of disadvantage – known as proportionate universalism. We therefore advocate a 'proportionate universalist' approach to school transitions. This means adopting a universal approach to mitigate all pupil risk of experiencing poor school transitions, but with a particular focus on disadvantaged groups.

Recap – key effects of school transitions

School transitions can be both a threat and opportunity for pupils, particularly vulnerable or disadvantaged pupils. Key negative effects include:

- Increased stress, anxiety and feelings of loneliness
- Lower stress resilience
- Reduced confidence and self-esteem
- Lower academic attainment
- Conduct problems
- Not liking school and disengagement – shown by reporting not liking school or finding school a waste of time, or through behavioural changes (reduction in concentration and motivation, poor school attendance, frequent lateness and exclusions)

Although larger-scale studies are needed to detect school-level policy differences relating to transition success, smaller studies have identified a number of ways that schools, parents/carers, and other sectors, including health, can help to mitigate the risk of experiencing poor school transitions and to ensure a smooth transition. These are discussed in turn below.

6.1 School transition interventions: the role of formal schooling

The connection of children, young people and their parents or carers with their school and school environment is known to have a direct, positive effect on health (111-113). Schools are therefore promising sites for effective transition interventions.

Interventions/strategies prior to the school transition

Before the home to school transition takes place, primary schools need to work closely with early years services, such as children's centres, to ensure that relevant information about at-risk pupils and their backgrounds, including information about their home learning environment, is flagged and shared. This will enable primary schools to plan and implement targeted or additional support for vulnerable or disadvantaged pupils.

Similarly, primary and secondary schools should seek to effectively share background and personal characteristic information about pupils at risk of experiencing poor school transitions. A recent study found that when primary schools

alert secondary schools to future pupils' strengths and weaknesses, there are small but significant benefits for pupils' future academic attainment (14). Secondary schools should ideally receive information from primary schools prior to the summer holiday. Secondary schools can then put support in place for pupils with additional needs, such as those with social needs or anxieties, or who have had prior experience of bullying (14).

Measurement tool – the school transition and adjustment research study (STARS)

The recent School Transitions and Adjustment Research Study (STARS) worked with ten secondary schools to explore how pupils, parents/carers and teachers view the transition to secondary school.

STARS reported two main areas of school transition success: school adjustment, as shown by good attainment, attendance and classroom behaviour, and social and emotional adjustment, as shown by pupils reporting that they liked school and did not feel lonely there.

The team developed a simple four-item questionnaire, which has been found to predict which pupils are at risk of experiencing poor school transitions. Year 6 primary school teachers can provide reliable predictive information about their pupils using this measurement tool, over and above routine information available from school records (i.e. Key Stage 2 test results, socioeconomic status measured by eligibility for free school meals, and special educational needs). Teachers are asked to consider whether each child is likely to settle in well at secondary school academically, socially with peers, socially with teachers, and to the new routine, using a 1–5 scale. A score of 12 or below might indicate increased risk of experiencing poor school transitions, and thus which pupils might need extra monitoring to check how they settle in to secondary school.

This simple measure can help to ensure effective communication between school settings. It can also provide secondary (or other) schools with useful information about pupils' strengths and weaknesses, as well as information about which individual pupils might be vulnerable and who might therefore benefit from additional support.

As parents' and carers' experiences of school transitions impact pupils' experiences, schools should help facilitate the involvement of parents and carers in their children's learning by developing positive relationships with families before school starts, as well as during and after the transition process (114).

For children with SEN, the presence of educational psychologists to support pupils and families before, during and after school transitions can help facilitate communication with schools, and minimise the perceived size of the change, as well as challenges ahead (71).

The school transition itself
Universal approaches

An evaluation of pilots to improve primary and secondary school transitions found that it was not so much the precise model that affects the smooth running and success of the projects, but other factors and processes, including the enthusiasm and commitment of staff, cross-sector liaison and interchange, effective communication, and the ability of the pilots to be flexible and responsive to the needs of the community (37).

Familiarisation lessons, open days, school visits and one-to-one support can also help children and young people gradually adjust to the new school environment, and help ease fears of the unknown (16), particularly as transitions are known to be harder the greater the change (4).

Other transition initiatives include relaxing rules in the first few weeks, information booklets, meetings with staff and other pupils, showing students examples of work and sample lessons, and providing information, encouragement, support and assistance with lessons and homework (16). Children who feel they received a lot of help and support from their secondary school in settling in (using a combination of the above initiatives) report more successful school transitions (16). Perceived support from secondary schools is an important driver of successful transitions for pupils (16).

The recent STARS study (see above box) found that a number of school transition strategies appear to have small but significant benefits for pupils' future academic attainment. This includes induction arrangements, including staggered lunch breaks, and reflective diaries to help students become familiar with their learning styles. These have been shown to be beneficial, especially if these continue for a while beyond the first week (14), helping to minimise discontinuities for pupils.

However, research has found mixed results for teaching pupils in academic ability groups. The STAR study found small benefits (14). Yet other studies have found this strategy to make very little difference to learning outcomes (115), particularly as it promotes an exaggerated sense of within-group homogeneity in teachers' minds (116).

Other strategies to help ensure a smooth school transition include: schools presenting a picture of the 'next year at school', with the aim of encouraging pupils to feel excited about the change (75), developing structures that allow pupils to ask about things they do not understand, and providing flexible teaching that takes account of differences in pupils' preferred learning styles (75).

To help bridge the gap between different learning environments, a focus on the whole-child – for example, asking children about their interests and family, and not just their academic knowledge – can help children feel more at ease, as can continuing activities and routines from the EYFS at Key Stage 1 (24). Teachers and support staff therefore need to familiarise themselves with pre-school curriculums and aim to continue some of the activities and routines from the EYFS into Key Stage 1 (24).

Longitudinal studies from the US have found that school connectedness is protective against participation in health-risk behaviours (including substance and alcohol misuse, early sexual initiation and violence) (111). There is evidence that school connectedness can be promoted in schools through extra-curricular activities, positive classroom strategies and tolerant disciplinary policies (117).

Schools should also look to implement effective anti-bullying strategies, particularly for those pupils identified as most at-risk of being a victim of bullying – a key inhibitor of smooth school transitions – including children with SEN or a disability, and shy and withdrawn pupils. A systematic review of school bullying interventions found that intensive programmes, and programmes including parent meetings, firm disciplinary methods and improved playground supervision, were most effective (118). Anti-bullying programmes can return £15 for every £1 spent in the long-run in terms of higher earnings, productivity and public sector revenue (119).

Working with parents and carers

Parents and carers can also influence their children's experience of school transitions. As previously reported, pupils whose parents or carers have concerns regarding school transitions are more likely to have a difficult school transition themselves. Schools therefore need to work with parents and carers before, during and after school transitions.

The anxiety and stress experienced by some parents and carers, particularly at-risk families, during key school transitions, can be minimised through effective interventions and strategies.

Familiarisation lessons, open days and orientation sessions can enable parents and carers to meet each other and familiarise themselves with the school environment, admissions process and new expectations. These need to be flexible – for example, offered before or after the working day – to accommodate working parents and large families (24).

Schools that offer bespoke forms of support groups, such as literacy classes and parenting skill support, are also more likely to engage parents and carers from certain ethnic and social groups with school and their children's learning (57).

Schools also need to be mindful of the impact that staggered school start times and phasing-in periods can have on working parents and large families. To help parents and carers arrange work or child care, appropriate notification and flexibility need to be offered (24). In turn, employers should aim to promote smooth school transitions through flexible working so that parents and carers can attend school familiarisation programmes and work around phasing-in periods (24). Schools and/or transition programmes should also ensure adequate provision of crèches and translation services for parents and carers (24).

Targeted approaches

For those pupils identified as at increased risk of experiencing poor school transitions, a number of targeted strategies have been shown to be effective at improving outcomes for disadvantaged or vulnerable children and young people, and in reducing inequalities in outcomes.

For those children who have already started to fall behind their peers academically (that is, for children not achieving level 4 in English by the end of Key Stage 2), one-to-one and small group tuition can help struggling pupils to catch up with their peers (120). One-to-one interventions have a slightly higher average impact and a more secure evidence base, although they are generally more costly than group interventions (120).

A review of literacy catch-up projects at the transition from primary to secondary school also found that reading comprehension approaches tend to be more effective for lower attaining, older readers than phonics or oral language approaches (120). However, a combination of approaches using age-appropriate materials delivered by trained professionals is likely to be most effective (120). Summer schools can improve reading ability, but are less cost effective than one-to-one and group interventions delivered in schools (120).

Evaluation – Suffolk Include, Catch 22

Suffolk Include, run by Catch 22 in Ipswich, Lowestoft and Bury St Edmunds, are independent alternative education schools that offer full-time, alternative primary education to 5–11 year old pupils with behavioural, emotional and social difficulties, or autistic spectrum disorders, and who have been excluded from their previous schools. The aim of this educational programme, which uses tailored in-school support designed to re-engage learners in education, is for pupils to be reintegrated into their mainstream primary school after two to three terms, and to have increased school attainment and fewer exclusions.

In 2013, Ofsted rated Suffolk Include as 'good', citing that pupils were well prepared for transfer to their primary schools, and that a strong emphasis on literacy, numeracy and personal, social and health education ensured good behaviour, good attendance and good personal development.

For poorer pupils, it has also been suggested that the transition from primary to secondary school can be improved by the use of family liaison officers, and closer working between primary and secondary schools (121).

Research has found that children with SEN are likely to benefit from personalised interventions tailored to their specific needs (110). This is because universal interventions with the aim of reducing anxiety during the primary to secondary school transition were found to be effective for typically developing pupils, but no approaches were associated with changes in anxiety among pupils with SEN (110).

Evaluation – SHINE in secondaries

SHINE in Secondaries is a Saturday school transition programme, which targets disadvantaged and underachieving pupils in year 7 to support literacy, numeracy, the development of good social networks, social skills and improved self-confidence in the transition between primary and secondary schools.

The programme is currently being independently evaluated by Durham University, although there is evidence of promise from the 2011 review of Shine on Saturdays by the NFER. This found that: just over half of the pupils receiving the intervention progressed by at least two sub-levels in literacy and just under half progressed by at least two sub-levels in numeracy, and around one in 14 progressed substantially (four or more sub levels) in literacy. Furthermore, about one in 13 progressed substantially in numeracy. Overall, SHINE pupils were progressing, on average, with national expectations at Key Stage 2. Pupils also reported increased confidence, self-esteem and aspirations while parents reported greater engagement with their children's learning during times of transition (122, 123).

Effective practices during school transitions for pupils with low emotional resilience include:

- maintaining collaboration pre- and post- school transfer

- prioritising and investing in school visits and induction programmes

- facilitating effective communication

- ensuring schools have clear roles and responsibilities that are supported by senior management

- disseminating good practice (124).

Interventions/strategies post-school transition

Vulnerable and disadvantaged pupils are at greater risk of having a sustained stress response that extends beyond the first term after starting a new school, and are less likely to adjust well to their new school environment, than other pupils. It is therefore imperative that school transition interventions and strategies are continued so that they address any negative effects of school transitions.

Pupils' engagement with school is most effectively improved by creating an environment that promotes children's sense of belonging and connections with the school and teachers (125) or by implementing strategies found to best re-engage the disengaged. A review of school programmes to engage pupils at risk of disconnection from learning found that effective elements include: one-to-one support; personalised and flexible provision; small class sizes with high adult to student ratio; and practical or vocational elements and employer engagement (126).

EVALUATION – IT'S NOT OK!
(Centre for analysis of youth transitions)

It's not OK! is a group of violence-prevention interventions (addressing alcohol, arson, anti-social behaviour, racism, teenage relationships and domestic violence, homophobic bullying, guns and gangs and road safety) that are delivered by teachers using lesson plans, an interactive CD and a topical bespoke film or theatre play. Themes of each of the interventions are mapped against the curriculum of a chosen subject, such as PSHE (personal, social and health education) or English.

The intervention has a dual aim of changing young people's attitudes towards difficult social issues, as well as increasing academic attainment by supporting the national curriculum so that pupils become more engaged with learning.

Evidence from a number of schools shows that the intervention raises awareness of problematic issues and their consequences, and pupils develop more cautious attitudes towards some of these issues. There is also evidence that the intervention is associated with students exceeding their predicted grades in GCSE coursework in English. In one school, the average increase was 1.25 grades, while in another, 80% of pupils exceeded their predicted grades, and 36% exceeded them by two levels or more. A third school reported that the proportion of young people achieving grade C or above in KS3 English coursework increased from 23% to 83%. Students engaged in the 'Terriers' intervention, which addresses guns and gangs, were also found to exhibit higher effort and better behaviour than they did prior to the intervention (127).

As previously discussed, offering extra-curricular activities can help pupils to make new friends and feel more bonded with their school. Mental health support and counselling should also be offered within schools.

6.2 School transition interventions – parents and carers

Parents and carers can also help to ensure that their children have smooth transitions.

Early education provides children with the opportunity to develop positive relationships during the preschool years, increasing their likelihood of having a smooth home to school transition, and subsequent social and academic outcomes (128). Parents and carers should therefore be supported to enrol their children with quality early education, to engage with their children's learning, and primary and secondary schools, and, where possible, to attend familiarisation or induction events.

6.3 School transition interventions – health and early years services
Before school transitions

Children's long-term success in school stems from their learning experiences before formal schooling (129). Research indicates that all children, but particularly children from disadvantaged backgrounds, benefit from high quality early education and childcare (130, 131). Benefits include improved school readiness, future academic attainment and productivity (130), higher levels of employment and less involvement in crime (132).

To prevent school transitions from compounding inequalities, all children, but particularly those at increased risk of poor physical, cognitive, communication and language, and social and emotional development, should have access to quality early education, and their parents/carers need to be supported to provide a safe, healthy and active learning environment, with positive parenting. As social and financial benefits will be felt by education, health and social care, a shared budget can help achieve this. The IHE (2012) paper *An Equal Start* sets out the most important outcomes childhood services should be striving for in order to give all children positive early-years experiences. It also calls for a renewed focus on supporting good parenting and the environment in which parents live and work (55).

Progressive universal interventions in the early years to improve readiness for the home to school transition can reduce absolute socioeconomic inequalities in poor academic attainment between the least and most disadvantaged groups by 15.7% (effect size 0.8 SD) (41).

Interventions to improve the developmental skills of disadvantaged pupils at the home to school transition are also estimated to reduce the proportion of young people with poor educational outcomes (133) at Key Stage 4 by 4.5%, which is equivalent to just under 13,000 more children achieving five or more GCSEs or equivalent at grade A*–C (133).

Incorporating universal provision can simultaneously raise the academic attainment for the entire population by 5% (effect size 0.2 SD) (41). A number of early education and home visiting programmes have been evaluated by the Early Intervention Foundation (134) and the Social Research Unit (135), with the Family Nurse Partnership (FNP) (39) and the High Scope Preschool/Perry Preschool programme (40, 41) found to be consistently effective at improving child outcomes, while also having a good rate of return on investment *(see box below)*.

EVALUATION – Early years – programme impact

A. Family Nurse Partnership programme: Benefits minus costs = £7,132. This is equivalent to a benefit-cost ratio of 1.94, with a rate of return on investment of 6% (135).

B. High Scope Preschool/Perry Preschool programme: Benefits minus costs = £8,205. This is equivalent to a benefit-cost ratio of 1.61, and a rate of return on investment of 5% (135).

A large effect size for cognitive development has also been demonstrated in randomised trials of the High Scope/Perry Preschool (effect size 0.97) (40, 41).

C. Early childhood education: Benefits minus costs = £5,384 (estimate). This is equivalent to a benefit-cost ratio of 1.88 and a 6% return on investment. The risk of loss is only 2% (135).

Early years interventions have also been shown to have a higher rate of return per investment than late interventions (136). The annual expected rate of return on investment to be achieved by investments in early life is 10% (137) and the average economic benefit of early education programmes for low income 3 and 4 year olds is nearly 2.5 times the initial investment (with savings from improved educational attainment, reduced crime and fewer instances of child abuse and neglect) (138).

Intervention – Transition PEEP

The Parents Early Education Partnership (PEEP) Programme enables schools, pre-schools and day care settings to welcome new families. This is achieved through downloadable resources to help introduce parents/carers to the new activities and routines in the learning environments, including song, rhymes, stories, play, games and activities. It also provides an opportunity for parents to share ideas about how parents can support play and learning at home, which can enhance school readiness and the confidence of children and their families. The latest evaluation of PEEP (139) found that:

When the children were 1 year old, parents in the PEEP sub-group, who had attended at least one weekly PEEP session, reported a significantly enhanced view of their parent–child interaction.

When the children were 2 years old, parents in the PEEP sub-group were rated significantly higher on the quality of their care-giving environment. In addition, parents who lived in the PEEP catchment area were also rated significantly higher on the quality of their care-giving environment.

At the community level, children who had access to the PEEP programme also made significantly greater progress between the ages of 2 and 5 in a range of literacy and numeracy outcomes, including early numeracy skills between ages 2 and 3 (effect size 0.31), vocabulary (0.48), letter identification (0.47) and emergent writing skills (0.36) at ages 2 to 5, and vocabulary (0.22) and emergent writing skills (0.34) between the ages of 4 and 5.

For further information on how PEEP works, see: www.peep.org.uk

Early years services also provide an opportunity to reach and engage children and families with wider interventions and strategies that aim to impact on factors known to affect the success of school transitions. For example, children's centres can be a vehicle for social competence interventions that will help children to better navigate friendships and improve peer acceptance. Social competence interventions developed and implemented in partnership with educators and families, and that are embedded within play, have been found to be most effective at improving the peer play interactions of children with social competence difficulties (140). A review of parental involvement interventions to increase child attainment also found that despite limited evidence of effects, the most promising phase for parental intervention is pre-school and preparation for primary school (141).
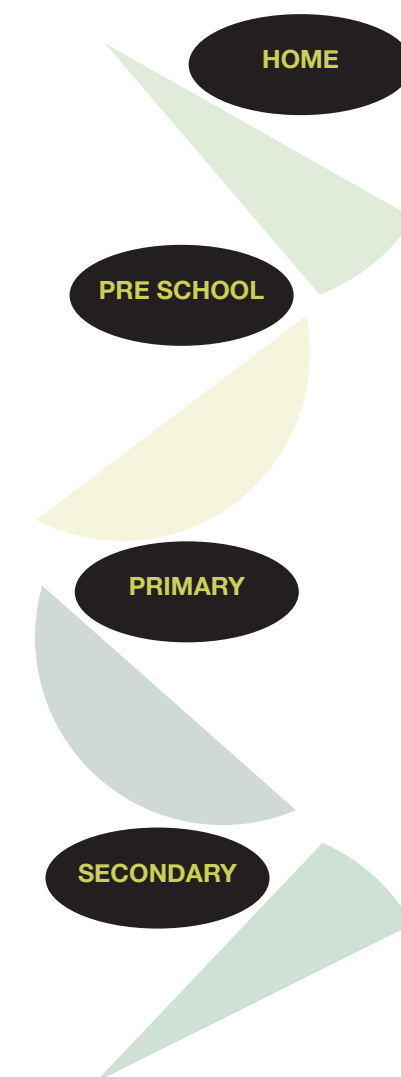
During and post-school transitions

Other sectors, including health, community adolescent mental health services (CAMHS), social care and voluntary services can help promote stronger relationships between schools and early education services by engaging in effective communication and sharing data. For example, parents and carers who have been engaged with early years services can find that much needed additional family support disappears once their children start school.

To prevent support 'cliff edges' and potential isolation, professionals need to ensure that they effectively share information about continuing support services with families and schools (1). Schools and early years services need to be well integrated to provide cohesive support to children and families.

Early years and linked health services can also connect with schools to share information about at-risk pupils and families, and encourage engagement with schools, through strategies such as improving parental skills – a strategy known to improve parents' involvement with school and their children's learning (142).

Local authorities can also help to support early years services and schools to reach and engage parents and carers to further involve them with their children's learning. For example, local authorities can commission training for staff to help them consult with and engage parents and carers, and can enable networks of schools and services to share information and develop good practice (143).

Wider services, such as the police, fire and rescue service, employers and the arts sector, such as theatres and museums, can also work with formal schooling, the community sector and pupils to address any negative effects of school transitions, particularly school engagement and liking of school, through making learning more hands-on (for example, see the It's not ok! programme evaluation above).

HOME

PRE SCHOOL

PRIMARY

SECONDARY

Recap – Summary of recommendations

- To have the greatest impact, school transition interventions and strategies need to address and influence wider factors affecting the school transition process, the transition process itself and the effects of school transitions.

- Interventions and strategies therefore need to be implemented before, during and after key school transitions.

- Progressive universal interventions in the early years (universal interventions but with a scale and intensity that is proportionate to the level of disadvantage), to improve 'school readiness' for the home to school transition, can reduce absolute socioeconomic inequalities in poor academic attainment between the least and most disadvantaged groups by 15.7% (effect size 0.8 SD). (41)

- Early years and education, social care and health services need to work closely together and involve parents and carers to support families and give every child the best start in life. This will involve focusing on children's physical, cognitive, communication and language, and social and emotional development, while simultaneously supporting parents and carers to provide a safe, healthy and active learning environment, with positive parenting. The education, health and care plan can help facilitate effective partnership working.

- Schools and early years services need to be well integrated to provide cohesive support to children and families. Services need to have open communication channels and share clear, accurate and timely information about identified at-risk pupils' backgrounds and personal characteristics, in order to plan and implement additional or targeted evidence-based school transition programmes and strategies.

- During the school transition, there are a number of evidence-based and effective strategies that can help to minimise the pre-transition concerns held by the majority of pupils and their families, with targeted support for those that need it the most.

- Post-transition, school engagement strategies can help to reverse or minimise the impact of a poor school transition, or to ensure a sustained, successful transition. There is evidence that incorporating practical or vocational elements into the curriculum can help to re-engage the disengaged, as can employer engagement, flexible provision, and more intensive one-to-one support.

- To help identify and develop the most effective school transition interventions and strategies, large-scale research should be commissioned to better understand the relative importance of each of the factors that predict a successful school transition, and to detect school-level policy differences. Further longitudinal research is also needed to provide evidence of the direct and indirect links between school transitions and health outcomes, and thus how school transitions can reduce or exacerbate health inequalities.

FURTHER RESEARCH

7

Much of the literature focuses on the experience of the primary–secondary transition. Further research is therefore needed on children's experiences of the transition from home to school, and the prevalence of in-year transfers and its impact on children, young people and families, particularly those at increased risk of experiencing poor school transitions.

There is also a dearth of published research on the relative importance of the factors that predict a successful transition, and the direct and indirect links between school transitions and health outcomes. For example, more work on the role of parents/carers and how they can support their children during times of transition would be beneficial. Further longitudinal research is needed in these areas to help identify, plan and implement the most effective school transition interventions and strategies, and to better understand how school transitions can reduce or exacerbate health inequalities.

Reviews of transition studies and programmes have highlighted that data on prior academic performance, and pre-transfer concerns and anxieties, are not always collected or controlled for in studies (7), and measures of transition success and study methodologies vary considerably (7, 21). This makes it difficult to provide generalisable recommendations (7). More longitudinal research using consistent methodologies and evaluations of school transition programmes is therefore recommended. There also needs to be a greater understanding of the skills and methods necessary to deliver and evaluate effective interventions.

Finally, where possible, information about evidence-based school transition programmes and strategies, as well as good practice, should be made widely available for schools, parents/carers and linked services.

HOME

PRE SCHOOL

PRIMARY

SECONDARY
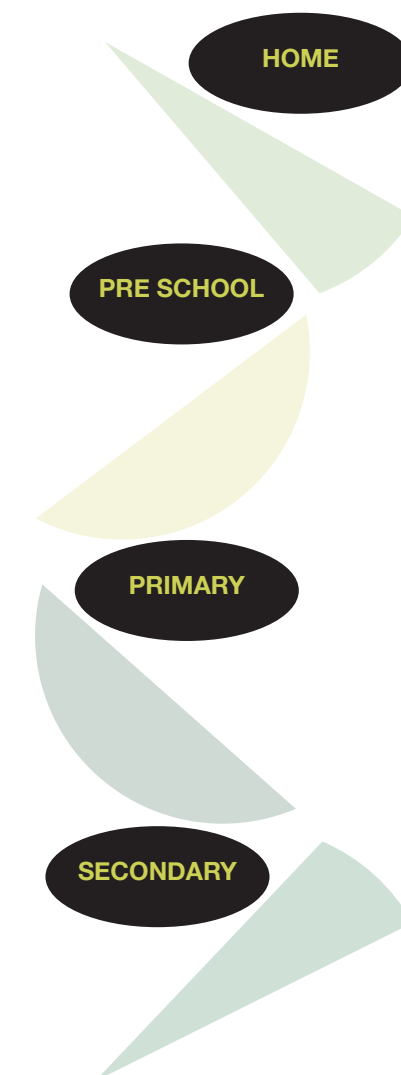
CONCLUSION

8

School transitions are stressful and challenging times for many children, young people and their families. For most pupils, pre-transition worries tend to diminish within the first year of moving school. But for pupils who are already vulnerable as a result of the accumulation of risk in their early experiences, concerns and difficulties are more likely to persist.

Pupils from disadvantaged backgrounds, with SEN, English as an additional language, low prior academic attainment, looked after children, and shy children with low confidence and self-esteem are most at risk of experiencing poor school transitions.

A range of personal, background, parental, school and community factors influences whether a pupil experiences a successful school transition. And a poor school transition can negatively affect pupils' social, emotional and academic outcomes in the short and long-term.

More research is needed on the relative importance of factors that predict school transitions, and on the direct and indirect links between school transitions and health outcomes.

Nevertheless, negative associations with health can be inferred by looking at what is known about the effects of school transitions. Adverse health outcomes of poor transitions might include an increased risk of mental health problems, suicide and self-harm, risky health behaviours, a range of diseases in adulthood and premature mortality.

As vulnerable and disadvantaged pupils are at greater risk of experiencing poor transitions, it is therefore likely that poor school transitions can further exacerbate health inequalities.

This review has drawn attention to evidence that background factors become less important during times of transition, which suggests that school transitions can be both a threat and opportunity, particularly for vulnerable or disadvantaged pupils.

Good school transition programmes have also been linked to better outcomes, particularly for at-risk groups, which mean that they have a role to play in reducing health inequalities.

Schools, parents and carers, in partnership with early years and linked services, need to work together, at the earliest possible opportunity, to address the factors that make some pupils and groups of pupils more vulnerable to poor school transitions. Interventions and strategies must also support pupils and their families during the transition itself and beyond, to reverse or minimise any adverse effects of school moves.

This review has identified a number of evidence-based and promising school transition interventions and strategies to be planned and implemented before, during and after transitions. These can help to ensure that all, and particularly disadvantaged and vulnerable pupils, adjust well to their new schools, thus laying the foundation for lifelong health and wellbeing, and improved health equity.

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REFERENCES

1. Sanders D, White, G., Burge, B., Sharp, C., Eames, A., McEune, R. and Grayson, H. A Study of the Transition from the Foundation Stage to Key Stage 1. London: DfES, 2005.

2. Shields P. 'School doesn't feel as much of a partnership': parents' perceptions of their children's transition from nursery school to Reception class. Early Years. 2009;29(3):237-48.

3. Rice F, Frederickson N, Seymour J. Assessing pupil concerns about transition to secondary school. The British journal of educational psychology. 2011;81(Pt 2):244-63.

4. Donkin A. Good quality parenting programmes and the home to school transition. London: UCL Institute of Health Equity, 2014.

5. Allen M. Building children and young people's resilience in schools. London: UCL Institute of Health Equity, 2014.

6. Whitaker A. Early Years Foundation Stage Profile results in England, 2013/14. London: Department for Education, 2014.

7. West P, Sweeting H, Young R. Transition matters: pupils' experiences of the primary-secondary school transition in the West of Scotland and consequences for well-being and attainment. Research Papers in Education. 2010;25(1):21-50.

8. Rodda M, Hallgarten J. and Freeman, J. Between the cracks: Exploring in-year admissions in schools in England. London: The RSA, 2013.

9. Vaz S, Parsons R, Falkmer T, Passmore AE, Falkmer M. The impact of personal background and school contextual factors on academic competence and mental health functioning across the primary-secondary school transition. PloS one. 2014;9(3):e89874.

10. Vaz S. Factors affecting student adjustment as they transition from primary to secondary school: a longitudinal investigation. Perth: Curtin University; 2010.

11. Davis CM, Graham, Kosky, Robert; O'Hanlon, Anne. Early Intervention in the Mental Health of Young People: A Literature Review. Bedford Park, South Australia: Australian Early Intervention Network for Mental Health in Young People, 2000.

12. Dotterer AM, McHale SM, Crouter AC. The Development and Correlates of Academic Interests from Childhood through Adolescence. Journal of educational psychology. 2009;101(2):509-19.

13. Schneider BH, Tomada G, Normand S, Tonci E, de Domini P. Social support as a predictor of school bonding and academic motivation following the transition to Italian middle school. Journal of Social and Personal Relationships. 2008;25(2):287-310.

14. Rice F, Frederickson N, Shelton KH, Riglin L. School Transition and Adjustment Research Study. (Forthcoming).

15. Ward R. Transfer from middle to secondary school: a New Zealand study. International Journal of Educational Research. 2000;33(4):365-74.

16. Evangelou M, Taggart, B., Sylva, K., Melhuish, E., Sammons, P. & Siraj-Blatchford, I. Effective Pre-school, Primary and Secondary Education 3-14 Project (EPPSE 3-14): What Makes a Successful Transition from Primary to Secondary School? Nottingham: DCSF Publications, 2008.

17. Hirsch BJ, DuBois DL. The relation of peer social support and psychological symptomatology during the transition to junior high school: a two-year longitudinal analysis. American journal of community psychology. 1992;20(3):333-47.

18. Boulton MJ, Don J, Boulton L. Predicting children's liking of school from their peer relationships. Soc Psychol Educ. 2011;14(4):489-501.

19. Holmstrom MR, Olofsson N, Asplund K, Kristiansen L. Transitions in the Swedish school system and the impact on student's positive self-reported-health. BMC public health. 2014;14:1045.

20. Langenkamp AG. Effects of Educational Transitions on Students' Academic Trajectory: A Life Course Perspective. Sociological Perspectives. 2011;54(4):497-520.

21. Galton M, Morrison I, Pell T. Transfer and transition in English schools: reviewing the evidence. International Journal of Educational Research. 2000;33(4):341-63.

22. Reay D, Lucey H. Identities in transition: anxiety and excitement in the move to secondary school. Oxford Review of Education. 2000;26(2):191-205.

23. Bloyce J, Frederickson N. Intervening to improve the transfer to secondary school. Educational Psychology in Practice. 2012;28(1):1-18.

24. Evans K, George, N., White, K., Sharp, C., Morris, M. and Marshall, H. Ensuring that all Children and Young People Make Sustained Progress and Remain Fully Engaged through all Transitions Between Key Stages. London: Centre for Excellence and Outcomes in Children and Young People's Services, 2010.

25. Miller A, Gouley KK, Shields A, Dickstein S, Seifer R, Magee KD, et al. Brief functional screening for transition difficulties prior to enrolment predicts socio-emotional competence and school adjustment in Head Start preschoolers. Early Child Development and Care. 2003;173(6):681-98.

26. McIntyre L, Eckert T, Fiese B, DiGennaro F, Wildenger L. Transition to Kindergarten: Family Experiences and Involvement. Early Childhood Educ J. 2007;35(1):83-8.

27. Anderson LW, Jacobs J, Schramm S, Splittgerber F. School transitions: beginning of the end or a new beginning? International Journal of Educational Research. 2000;33(4):325-39.

28. Chedzoy SM. Making the Move: Assessing Student Attitudes to Primary-Secondary School Transfer. Research in Education. 2005;74:22-35.

29. Riglin L, Frederickson N, Shelton KH, Rice F. A longitudinal study of psychological functioning and academic attainment at the transition to secondary school. Journal of Adolescence. 2013;36(3):507-17.

30. Benner AD, Graham S. The transition to high school as a developmental process among multiethnic urban youth. Child development. 2009;80(2):356-76.

31. Ng-Knight T, Shelton KH, Frederickson N, Rice F. Measuring successful school transitions. Forthcoming.

32. Bergh C, Udumyan R, Fall K, Almroth H, Montgomery S. Stress resilience and physical fitness in adolescence and risk of coronary heart disease in middle age. Heart. 2015.

33. Fuller E, Hawkins V. Smoking, Drinking and Drug Use Among Young People in England - 2013. London: Health & Social Care Information Centre, 2014.

34. Taylor IM, Spray CM, Pearson N. The influence of the physical education environment on children's well-being and physical activity across the transition from primary to secondary school. Journal of sport & exercise psychology. 2014;36(6):574-83.

35. Collingwood J. The Physical Effects of Long-Term Stress: PyschCentral; 2007 [30/03/2015]. Available from: http://psychcentral.com/lib/the-physical-effects-of-long-term-stress/000935.

36. Turner-Cobb JM, Rixon L, Jessop DS. Hypothalamic-pituitary-adrenal axis activity and upper respiratory tract infection in young children transitioning to primary school. Psychopharmacology. 2011;214(1):309-17.

37. Bryan RT, Morag. Evaluation of Pilots to Improve Primary to Secondary School Transitions. Glasgow: Scottish Executive Social Research, 2007.

38. Standing K, Judkins D, Keller B, Shimshak A. Early outcomes of the GEAR UP Program. Washington D.C.: U.S. Department of Education, 2008.

39. Early Intervention Foundation. Family Nurse Partnership [cited 2015 31/02]. Available from: http://www.eif.org.uk/wp-content/uploads/2014/07/FNP1.pdf.

40. Karoly LA, Kilburn R, Cannon JS. Early Childhood Interventions: Proven Results, Future Promise: RAND Corporation; 2006.

41. Chittleborough CR, Mittinty MN, Lawlor DA, Lynch JW. Effects of Simulated Interventions to Improve School Entry Academic Skills on Socioeconomic Inequalities in Educational Achievement. Child development. 2014;85(6):2247-62.

42. Dockett SP, B. Kearney, E. Hampshire, A. Mason, J. Schmied, V. Facilitating children's transition to school from families with complex support needs. Albury: Research Institute for Professional Practice, Learning and Education, 2011.

43. Giallo RT, Karli; Matthews, Jan; Kienhuis, Mandy. Making the Transition to Primary School: An Evaluation of a Transition Program for Parents. Australian Journal of Educational & Developmental Psychology. 2010;10:1-17.

44. Moffitt T, Caspi A, Rutter M. Strategy for investigating interactions between measured genes and measured environments. Archives of General Psychiatry. 2005;62:473.

45. Rutter M, Silberg J. Gene environment interplay in relation to emotional and behavioural disturbance. Annual Review of Psychology. 2002;53:463-90.

46. Heckman J, Pinto R, Savelyev P. Understanding the Mechanisms Through Which an Influential Early Childhood Program Boosted Adult Outcomes. American Economic Review. 2013;103(6):2052-86.

47. Duncan GJ, Dowsett CJ, Claessens A, Magnuson K, Huston AC, Klebanov P, et al. School readiness and later achievement. Developmental psychology. 2007;43(6):1428-46.

48. Boethel M, Southwest Educational Development Lab ATX. Readiness: School, Family, & Community Connections. Annual Synthesis, 2004. Southwest Educational Development Laboratory, 2004.

49. Bowes L, Arseneault L, Maughan B, Taylor A, Caspi A, Moffitt TE. School, Neighborhood, and Family Factors Are Associated With Children's Bullying Involvement: A Nationally Representative Longitudinal Study. Journal of the American Academy of Child & Adolescent Psychiatry. 2009;48(5):545-53.

50. Graham C, Hill M. Negotiating the Transition to Secondary School. SCRE Spotlight. Edinburgh: Scottish Council for Research in Education, 2003.

51. Galton M, Mornson I. Concluding comments. Transfer and transition: the next steps. International Journal of Educational Research. 2000;33(4):443-9.

52. McGee C, Ward. R, Gibbons. J and Harlow, A. Transition to Secondary School: A Literature Review. Waikato, New Zealand: University of Waikato, 2003.

53. Weiss ADG, Fantuzzo JW. Multivariate impact of health and caretaking risk factors on the school adjustment of first graders. Journal of Community Psychology. 2001;29(2):141-60.

54. Shonkoff JP, Richter L, van der Gaag J, Bhutta ZA. An integrated scientific framework for child survival and early childhood development. Pediatrics. 2012;129(2):e460-72.

55. Bowers A, Strelitz, J. An equal start: Improving outcomes in Children's Centres. London: UCL Institute of Health Equity, 2012.

56. Smart D, Sanson, A, Baxter, J., Edwards, B., and Hayes, A. Home-to-school transitions for financially disadvantaged children. Sydney: The Smith Family, 2008.

57. Harris A, Goodall J. Engaging parents in raising achievement: Do parents know they matter? Educational Research. 2007;50(3):277-89.

58. C4EO. Strategic leaders in children's services London: C4EO. Available from: http://archive.c4eo.org.uk/themes/schools/eresource/schools/strategic-leaders/sustained-progress/what-does-the-evidence-tell-us/difficulties/index.html.

59. Archer L, Hollingworth S, Halsall A. `University's not for Me — I'm a Nike Person': Urban, Working-Class Young People's Negotiations of `Style', Identity and Educational Engagement. Sociology. 2007;41(2):219-37.

60. Rosenblatt JL, Elias MJ. Dosage effects of a preventive social-emotional learning intervention on achievement loss associated with middle school transition. The journal of primary prevention. 2008;29(6):535-55.

61. Bradshaw C. School Transitions Among Military Adolescents: A Qualitative Study of Stress and Coping. School Psychology Review. 2010;39(1):84-105.

62. London's school places shortage rises to 133,000 [press release]. London: London Councils2014.

63. Prigg A. Experiences and perceived roles of occupational therapists working with children with special learning needs during transition to school: A pilot study. Australian Occupational Therapy Journal. 2002;49(2):100-11.

64. Bailey S. The impact of risk and resiliency factors on the adjustment of children after the transition from primary to secondary school. Educational and Child Psychology. 2012;29(1):47-63.

65. Chevalier A, Feinstein L. Sheepskin or Prozac: The Causal Effect of Education on Mental Health. Centre for the Economics of Education, LSE, 2006 Aug. Report No.

66. Hebron J. The impact of primary-secondary school transition for children with autism spectrum conditions: a longitudinal, mixed-methods study Manchester: University of Manchester; [cited 2015 30/03]. Available from: http://documents.manchester.ac.uk/display.aspx?DocID=20008.

67. Currie C et al. Social determinants of health and well-being among young people. Health Behaviour in School-aged Children (HBSC) study: international report from the 2009/2010 survey. 2012.

68. Kia-Keating M, Dowdy E, Morgan M, Noam G. Protecting and promoting: an integrative conceptual model for healthy development of adolescents. Journal of Adolescent Health. 2011;48:220-8.

69. Morgan A, Haglund B. Social capital does matter for adolescent health: evidence from the English HBSC study. Health Promotion International. 2009;24:363-72.

70. Vienio A, Santinello M, Pastore M, Perkins D. Social support, sense of community in school, and self-efficacy as resources during early adolescence: an integrative model. American journal of community psychology. 2007;39:177-90.

71. Baines E. (Ed.) IOE DEdPsy Research Bulletin. Institute of Education, 2013.

72. Tur-Kaspa H. The socioemotional adjustment of adolescents with LD in the kibbutz during high school transition periods. Journal of learning disabilities. 2002;35(1):87-96.

73. Hawker DS, Boulton MJ. Twenty years' research on peer victimization and psychosocial maladjustment: a meta-analytic review of cross-sectional studies. Journal of child psychology and psychiatry, and allied disciplines. 2000;41(4):441-55.

74. Goodman A, Joshi H, Nasim B, Tyler T. Social and emotional skills in childhood and their effects on adult life. UCL Institute of Education, 2015.

75. Galton MJ, Gray J, Ruddick J. The Impact of School Transitions and Transfers on Pupil Progress and Attainment: DfEE; 1999.

76. Eide ER, Showalter MH. Estimating the relation between health and education: What do we know and what do we need to know? Economics of Education Review. 2011;30(5):778-91.

77. Pape K, Bjørngaard J, Westin S, Holmen T, Krokstad S. Reading and writing difficulties in adolescence and later risk of welfare dependence. A ten year follow-up, the HUNT Study, Norway. BMC public health. 2011;11(1):1-8.

78. Office for National Statistics. Earnings by Qualification 2011. London: Office for National Statistics, 2011.

79. Mirowsky J, Ross CE. Education, Social Status, and Health: Transaction Publishers.

80. Wirt J, Rooney P, Hussar B, Choy S, Provasnik S, Hampden-Thompson G. The Condition of Education 2005. Washington DC: National Center for Education, Education UDo; 2005.

81. Vorhaus J, Duckworth K, Budge D, Feinstein L, et al. The Social and personal benefits of learning: A summary of key research findings. London: Centre for Research on the Wider Benefits of Learning, Institute of Education, University of London; 2008.

82. Crawford C, Cribb J, Kelly E. Teenage Pregnancy in England. London: Centre for Analysis of Youth Transitions, Studies IoF; 2013.

83. Feinstein L, Budge D, Vorhaue N, Duckworth K. The social and personal benefits of learning: A summary of key findings. London: Institute of Education, 2008.

84. Chandola T, Britton A, Brunner E, Hemingway H, Malik M, Kumari M, et al. Work stress and coronary heart disease: what are the mechanisms?2008 2008-03-01 00:00:00. 640-8 p.

85. Roberts J. Social inequalities in the leading causes of early death - a life course approach. UCL Institute of Health Equity, 2015.

86. Allen M. Reducing the number of young people not in employment, education or training (NEET). London: UCL Institute of Health Equity, 2014.

87. Mentor. Disengaged from school, engaged with drugs and alcohol? Young people at risk. London: Mentor, 2013.

88. Riglin L, Petrides KV, Frederickson N, Rice F. The relationship between emotional problems and subsequent school attainment: a meta-analysis. Journal of Adolescence. 2014;37(4):335-46.

89. Cotzias E. Pupil absence in schools in England: 2012 to 2013. London: Department for Education, 2014.

90. Department for Children, Schools and Family. Reducing the number of young people not in education, employment or training (NEET): The strategy. London: Department for Children, Schools and Families, 2008.

91. McLaughlin C, Clarke B. Relational matters: a review of the impact of school experience on mental health in early adolescence. Educational and Child Psychology. 2010;27(1):91-103.

92. Roeser RW. School as a context of early adolescents' academic and social-emotional development: A summary of research findings. The Elementary School Journal. 2000;100(5):443-71.

93. Young R, Sweeting H, Ellaway A. Do schools differ in suicide risk? The influence of school and neighbourhood on attempted suicide, suicidal ideation and self-harm among secondary school pupils. BMC public health. 2011;11:874.

94. Wood JJ, Lynne-Landsman SD, Langer DA, Wood PA, Clark SL, Eddy JM, et al. School attendance problems and youth psychopathology: structural cross-lagged regression models in three longitudinal data sets. Child development. 2012;83(1):351-66.

95. Lehr CA, Sinclair MF, Christenson SL. Addressing Student Engagement and Truancy Prevention During the Elementary School Years: A Replication Study of the Check & Connect Model. Journal of Education for Students Placed at Risk (JESPAR). 2004;9(3):279-301.

96. Hess GA, Lyons A, Corsino, L.,, Wells E. Against the odds : the early identification of dropouts. Chicago, Ill.: Chicago Panel on Public School Policy and Finance; 1989.

97. Rumberger R. Dropping Out of Middle School: A Multilevel Analysis of Students and Schools. American Educational Research Journal. 1995;32(3):583-625.

98. Wood J. School Absenteeism, Mental Health Problems Linked: PyschCentral; 2011 [cited 2015 30/03/2015]. Available from: http://psychcentral.com/news/2011/12/25/school-absenteeism-mental-health-problems-linked/32937.html.

99. Phillips-Howard PA, Bellis MA, Briant LB, Jones H, Downing J, Kelly IE, et al. Wellbeing, alcohol use and sexual activity in young teenagers: findings from a cross-sectional survey in school children in North West England. Substance abuse treatment, prevention, and policy. 2010;5:27.

100. Green R, Ross A. Young people's alcohol consumption and its relationship to other outcomes and behaviour. London: Department of Education, 2010.

101. Anderman E, Missall K, Hojnoski R, Patrick H, Drake B, Jarvis P. School Transitions: Education.com; 2009. Available from: http://www.education.com/reference/article/school-transitions/.

102. Royal College of Psychiatry. Behavioural problems and conduct disorder: information for parents, carers and anyone who works with young people 2012 [cited 2015 31/03]. Available from: http://www.rcpsych.ac.uk/healthadvice/parentsandyouthinfo/parentscarers/behaviouralproblems.aspx.

103. Kretschmer T, Hickman M, Doerner R, Emond A, Lewis G, Macleod J, et al. Outcomes of childhood conduct problem trajectories in early adulthood: findings from the ALSPAC study. European child & adolescent psychiatry. 2014;23(7):539-49.

104. Herrenkohl TI, Kosterman R, Mason WA, Hawkins JD, McCarty CA, McCauley E. Effects of childhood conduct problems and family adversity on health, health behaviors, and service use in early adulthood: tests of developmental pathways involving adolescent risk taking and depression. Development and psychopathology. 2010;22(3):655-65.

105. Kessler RC, Foster CL, Saunders WB, Stang PE. Social consequences of psychiatric disorders, I: Educational attainment. The American journal of psychiatry. 1995;152(7):1026-32.

106. Moilanen KL, Shaw DS, Maxwell KL. Developmental cascades: externalizing, internalizing, and academic competence from middle childhood to early adolescence. Development and psychopathology. 2010;22(3):635-53.

107. Richards M, Abbott R. Childhood mental health and life chances in post-war Britain: Insights from three national birth cohort studies London: Centre for Mental Health, 2009.

108. Miech RA, Caspi A, Moffitt TE, Wright BRE, Silva PA. Low Socioeconomic Status and Mental Disorders: A Longitudinal Study of Selection and Causation during Young Adulthood. American Journal of Sociology. 1999;104(4):1096-131.

109. Galton M, Gray J, Ruddock J. Transfer and transition in the middle years of schooling (7–14): Continuities and discontinuities in learning. Nottingham: Department for Education and Skills, 2003.

110. Neal S, Rice F, Ng-Knight T, Riglin L, Frederickson N. Reducing anxiety across secondary transitions. Forthcoming.

111. Resnick MD, Bearman PS, Blum RW, Bauman KE, Harris KM, Jones J, et al. Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. Jama. 1997;278(10):823-32.

112. Flay BR, Graumlich S, Segawa E, Burns JL, Holliday MY. Effects of 2 prevention programs on high-risk behaviors among African American youth: a randomized trial. Archives of pediatrics & adolescent medicine. 2004;158(4):377-84.

113. Viner RM, Ozer EM, Denny S, Marmot M, Resnick M, Fatusi A, et al. Adolescence and the social determinants of health. The Lancet.379(9826):1641-52.

114. Margetts K, Kienig AE. International perspectives on transition to school: reconceptualising beliefs, policy and practice. London: Routledge; 2013.

115. Coe R, Aloisi C, Higgins S, Major LE. What makes great teaching? Review of the underpinning research. London: 2014.

116. Stipek D. How Do Teachers' Expectations Affect Student Learning. 2010.

117. Weissberg R, O'Brien M. What works in school-based social and emotional learning programmes for positive youth development. Annals of the American Academy of Political and Social Science. 2004;591:86-97.

118. Ttofi M, Farrington D. Effectiveness of school-based programs to reduce bullying: a systematic and meta-analytic review. J Exp Criminol. 2011;7(1):27-56.

119. Buck D. Understanding the economics of investments in the social determinants of health. London: UCL Institute of Health Equity, 2014.

120. Higgins SK, Maria; Coleman, Robbie. Reading at the transition: interim evidence brief. London: Education Endowment Foundation, 2014.

121. The Sutton Trust. Premium Policies: What schools and teachers believe will improve standards for poorer pupils and those in low-attaining schools. London: The Sutton Trust, 2012.

122. The Shine Trust. SHINE in Secondaries [cited 2015 31/03]. Available from: http://www.shinetrust.org.uk/what-we-fund/secondary-schools/projects/shine-in-secondaries/.

123. Chamberlain T, Aston H, George N, Sharp C, Sanders D. Evaluation of SHINE on Saturdays. London: National Foundation for Educational Research, 2011.

124. Department for Education. Literacy and numeracy catch-up strategies. London: Department for Education, Education Df; 2012.

125. Forrest CB, Bevans KB, Riley AW, Crespo R, Louis TA. Health and School Outcomes During Children's Transition Into Adolescence. Journal of Adolescent Health. 2013;52(2):186-94.

126. Kettlewell K, Southcott C, Stevens E, McCrone T. Engaging the Disengaged. Slough: National Foundation for Educational Research, 2012.

127. Ainsworth P. It's not OK! London: Centre for Youth Transition, 2012.

128. Ladd GW, Kochenderfer BJ, Coleman CC. Friendship Quality as a Predictor of Young Children's Early School Adjustment. Child development. 1996;67(3):1103-18.

129. Dockett S, Perry B. Children's transition to school: Changing expectations. In: Dunlop A-W, Fabian H, editors. Informing transitions in the early years: research policy and practice. London: Open University Press; 2007. p. 92-104.

130. Sammons P, Sylva K, Melhuish EC, Siraj-Blatchford I, Taggart B, Barreau S, et al. Effective Pre-School and Primary Education 3-11 Project (EPPE 3-11): Influences on Children's Development and Progress in Key Stage 2: Social/ behavioural outcomes in Year 5. London: Department for Children, Schools and Families, Department for Children SaF; 2007.

131. Sylva K, Melhuish EC, Sammons P, Siraj-Blatchford I, Taggart B. Effective Provision of Pre-School Education (EPPE) Project: Technical Paper 12 - The Final Report: Effective Pre-School Education. London: Department for Education and Skills, Skills DfEa; 2004.

132. Gorey KM. Early childhood education: A meta-analytic affirmation of the short- and long-term benefits of educational opportunity. School Psychology Quarterly. 2001;16(1):9-30.

133. Bartholomew D. Revised GCSE and equivalents results in England, 2013 to 2014. London: Department of Education, 2015.

134. Available from: www.eif.org.uk.

135. Social Research Unit - Investing in Children. Available from: http://investinginchildren.eu/.

136. Heckman JJ. Schools, Skills, and Synapses. National Bureau of Economic Research Working Paper Series. 2008;No. 14064.

137. Department of Health. Chief Medical Officer's annual report 2012: Our Children Deserve Better: Prevention Pays. London: Department of Health, 2013.

138. Aos S, Lieb R, Mayfield J, Miller M, Pennucci A. Benefits and costs of prevention and early intervention programs for youth. Olympia, WA: Washington State Institute for Public Policy, 2004.

139. Evangelou M, Brooks G, Smith S. The Birth to School Study: Evidence on the Effectiveness of PEEP, an Early Intervention for Children at Risk of Educational Under-Achievement. Oxford Review of Education. 2007;33(5):581-609.

140. H. Manz P, M. McWayne C. Early Interventions to Improve Peer Relations/Social Competence of Low-Income Children. Montreal: Encyclopedia on Early Childhood Development,, 2004.

141. Gorard S, Huat See B. Do parental involvement interventions increase attainment? A review of the evidence. Durham: Nuffield Foundation, 2013.

142. Goodall J, Vorhaus J. Review of best practices in parental engagement. 2011.

143. Dyson A, Beresford E, Splawnyk E. The Manchester Transition Project: Implications for the Development of Parental Involvement in Primary Schools. London, 2007.