Department for Education

The home learning environment and attainment

Research report

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Pallavi Banerjee, University of Cambridge

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Executive summary

Purpose and scope

The 2018 key stage 4 (KS4) attainment report found that 84% of the variation in attainment at KS4 could be attributed to individual characteristics (differences between pupils), while 16% was attributed to differences between the schools they attended. Given that the majority (84%) of variation in educational attainment occurs at the individual rather than the school level, it is important to identify and understand these individual level factors.

The analysis presented in this report investigates the influence of socioeconomic background, behaviour, neighbourhood context, and family-related characteristics on attainment. Collectively, these dimensions are referred to as demographic factors and behavioural factors and shape the learning environment at home.

The home learning environment (HLE) plays a critical role in shaping children's cognitive, emotional and educational outcomes and is influenced by the factors listed above. Although extensive research exists regarding HLE during early childhood, empirical evidence about its impact on educational attainment of young people remains limited. Addressing this gap, the report summarises findings from exploratory analysis and predictive modelling of linked survey and administrative data sets.

This analysis also draws on the COM-B model, a behavioural science framework that categorises factors influencing behaviour into capability (individual skills and knowledge), opportunity (external social and environment factors) and motivation (internal cognitive and emotional processes). This model helps to systematically identify and understand factors shaping behaviour.

The research presented in this report had two main aims. The first aim was to identify key factors which predict attainment for teenagers. This was addressed by examining the relationships between socioeconomic background, behavioural factors, HLE related variables and the likelihood of students completing level 2 and Level 3 qualifications by age 19.

By applying behavioural insights, the findings we then interpreted to explore underlying dynamics and highlights patterns and disparities outside school that affect educational attainment. Together, the data-driven findings and the COM-B model provide a deeper understanding of the factors influencing behaviour, HLE and attainment. The report aims to move beyond a deficit model, aligning instead with the Opportunity Mission, to focus on how every young person can achieve and thrive by breaking barriers to opportunity.

Methodological approach

Phase 1

A systematic review and policy mapping exercise was conducted and has been published separately. Summary findings from the evidence review include:

- HLE is poorly defined in the literature. Key HLE related factors identified in the literature include parental attitudes towards education, parental involvement, the parent child relationship and the physical environment
- Characteristics of a 'good' HLE evolve across various across different developmental stages - from early years through primary and secondary education. Most existing evidence focuses on the early childhood, with significantly less known as children grow older
- The HLE influences various cognitive outcomes including literacy, numeracy and language skills in early childhood, relatively little is known about its impact during later educational stages
- There are notable gaps in the literature, particularly concerning the HLE of disadvantaged children and those with special educational needs and disabilities (SEND).

Phase 2

The primary objectives of the analytical phase were to:

- Define HLE
- Develop a better understanding of the relationship between HLE and educational attainment
- Assess the longitudinal impact of behavioural factors and relationships on teenagers' educational outcomes
- Determine whether a positive HLE can mitigate risks associated with poorer educational outcomes
- Identify 'pivotal moments' or areas where behavioural insights based interventions might reduce attainment gaps

The secondary data analysis presented here used linked administrative and survey data from the national pupil database (NPD) and the longitudinal study of young

people in England (LSYPE-2). In this report, HLE is treated as a multifaceted construct influenced by parental background, parental engagement, young person's behaviour, the physical environment, parent child relationships, perceptions of local area safety and demographic factors.

Modelling

The analysis was conducted in two stages. Univariate regression was used to assess the unadjusted association between individual covariates and qualification attainment. The covariates included:

- Socioeconomic background (eligibility for free school meals)
- Parental involvement (homework support and monitoring)
- Parent-child relationships (aged 13-19)
- Parental education (highest qualification of the main parent)
- Self-reported learning difficulties
- Risk factors (antisocial behaviour)
- Perceived neighbourhood safety (whether the young person reported feeling safe in their local area)

Then, multivariate logistic regression models estimated the adjusted odds of achieving level 2 and Level 3 qualifications, accounting simultaneously for all covariates. This approach provided clearer insights into the relative contributions of each factor while controlling for potential confounders. Comparing the unadjusted and adjusted results allowed the identification of key predictors of educational attainment within a broader socio economic and behavioural context.

Key findings

- Demographic factors: Eligibility for free school meals (FSM) and self-reported learning difficulties were associated with lower odds of achieving level 2 and Level 3 qualifications
- Parental background: Students whose parents held degree level qualifications, had higher occupational statuses or came from higher income households were more likely to achieve level 2 Level 3 qualifications by age 19

- Parental engagement with homework: Young people who received regular homework from school, consistent homework monitoring and support at home had a higher likelihood of attaining level 2 and Level 3 qualifications by age 19

- Parent-child relationships: Warm parent child relationships were associated with higher attainment of level 2 and Level 3 qualifications by age 19

- Risk factors: Students engaging in behaviours classified as risky or antisocial such as substance abuse, excessive drinking, shoplifting, vandalism, truancy, involvement in crime or theft were less likely to achieve the academic milestones by age 19

- Perceptions of safety: Young people who reported feeling safe in their local area had higher odds of achieving level 2 and Level 3 qualifications by age 19 compared to those who felt unsafe.

Behavioural insights

The results show behaviour was one of the strongest predictors of attainment. Drawing on empirical evidence behavioural insights are often used to design policies, interventions and programmes that align with how people behave in real world. COM-B is a behavioural framework that conceptualises behaviour as the result of the interaction between Capability (C), Opportunity (O), and Motivation (M). This model is frequently used in public health, education, and policy contexts to design interventions that change behaviour by addressing these three core components.

The COM-B model was applied to extend the findings from the regression models. The aim is to interpret the findings through the lens of the COM-B model offering a theoretically informed discussion of how behaviour and environment influence attainment. The model recognises that behaviour is shaped by both internal and external conditions and that change requires addressing all three components.

The key principles discussed in the report which can inform the design of effective solutions are:

- Family engagement initiatives, parenting workshops and resources aimed at fostering positive family relationships, alongside strengthened home school communication and collaborative parent teacher partnerships.
- Data-driven personalisation - for example, research into predictive analytics and artificial intelligence could support the creation of tailored interventions for students. Targeted family support programmes leveraging insights and teacher feedback can effectively identify and address specific family needs.

- Peer mentorship and community-based learning hubs could be particularly beneficial in areas experiencing high deprivation or risk. These programmes can offer structured peer support, academic enrichment and family-oriented activities strengthening community ties and supporting student achievement.
- The integration of emotional and social support mechanisms within education systems is another critical area to consider, particularly programmes focusing on mental health and conflict resolution to promote holistic student well-being.
- Innovation within schools can be fostered through national platforms designed for piloting and sharing successful interventions, technological solutions and community partnerships.
- Long term comprehensive strategies promoting lifelong learning and coordinated community support systems addressing educational, economic, health and social needs require further exploration.
- Finally, establishing real time feedback loops and adopting ongoing evaluation processes will facilitate agile and responsive adjustments to educational programmes, ensuring their continued relevance and effectiveness.

Introduction

Home learning environment

The home learning environment (HLE) plays a critical role in shaping cognitive and social development during formative years. In early childhood, the HLE refers to the conditions, activities and resources available within a child's home that support their educational development and learning. This environment includes interactions, routines and materials that foster foundational skills such as literacy, numeracy, cognitive abilities and socioemotional growth (Toth et al., 2019).

The availability of resources including books, educational toys and technology provides essential tools for children to engage in diverse learning experiences. Additionally, structured learning routines - such as dedicated time for educational activities, regular reading sessions, play-based learning and age appropriate chores - further promote responsibility and essential life skills (McLean et al., 2015).

Alongside physical resources and routines, a robust HLE is characterised and influenced by active engagement from parents[1] (caregivers). Activities such as reading together, discussing school topics and providing homework support, cultivate a positive learning culture at home. Communication is central to a supportive HLE, as children benefit from conversations, storytelling and exposure to rich vocabulary, enhancing language and comprehension skills.

As children progress beyond their early years, engaging in extracurricular activities during primary school can play a crucial role in their development. These activities not only contribute to a well-rounded education but also help reinforce essential life skills such as teamwork, leadership and resilience, complementing academic achievements. Parents and caregivers can further support and enhance these skills at home by encouraging and facilitating their application in everyday situations, ensuring consistent reinforcement both at school and at home (Cameron et al., 2022).

Emotional support within the home, where children feel nurtured and encouraged significantly impacts their motivation and confidence in learning. While early years and primary education lay critical foundations, adolescence represents a distinct developmental stage that shapes young people's pathways towards adulthood. As adolescents navigate this crucial stage the HLE has the potential to become a major factor influencing their socioemotional growth by promoting wellbeing and helping them manage the stress and social complexities typical of this age.

[1] Though the term parent is used here it is recognised that the primary adult shaping the HLE is not always the parent and could be another caregiver.

Research reports have focused on various elements of the HLE, including active parental engagement, goal setting, exam preparation, accessible educational resources like textbooks, technology and dedicated study spaces (Kent et al., 2000, Kiss and Vukovic, 2020). A well supported HLE has been linked to positive educational outcomes for teenagers in secondary school. (Zhang et al., 2011).

An effective HLE for adolescence also fosters broader life skills, necessary for transitioning to adulthood lay a solid foundation for future education and career paths (Rathee and Kumari, 2022). However, less is known about the autonomy adolescents gain within a supportive HLE and whether this autonomy encourages them to take ownership of their learning, manage schedules effectively and make informed decisions about their educational futures.

Similarly, parents and guardians who model lifelong learning through active engagement in educational activities demonstrate the value of intellectual growth. However, there is limited evidence regarding whether this parental behaviour directly inspires similar lifelong learning habits in their offsprings.

Addressing the link between behaviour, relationships and educational attainment this report examines how specific components of the HLE - specifically those linked to parental background, young person's behaviour, perceptions of safety and parent-child relationships - correlate with and predict the educational trajectories of teenagers and the milestones they achieve by age 19.

Literature review

There are multiple determinants of attainment in education, including pupil characteristics, family background, school related factors and neighbourhood deprivation (Banerjee 2016). This literature review synthesises existing research to identify factors that shape students' educational outcomes, specifically focusing on socioeconomic background, HLE and behaviour. School effectiveness or the role played by schools and teachers in addressing attainment gaps is widely recognised; however, this project did not examine school effectiveness and thus does not include that literature or make any claims in this regard.

Determinants of educational attainment

The link between socioeconomic background (SEB) and attainment is well documented. Measures of SEB such as eligibility for free school meals (FSM), household income and parental occupation are strongly associated with students' academic outcomes (Crawford et al. 2022). Williams et al. (2022) show parental income and social class during childhood moderately correlate with later academic outcomes. Similarly, Anders (2012) identifies a direct relationship between household income and university attendance, noting that students from higher income families are more likely to apply to universities.

Parental influence emerges as another critical factor including several key dimensions, such as parent child relationships, engagement, involvement, expectations and support. Research indicates that supportive and positive interactions with parents promote better academic outcomes. For instance, Jessiman et al., (2022) highlight the importance of nurturing school cultures that encourage positive parental involvement, thus creating an environment conducive to students' mental health and academic success.

Focusing on academic support in medical contexts rather than the direct impacts of parental relationships, Osunronbi et al., (2023) demonstrate that a supportive educational environment and parental encouragement significantly contribute to better outcomes. However, Wilson (2021) suggests that parental engagement strategies, though well intentioned may inadvertently overlook underlying structural inequalities. Hartas (2011) supports this critique, arguing that merely encouraging parental involvement without addressing systemic barriers perpetuates deficits in educational support among disadvantaged families.

Brown first described the emergence of a 'parentocracy,' where a child's education increasingly depends on parents' wealth and preferences (Golden et al., 2021). Discussing the interplay between class, education and parenting, Wilson and Worsley

(2021) show how parents navigate complex educational choices to secure social advantages for their children. Better understanding of the complexity of family dynamics highlights their critical role in shaping educational outcomes for children and young people (Wilson and Worsley, 2021).

Alongside socioeconomic factors and parental influence, negative behaviours such as truancy significantly impact educational outcomes. Emotional difficulties positively correlate with persistent absenteeism. Literature on adolescent mental health indicates that lacking supportive dynamics can increase feelings of isolation and distress, negatively affecting educational trajectories (Jessiman et al., 2022).

Attendance strongly correlates with educational attainment. National level data from school censuses and key stage 2 (KS2) and key stage 4 (KS4) assessments show pupils with higher attainment levels have lower absenteeism than those with lower attainment (DfE, 2022). Controlling for socioeconomic background, Lereya et al. (2019) establish a correlation between mental health difficulties, externalising behaviours like disruptive conduct, lower attendance and subsequent academic failure. Students engaging in negative behaviours experienced punitive measures, such as classroom expulsion, creating a cycle of underachievement and mental distress (Lereya et al., 2019).

Antisocial behaviour including involvement in crime negatively correlates with attainment. Kim (2018) examined the differential impacts of violent and non-violent delinquency on educational outcomes while controlling for family background and neighbourhood influences. Using sibling pairs to control familial characteristics Kim's research indicates that the adverse effects of violent delinquency on education arise primarily from family background. On the other hand, nonviolent delinquency directly impacts educational attainment by disrupting educational programmes rather than through institutional responses or psychological factors associated with the behaviour itself.

Kirk and Sampson (2012) report that adolescents with arrest records exhibit lower likelihood of academic engagement. Associations with deviant peers create feedback loops of negative behaviour and poor educational performance. Wang and Sheikh-Khalil (2013) describe how chaotic conditions often accompanying negative social behaviours, alongside the challenges of adolescence, correlate with declining academic performance. This nexus of behavioural issues and educational barriers adds to the complexity of supporting students exhibiting negative behaviours, as these behaviours are often reflections of broader socioeconomic conditions and family dynamics.

Cowie and Oztug (2008) demonstrate that students who feel safe and supported are more likely to engage positively in their educational environment, highlighting

emotional and psychological safety as critical to academic success. Conversely, students perceiving their environment as unsafe are more likely to experience heightened anxiety and distress, negatively affecting academic focus and performance. Milam et al. (2010) suggests that students in violence prone neighbourhoods face lower academic achievement due to anxiety and fear emphasising that persistent safety concerns undermine academic concentration.

Florez et al. (2016) illustrate how negative perceptions of neighbourhood safety independently lead to psychological distress. They note that psychosocial stressors, such as feelings of powerlessness and fear associated with unsafe environments exacerbate educational disengagement. Similarly, Cote-Lussier et al. (2014) identified challenges faced by families living in unsafe neighbourhoods to engage supportive educational practices, negatively influencing children's academic attainment.

Guo et al. (2018) stress the importance of community interventions aimed at improving perceptions of safety, noting stronger feelings of safety within a neighbourhood are associated with enhanced academic performance. They advocate initiatives focused on reducing crime and building community support systems, essential for creating secure environment where students can academically thrive. Addressing safety perceptions and underlying causes is essential for improving individual outcomes and promoting overall educational equity.

Socioeconomic disparities in educational outcomes remain prevalent, highlighting the need for targeted policy interventions. Educational attainment is shaped by complex interactions between socio economic factors, familial relationships, educational policies, behavioural issues and structural inequalities. To inform some the work on closing attainment gaps further research is required to develop a comprehensive understanding of how these are interrelated and interact.

Why does the HLE matter?

The 2018 KS4 attainment report found that 84% of the variation in attainment at KS4 could be attributed to individual characteristics (differences between pupils), while 16% was attributed to differences between the schools they attended (Lessof et al., 2018). Given that most variation in educational attainment occurs at the individual rather than the school level, it is particularly important to understand the role of individual and family level factors, such as the HLE in influencing academic outcomes. Key aspects of HLE including parental attitudes towards education, parental involvement in learning activities, the physical environment, parent child relationships and behaviour - collectively influence cognitive and socioemotional development as well as young people's educational outcomes (Pratama et al., 2023).

The HLE continues to correlate with educational outcomes beyond early childhood (Lehrl et al., 2020). It can predict a child's verbal ability as early as age two and serves as a significant predictor of attainment in KS3 and KS4 Maths and English grades (Sun and Wang, 2022). As children grow parental attitudes continue to influence young people (Yilmaz Bodur and Aktan, 2021). Reports indicate students whose parents expected them to continue education after year 11 and anticipated their university attendance achieved significantly higher grades, averaging 50.4 and 48.3 KS4 points higher than their counterparts (Choy 2001).

Evidence from meta-analysis shows the HLE has an effect size of 0.52 on learning outcomes (Hattie 2017). Whether a high quality HLE can mitigate income related inequalities and offer partial protection against adverse impacts of disadvantage on a child's cognitive and socioemotional development into adolescence is yet to be determined. However, it is crucial to acknowledge that while the HLE influences children's cognitive and social development, it is distinct from socioeconomic factors such as household income and poverty. Families from both high and low socioeconomic backgrounds can exhibit either a positive or poor HLE.

HLE through the years

Parents play a crucial role as their child's first educators, significantly shaping early learning and development. In early childhood, household organisation, parental limit-setting, and the warmth of the parent-child relationship are key influences on overall development. Access to books, learning resources, and a structured home environment is essential in early childhood (Sheridan et al., 2010). Engagement in activities like shared reading, singing, and educational play at ages two to three supports language and literacy skills during early school years. A decline in family engagement with these activities between ages two and six is linked to lower literacy scores by age six.

Although parental involvement in reading continues to benefit a child's oral language and mathematical skills, its impact diminishes after early childhood. Over time, parenting style becomes increasingly critical; permissive and authoritarian parenting styles are often associated with rebelliousness, disruptive behaviour, antisocial behaviour and lower literacy and numeracy outcomes (Underwood et al., 2009).

Parental support for home-based learning remains vital throughout a child's development, beginning with early parent-child activities and evolving into more structured encouragement and support as children mature. While the influence of the HLE remains significant, parental aspirations also have a measurable impact on school performance. Melhuish et al., (2008) found a positive correlation between parents' expectations of their child's reading and maths achievements and the child's

academic progress. Students who perceive their parents as involved in their education report higher levels of school belonging and commitment to their studies (Demiroz, 2020).

During the primary years, out-of-home activities, such as participation in sports, music lessons, and library visits, positively relate to children's social behaviour. However, a warm parent-child relationship, combined with appropriate parental monitoring, remains crucial for academic success. As children enter adolescence, parental support shifts towards aspirations and expectations, particularly regarding future education. Parental involvement during secondary education takes a different form and typically includes discussions about schoolwork, exams, and academic progress. Additionally, digital resources in the home also become increasingly important.

Research aims and questions

The literature review has examined existing evidence on the determinants of educational attainment. Although socioeconomic background consistently emerges as a strong predictor of attainment, there are gaps in our understanding of how different dimensions of the HLE interact with socioeconomic disadvantage and behavioural factors. Additionally, it is less clear how should interventions be targeted to address these factors and improve educational outcomes, especially among disadvantaged students. The following chapters examine these relationships to provide insights into factors driving educational inequalities.

Research questions

The main research questions answered in this report are:

- How does socioeconomic status as measured by FSM eligibility, household income, parental occupation and parental qualification influence the attainment of Level 2 (L2) and Level 3 (L3) qualifications at age 19?
- To what extent do HLE related factors – such as parental homework support and monitoring, parent-child relationships – predict L2 and L3 attainment after accounting for socioeconomic background?
- To what extent do behavioural factors such as truancy, delinquency, and perceptions of safety independently affect educational attainment, controlling for socioeconomic and family related factors?

The study intentionally avoids framing findings within a deficit model. The focus was on understanding multiple layers of broader structural and behavioural influences on educational attainment. School effectiveness or the role played by schools and teachers in addressing attainment gaps was not addressed as such so no claims are made in this regard. At the same time, no causal claims are made about measures of socioeconomic deprivation and attainment, as establishing such relationships would require an alternative research design and analytical strategy.

The stratified patterns of attainment were further examined using a behavioural insights framework. This approach enables a deeper understanding of how subtle psychological and contextual influences - such as risk factors, perceptions, relationships and home learning environments might explain or mediate the observed associations. By applying behavioural insights, the analysis identifies potential mechanisms behind the observed relationships thereby offering practical strategies for targeted policy interventions aimed at improving educational attainment.

Methods

This chapter describes the methods used to answer the research questions outlined previously. It details the sources of data, the variables included in the analysis and the analytical techniques employed. The methods chosen were designed to systematically examine associations between socioeconomic background, behavioural factors and elements of HLE in relation to educational outcomes.

Data sources

Secondary data from two primary sources – the Longitudinal study of Young People in England (LSYPE-2) and the National Pupil Database (NPD) – were used for this analysis. These datasets were selected because together they provide comprehensive coverage of students' educational, socioeconomic, familial and behavioural characteristics.

LSYPE-2

The analysis draws extensively upon data from the LSYPE-2, a large scale nationally representative longitudinal cohort study commissioned by the Department for Education (DfE). LSYPE-2 tracks the education, experiences, attitudes and transitions from secondary education into adulthood providing rich longitudinal insights.

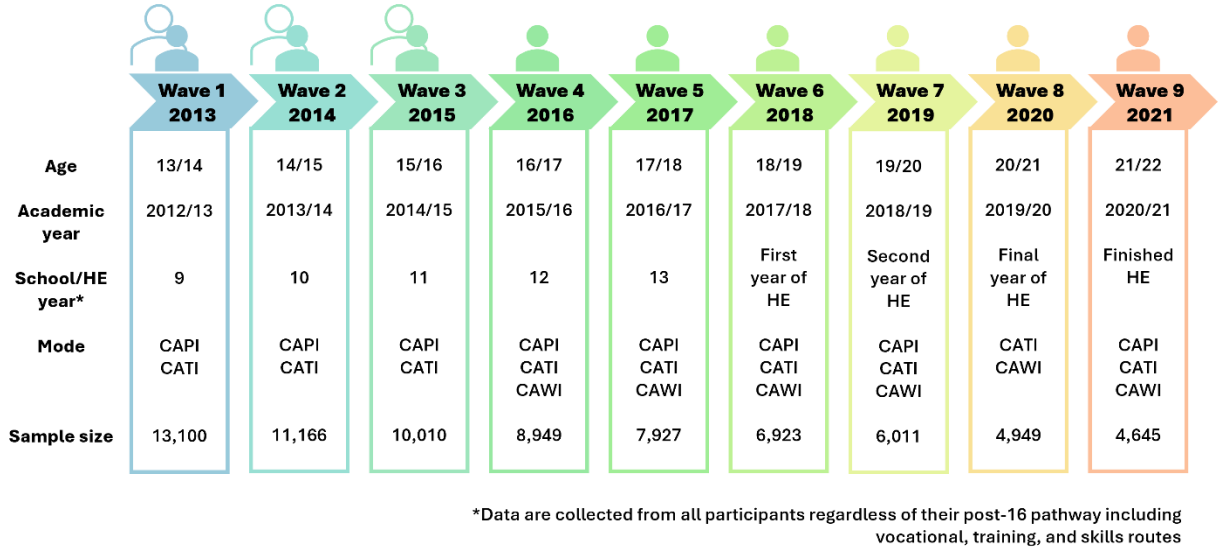


Figure 1 Wave 1-9 of LSYPE-2[2]

[2] Source: CLOSER (2024). Longitudinal survey of young people in England: Cohort 2. Accessed on May 2024

LSYPE-2 is a major study of young people who were aged 13/14 in 2013 and were followed up annually (Figure 1[3]). In wave 1 data was collected from young people and their parents. Consent was also sought in each wave for linkage to administrative data sources. The survey provides detailed information on parental qualifications, household characteristics, homework monitoring and help, behavioural issues, health and wellbeing indicators, self-perceptions and neighbourhood context. There are nine full waves of data with the most recent one concluding in 2022.

National pupil database

The Young Person's Matched Administrative Dataset (YPMAD) is a derived dataset within the NPD maintained by the DfE. It consolidates individual level data from various sources to track learner attainment, capturing information on students' educational qualifications. This cumulative dataset facilitates the monitoring of educational progress and outcomes over time.

YPMAD cohorts are created based on pupils' age at the start of the academic year rather than by school year group, in contrast to KS4 cohorts which are defined by school year groups (DfE 2024). Final KS4 performance measures are calculated exclusively for pupils completing KS4, although KS4 data also include pupils from other years (DfE 2025). Despite some overlap between age-based and school year based cohorts, YPMAD does not provide detailed grade data for individual subjects, except for English and Maths. However, this limitation was not problematic for the current analysis, as the primary aim was to investigate whether pupils had achieved L2 and L3 qualifications. Thus, the YPMAD dataset was the most suitable source of attainment data, meeting all necessary criteria.

Within the YPMAD datasets, learners aged 15 to 25 can be tracked longitudinally for cohorts born from 1984 onwards. NPD pupil IDs are periodically updated and YPMAD datasets are refreshed to align with these changes. YPMAD datasets are available in two formats: snapshot and chronological. In the snapshot data, each learner appears only once and data include learner characteristics, education provider's details, study information and achievement status at specified ages. The chronological data contain multiple records per learner providing annual tracking of measures across each academic year. For the linkage with LSYPE-2, the snapshot dataset was selected.

[3] Longitudinal Survey of Young People in England: Cohort 2 - CLOSER

Data linkage

By linking LSYPE-2 with attainment data from the NPD (YPMAD), this study leverages the strengths of longitudinal self-reported information alongside verified administrative records. This linkage enables robust analyses that inform our understanding of educational inequalities, socioeconomic disparities and the broader contextual factors influencing young people's educational outcomes.

The linked LSYPE-2-NPD dataset included data from respondents who had given consent for their survey data to be linked with administrative records. Matching of the datasets was conducted using unique pupil identifiers. From an original total of 13,100 respondents in wave one of LSYPE-2, the final weighted sample consisted of 6,943 consenting respondents with complete data across all relevant NPD and LSYPE-2 variables used in the analysis.

Variable selection and coding

Evidence from longitudinal studies conducted both in the UK and internationally indicates that the HLE is a multifaceted construct. Based on the literature review and policy mapping exercise, a conceptual framework was developed. The key themes identified were parental background, parental involvement and the physical environment. Survey items representing these constructs captured through responses from parents or young people and information on their backgrounds were identified. Where necessary composite measures were derived from survey responses. The richness of the linked LSYPE-2-NPD dataset also allowed for inclusion of additional variables related to young people's behaviours such as antisocial risk factors, perceptions of safety in their local area and the quality of relationships with their parents.

Attainment

There are nine qualification[4] levels. Amongst these L2 and L3 qualifications achieved by age 19 were selected as the key outcome measures for attainment. These variables represent critical milestones in a young person's educational journey, providing clear indicators of academic achievement during secondary and post-secondary education. These measures are also commonly used in statistical releases by the DfE (2024).

Foundational qualifications typically include GCSEs or equivalent certifications, as well as further academic or vocational qualifications such as A-levels or advanced technical training. L2 and L3 qualifications are:

[4] What qualification levels mean: Overview - GOV.UK

L2 qualifications are:

- CSE - grade 1
- GCSE - grades 9, 8, 7, 6, 5, 4 or grades A*, A, B, C
- intermediate apprenticeship
- level 2 award
- level 2 certificate
- level 2 diploma
- level 2 ESOL
- level 2 essential skills
- level 2 functional skills
- level 2 national certificate
- level 2 national diploma
- level 2 NVQ
- music grades 4 and 5
- O level - grade A, B or C

L3 qualifications are:

- A level
- access to higher education diploma
- advanced apprenticeship
- applied general
- AS level
- international Baccalaureate diploma
- level 3 award
- level 3 certificate
- level 3 diploma
- level 3 ESOL
- level 3 national certificate
- level 3 national diploma
- level 3 NVQ
- music grades 6, 7 and 8
- T Level
- tech level

Socioeconomic background

FSM eligibility is a widely recognised proxy for measuring socioeconomic background (SEB) in educational research and policy analysis. It provides a clear, binary indicator of economic deprivation, as eligibility is determined by household income thresholds. FSM eligibility is particularly valuable in longitudinal studies because it enables researchers to track the impact of socioeconomic deprivation on outcomes of interest over time. Additionally, this measure is also relevant for policy, as it informs funding allocation mechanisms such as the Pupil Premium[5] in England, which aim to address educational inequalities.

[5] Pupil premium: overview - GOV.UK

Two different variables were initially considered for FSM eligibility. The first was whether a student was eligible for FSM at age 15 and the second was FSM eligibility at any point between the ages of 10 and 15. Due to substantial missing data in the second variable for the linked dataset it was excluded from the analysis. Therefore, FSM eligibility at age 15 has been used as the SEB measure in the models.

While FSM eligibility effectively captures financial hardship, it is not without limitations. Nevertheless, its widespread use, consistency in recording and availability in administrative datasets make it a practical and impactful SEB measure for examining disparities in the HLE and their impact on educational outcomes. FSM eligibility was complemented by additional socioeconomic indicators linked to parental background.

Parental background

To capture the socio-economic dimensions linked to parental background three different variables were selected– occupation, income and education. These variables were chosen as they collectively shape the resources, expectations, and behaviours within the HLE.

Parental occupation reflects the type of employment or professional role of the parent, which impacts not only financial stability but also the amount of time and flexibility a parent may have to engage in their child's learning. Occupational status can also contribute to the social and cultural capital within the household, indirectly shaping attitudes and aspirations for the young person's education.

The analytical classes used for parental occupation were based on the National Statistics Socio-Economic Classification (NS-SEC)[6]. Parental occupation based on NS-SEC was categorised into large employer and higher managerial, higher professional, lower professional and higher technical, intermediate occupations, small employees and own account workers, lower supervisory and technical, semi-routine occupations, routine occupations, never worked and long term unemployed.

However, relying on only one parent's occupation may overlook household dynamics, such as the combined influence of both parents' socioeconomic status on a student's education. Therefore, rather than using parental (maternal or paternal) occupation the highest household occupation based on parental occupation was used in the analysis. In LSYPE-2, the highest household NS-SEC is determined by identifying the parent or guardian with the highest socioeconomic status within the household. This approach ensures that the classification reflects the most advantaged position present in the household providing a more accurate measure of the household's overall socioeconomic background.

[6] https://www.ons.gov.uk

Parental income is a crucial determinant of economic stability and directly influences access to educational resources, such as books, technology, and extracurricular activities. Income level affects the quality of the physical learning environment, from providing a quiet study space to supporting academic enrichment opportunities. Total household income where the young person lives was used for all crosstabulations, univariate and multivariate analysis.

Occupations capture long term social class and status; income captures short term economic resources and financial stability whereas FSM eligibility is a policy relevant indicator of low-income disadvantage. All three measures of socioeconomic background – FSM eligibility, highest household NS-SEC (occupation) and total household income were used in the cross tabulations to identify attainment patterns across different dimensions of SEB.

Parental education refers to the highest level of formal education attained by the main parent. It had seven distinct categories – degree qualified for example BA, BSc, MA, higher education (HE) below degree for example HND, HNC, A/AS or equivalent qualification, five or more GCSEs at A*-C or equivalent, some GCSE passes or equivalent, other qualifications and no qualifications. The highest category for qualification was degree level.

Analysing attainment solely by maternal or paternal qualifications would have introduced bias, within single-parent households where only one parent's educational level could be reported. To mitigate this bias, the decision was made to use the highest qualification of the primary caregiver, referred to in the LSYPE-2 dataset as the 'main parent'. In the context of the LSYPE-2, the main parent denotes the primary care giver who consistently provided detailed information about themselves and their child during the initial four waves of data collection. Typically, this parent was the individual most informed about their teenager's upbringing and daily experiences.

Parent-child relationships[7]

Parent-child relationships represent a key aspect of the HLE, shaping both the emotional climate and the level of academic support provided to adolescents. Not all families had a mother and a father so to eliminate bias against single parent households young person's responses based on their relationship with the main parent was analysed. The question 'How well do you get on with the main parent' in LSYPE-2 was designed to measure the quality of the relationship between the young person and their primary caregiver. Respondents could choose to say: very well, fairly well, fairly badly, very badly or do not see them. Due to small sample sizes in some

[7] To make sure terminologies are consistent across the report and the datasets, the relationships young people have with their parents are termed as parent-child relationships as this is the term used in LSYPE-2

categories, the responses were recoded into two categories - whether the young person got on well or did not get on well with the main parent.

Risk factors

In LSYPE-2 there is a derived measure from wave 1 that indicates risk factors acknowledged by the student. This variable is constructed based on responses to questions about behaviours and experiences that are considered risky, antisocial or detrimental. The new variable was derived by combining responses to different questions addressing attendance records, instances of suspension or expulsion, as well as involvement in smoking, drinking, and substance use. Additional questions assessed whether the young person has been associated with street gangs, shoplifting, or destructive actions, such as vandalism - damaging public property or spray painting, theft and crime.

Some other questions were linked to classroom behaviour. For example, the frequency of misbehaviour and whether the young person has played truant in the past 12 months. Together, these responses provide a comprehensive view of the young person's behaviour patterns and potential risk factors. Respondents could score between zero and ten in the new variable, where a score of zero meant no risk factors were identified. Based on the number of risk factors acknowledged by the young person the variable was recoded into three categories: zero, one to three and more than four risk factors.

Parental involvement and monitoring of homework

Two variables – help received at home for completing homework set by school (homework help) and frequency of monitoring homework completion by parents - were selected for the analysis. Homework help captures active parental engagement, reflecting direct support available to students, while homework monitoring measures parental involvement and oversight regarding study practices. Together these variables offer insights into distinct yet complementary forms of parental involvement, capturing both active support (help provided) and supervisory engagement (monitoring). Including these variables allowed the analysis to explore aspects of home-based educational support and their association with attainment, providing deeper insights than considering homework engagement in general terms.

Perceptions of safety

One of the questions in the survey was 'How safe do you feel where you live?' Participants responses were on a five-point Likert scale 'strongly agree' (feel very safe), 'agree' (feel mostly safe), 'neither agree nor disagree' (neutral), 'disagree' (feel unsafe) and 'strongly disagree' (feel very unsafe). This measure provides valuable

insights into young people's perceptions of safety in their local area, which can influence their overall well-being.

Analytical approach

The analysis followed a structured approach to examine the relationship between the various SES, HLE and behavioural factors and educational attainment. The outcome measure of attainment used in the analysis was the likelihood of achieving L2 and L3 qualifications. Following descriptive analysis, univariate analysis and multivariate modelling was employed.

Sample design

The original sample size of LSYPE-2 was 13,100 (see Figure 1). The young people in LSYPE-2 were sampled through a two-stage process. Schools were sampled first, followed by the pupils within those schools. The sample includes young people in local authority maintained schools, academies, independent schools, and special schools. Small schools and overseas students were excluded for practical reasons. This sample was selected to ensure the widest possible perspective on young people's experiences.

Sample boosts and survey weights

Longitudinal studies aim to select representative samples that reflect the composition of the target population. However, unless the starting sample is exceptionally large this means that there will be small numbers of participants from minority groups. While the proportion of participants from minority groups might accurately reflect the make-up of the wider population, the small numbers can constrain the research that can be done using these groups. As a result, some studies including LSYPE-2 now 'boost' the number of participants from groups (DfE 2018).

To ensure representation of groups of particular interest, LSYPE-2 included:

- A boost for young people eligible for free school meals (FSM)
- A boost for young people with special education needs (SEN)

If a study contains a boosted number of participants from a particular group, survey weights should be applied to adjust the overall results so that they are representative of the population. Sample weighting involves some individuals counting as less than one case, while others may count for more. Survey weights were applied to the analysis presented in this report.

Descriptive analysis

Summary statistics and crosstabulations were used to explore the distribution of key variables and other relevant covariates. This step provided an initial understanding of patterns in educational attainment across different socioeconomic and demographic groups. Descriptive statistics were also used to identify any notable disparities in attainment outcomes and to inform the selection of variables for further analysis.

Modelling approach

The aim of the multivariate analysis was to examine how the HLE, behaviour and relationships predict the likelihood of attaining L2 or L3 qualifications by age 19. Logistic regression was used to model binary outcomes, estimating the probability that an event occurs—in this case, whether a student achieved a given qualification. Results have been presented as odds ratios (ORs), where values greater than 1 indicate an increased likelihood of attainment, and values less than 1 indicate a decreased likelihood.

The analysis proceeded in two stages. First, univariate logistic regression was conducted to assess the unadjusted association between each individual covariate and qualification attainment. The covariates included:

- Socioeconomic status (eligibility for Free School Meals)
- Parental education (highest qualification of the main parent)
- Parental involvement and monitoring (homework support and supervision)
- Parent-child relationships
- Self-reported learning difficulties
- Acknowledged risk factors
- Perceived neighbourhood safety (whether the young person reported feeling safe in their local area)

Next, a multivariate logistic regression model was used to estimate the adjusted odds of achieving L2 and L3 qualifications, accounting for all covariates simultaneously. This approach allows for a clearer understanding of the relative contribution of each factor while controlling for potential confounders. By comparing the unadjusted and adjusted results, the analysis identifies the key predictors of educational attainment within a broader socioeconomic and educational context.

Results

The following descriptive statistics summarise the characteristics of the study sample and key variables included in the analysis. Frequencies and percentages are provided in Tables 1 to 11. A more detailed summary has been provided in Appendix 1 it shows crosstabulations of FSM and non-FSM pupils by key characteristics and can be used to contextualise and support the interpretation of subsequent findings.

Descriptive statistics

Table 1 shows the distribution of students based on whether they achieved L2 and L3 qualifications. For each qualification level, the table reports the number and percentages of students who attained the qualification, as well as those who did not. At L2, 83% students achieved the qualification, while 17% did not. At L3, 52% students achieved the qualification compared to 48% who did not achieve this qualification.

Table 1 Distribution of students by attainment

Characteristics	Overall (n = 6492)
Whether YP had L2 qualification by age 19	
No	1,129 (17%)
Yes	5,363 (83%)
Whether YP had a L3 qualification by age 19	
No	3,095 (48%)
Yes	3,398 (52%)

Following the distribution of qualification outcomes, Table 2 presents the number and percentage of students who considered themselves to have a learning difficulty. In the dataset, 21% students self-reported learning difficulty, while 79% did not consider themselves to have a learning difficulty.

Table 2 Sample distribution by self-reported learning difficulty

Characteristics	Overall (n = 6492)
Considers self to have a learning difficulty	1,342 (21%)
Does not consider self to have a learning difficulty/No information	5,150 (79%)

Socioeconomic background

This section represents a comparative analysis of educational attainment by different socioeconomic background indicators. The three measures used are highest household occupational status, total household income and FSM eligibility at age 15. Tables 3, 4 and 5 capture sample distribution and figures 2,3 and 4 show how each measure affects attainment.

Attainment by parental occupation

Table 3 presents the distribution of students in the sample by highest household NS-SEC, which reflects the socioeconomic classification of the household based on parental occupation. The data show that the largest proportion of pupils belong to the lower professional and higher technical group (31%).

Table 3 Distribution of pupils by highest household NSSEC

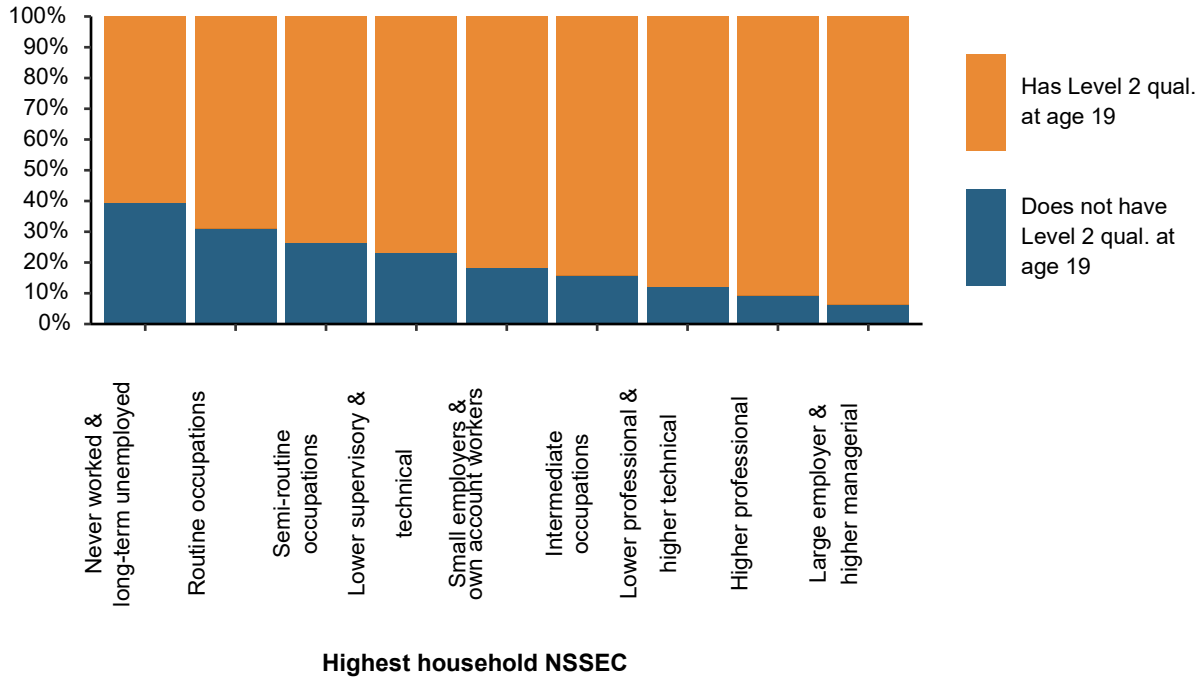
Characteristics	Overall (n = 6492)
Large employer & higher managerial	260 (4%)
Higher professional	596 (9.2%)
Lower professional & higher technical	1,984 (31%)
Intermediate occupations	1,078 (17%)
Small employers & own account workers	569 (8.8%)
Lower supervisory & technical	441 (6.8%)
Semi-routine occupations	987 (15%)
Routine occupations	473 (7.3%)
Never worked & long-term unemployed	104 (1.6%)

Figure 2 illustrates the association between household occupational status and percentage of students attaining L2 and L3 qualifications. More students from households with the highest occupational status obtained these qualifications.

A higher percentage of young people from households with higher NS-SEC (parents in higher occupational class), such as those classified as “large employers and higher managerial" (95%) or "higher professional occupations," (94%) completed L2 qualifications by 19. A smaller percentage of young people from households with parents in routine occupations (70%) and those who had never worked or were long-term unemployed (60%) achieved L2 qualifications by 19 (Figure 2).

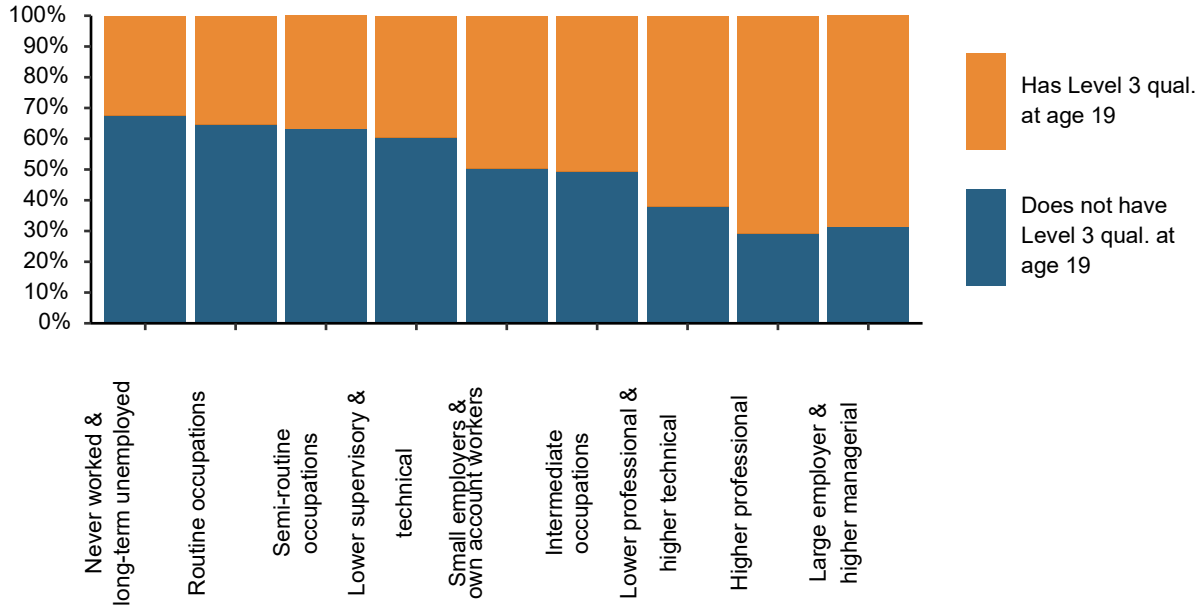
Figure 2 Percentage of young people obtaining L2 and L3 qualifications by highest parental occupational status in the household

Level 2 qualifications:



Weighted sample size: 6492

Level 3 qualifications:



Weighted sample size: 6492

Similar patterns were noted for L3 qualifications by NSSEC however the percentage of students who went on to achieve L3 qualifications was lower than those who obtained L2 qualifications. 70% students from large employer and higher managerial NS-SEC backgrounds achieved L3 qualifications compared to 30% students from families with parents who had never worked or were facing long term unemployment.

Attainment by household income

Table 4 shows the distribution of pupils by total household income, grouped into seven income bands. The largest proportion of pupils fall within the £10,400 to £20,799 band, accounting for 24% of the sample, followed by £20,800 to £31,199 band at 21%. In contrast, the £75,000 or more band has the smallest representation at 6.6%

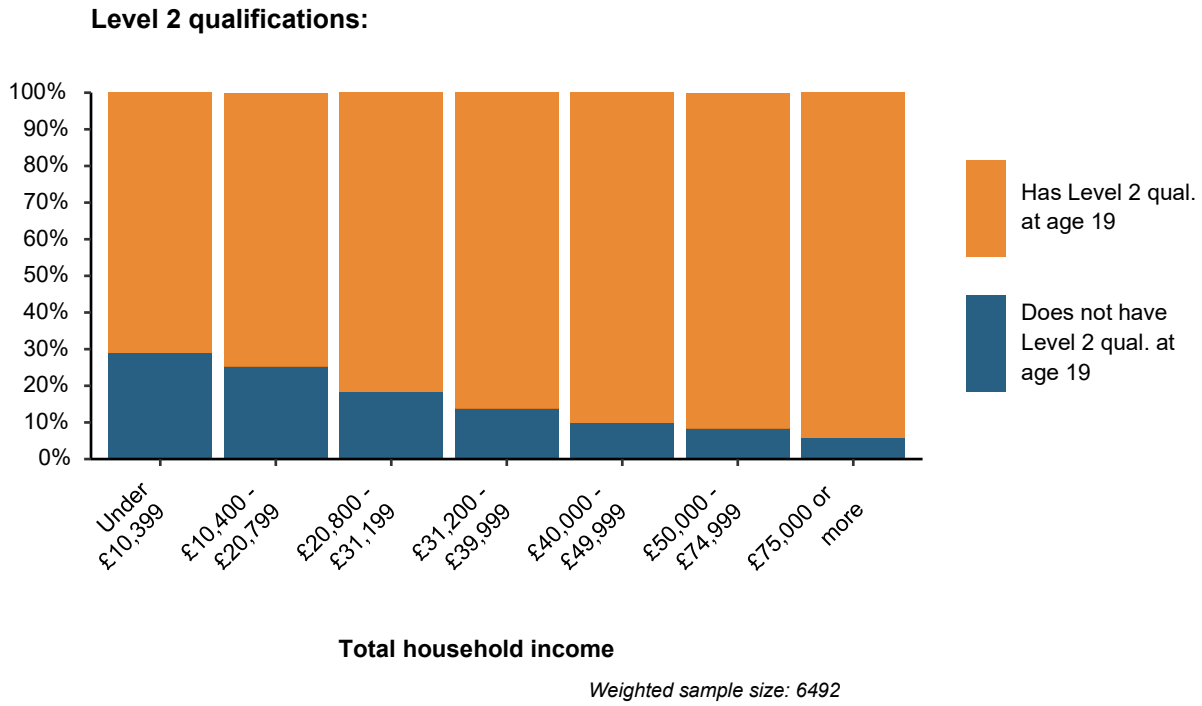
Table 4 Sample breakdown by total household income

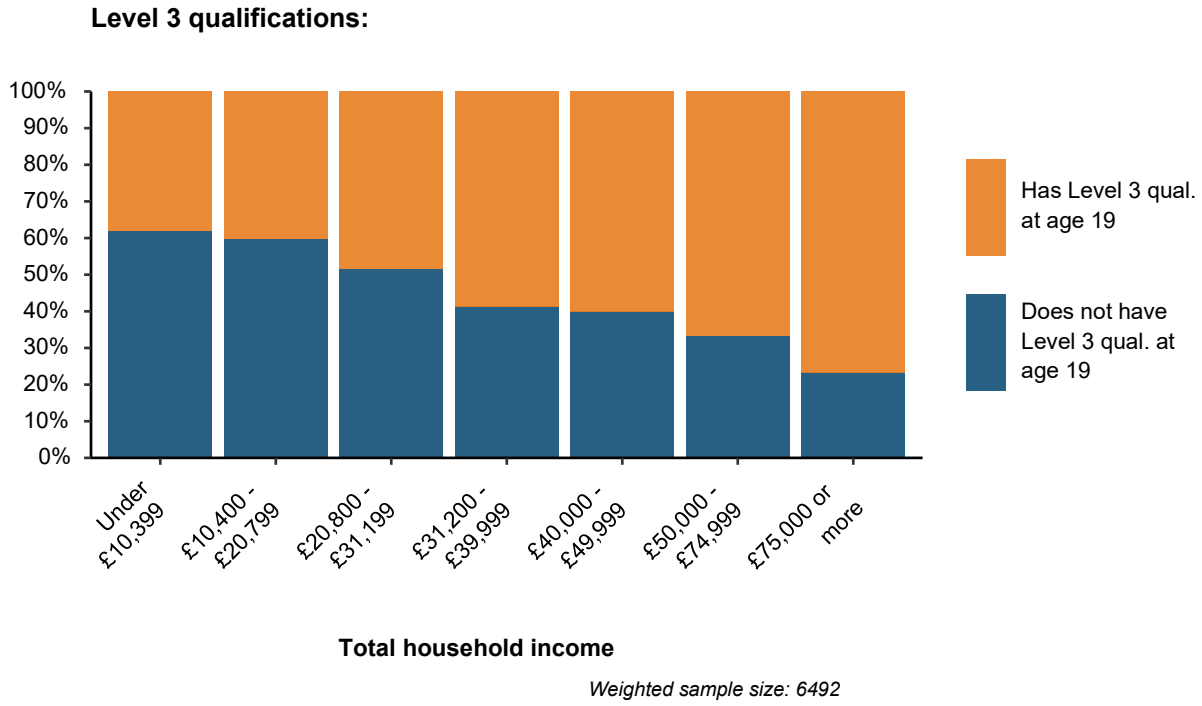
Characteristics	Overall (n = 6492)
Under £10,399	685 (11%)
£10,400 - £20,799	1,579 (24%)
£20,800 - £31,199	1,360 (21%)
£31,200 - £39,999	832 (13%)
£40,000 - £49,999	787 (12%)
£50,000 - £74,999	820 (13%)
£75,000 or more	430 (6.6%)

Figure 3 shows 95% of students from families with net household income of over £75,000 had L2 qualifications by the age of 19 compared to only 70% students from families with household income under £10,399.

Similar patterns were observed for L3 qualifications with slightly lower proportion of student achieving these qualifications across various income bands. 80% students from higher income (>£75,000) families obtained L3 qualifications by age 19 compared to 70% students from £50,000 to £74,999 group, 60% from the next income band £40,000 to £49,000 and only 40% students from families with total household income under £10,399. As household income increases, so does the percentage of young people who achieve L2 and L3 qualifications (Figure 3).

Figure 3 Percentage of students obtaining L2 and L3 qualifications by total household income





Attainment by FSM Eligibility

Table 5 shows the number and percentage of pupils in the linked dataset by FSM eligibility. In the sample, 882 students (14%) were on free school meals while 5,611 students (86%) were not on free school meals.

Table 5 Proportion of FSM and non-FSM pupils in the dataset

Characteristics	Overall (n = 6492)
Not eligible for FSM at 15	5,611 (86%)
Eligible for FSM at 15	882 (14%)

Comparable trends were observed for attainment by FSM eligibility as the other two SEB indicators. Fewer students from lower SEB obtained L2 and L3 qualifications by age 19 as measured by their FSM eligibility. 85% of non-FSM pupils obtained L2 qualifications compared to only 65% of FSM eligible pupils. At the same time 55% of non-FSM pupils had L3 qualifications by 19 compared to 30% FSM pupils (Figure 4).

Compared to L2 qualifications, a smaller percentage of students in each subgroup achieved L3 qualifications by the same age. 35% FSM pupils did not achieve an L2 qualification by 19 compared to 15% of non-FSM pupils. 70% of FSM eligible students did not attain L3 qualifications by age 19, compared to 45% of non-FSM pupils (Figure 4).

This baseline analysis and the SES attainment gap led us to investigate to what extent HLE related characteristics as defined by behaviour and relationships influence attainment. These findings can then inform whether these could serve as mitigating factors in addressing some of the barriers linked to academic success.

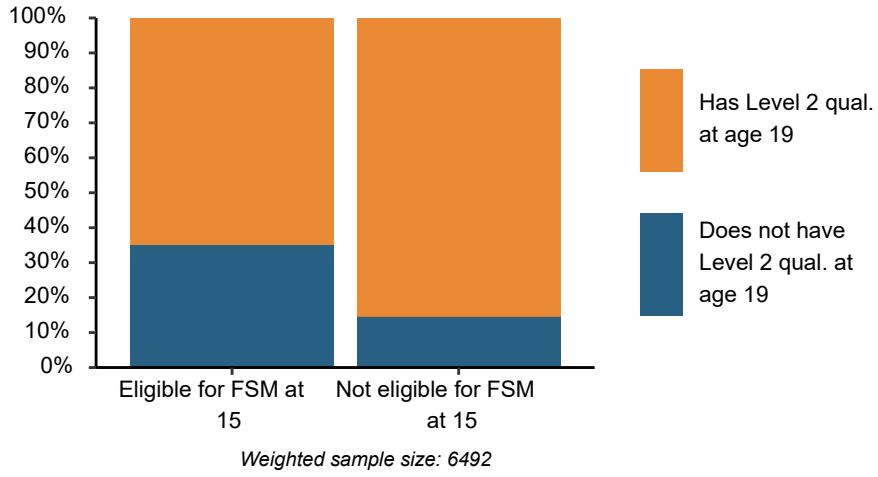
Summary findings for SEB indicators and attainment

Findings indicate a strong association between the SEB indicators and the likelihood of achieving L2 and L3 qualifications:

- Parental Occupation: A greater proportion of students from higher parental occupational classes achieved L2 and L3 qualifications.
- Parental Income: There is a clear income gradient, with more students from higher-income families achieving the qualifications.
- FSM Eligibility: Fewer FSM pupils went on to obtain L2 and L3 qualifications by age 19 compared to non-FSM pupils.

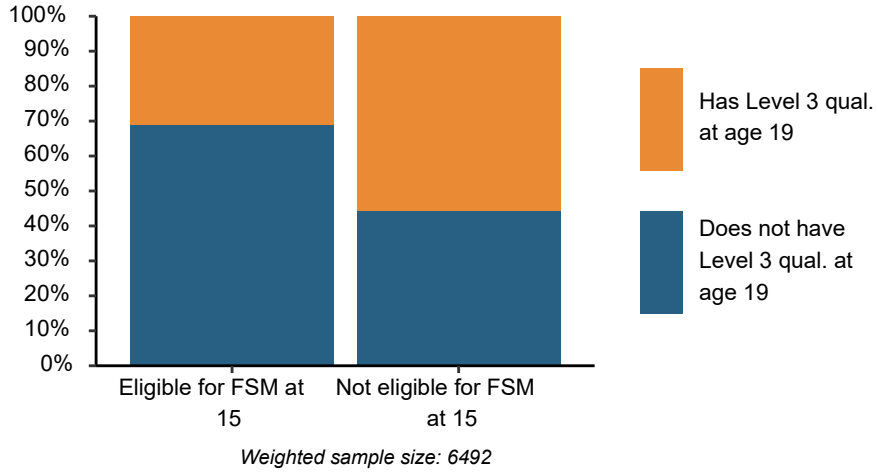
Figure 4 Percentage of students achieving L2 and L3 qualifications by FSM eligibility

Level 2 qualifications:



Weighted sample size: 6492

Level 3 qualifications:



Weighted sample size: 6492

Attainment by parental education

Table 6 provides the distribution of students in the sample by highest level of parental education, using a seven-category classification. The most common category was of students with main parent having some GCSE passes or equivalent, accounting for 23% of the sample. This was followed by students with main parent having five or more GCSEs at A*-C or equivalent at 21%. The distribution reflects a wide range of educational backgrounds among parents in the sample. 17% of students had a parent with a degree qualification such as BA, BSc or MA.

Within each category, the proportion of students identified as FSM eligible varied. For example, within the FSM eligible group 6.1% of pupils with parents holding degree qualifications were on FSM, 26% students on FSM had parents with no qualifications group while 29% FSM students had parents with some GCSE passes or equivalent (Appendix 1).

Table 6 Distribution of students by main parent's highest qualification

Characteristics	Overall (n = 6492)
Degree (e.g. BA, BSc, MA)	1,081 (17%)
HE but below degree level (HND, HNC etc)	949 (15%)
A/AS levels or equivalent	914 (14%)
5 or more GCSEs at A*-C or equivalent	1,367 (21%)
Some GCSE passes or equivalent	1,470 (23%)
Entry Level qualification/Other qualifications	111 (1.7%)
No qualifications	600 (9.2%)

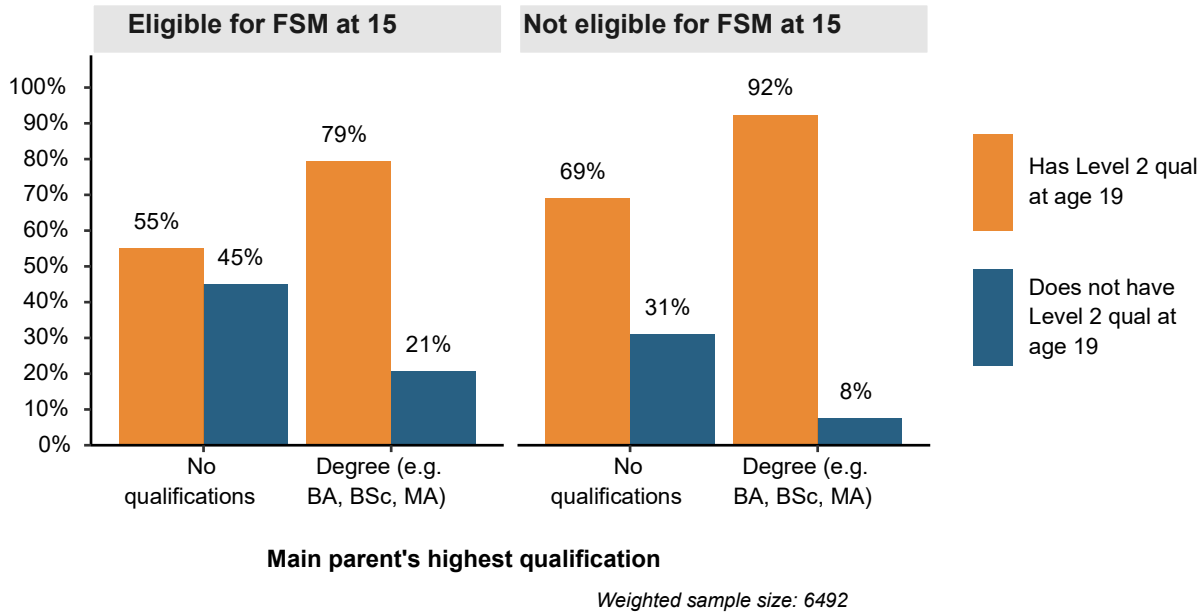
The following section examines how pupil attainment varies by parental education and FSM eligibility. Figure 5 shows the relationship between the main parent's highest qualification and the percentage of students obtaining L2 and L3 qualifications by age 19. The data indicate a strong positive association between parental education and student attainment for both FSM eligible and non-FSM pupils.

Students whose main parent held higher educational qualifications to a degree level (BA, BSc, MA) had the highest rates of L2 and L3 attainment. While students whose main parent had no formal qualifications had lowest percentages reaching these educational milestones. When the main parent had a degree qualification, 92% of non-FSM pupils and 79% of FSM students attained a L2 qualification. However, when main parent had no formal qualifications, attainment rates were lower, 69% of non-FSM and only 55% of FSM eligible students achieved L2 qualifications (Table 1).

Similarly, 72% of non-FSM pupils whose main parent had a degree qualification attained a L3 qualification whereas only 32% of non-FSM students attained L3 when the main parent had no qualifications. Similar patterns were noted for FSM pupils although the rates were lower, 50% of FSM pupils whose main parent had a degree qualification went on to achieve L3 qualification by 19 whereas only 23% of those young people whose main parent had no qualifications achieved L3 (Figure 5).

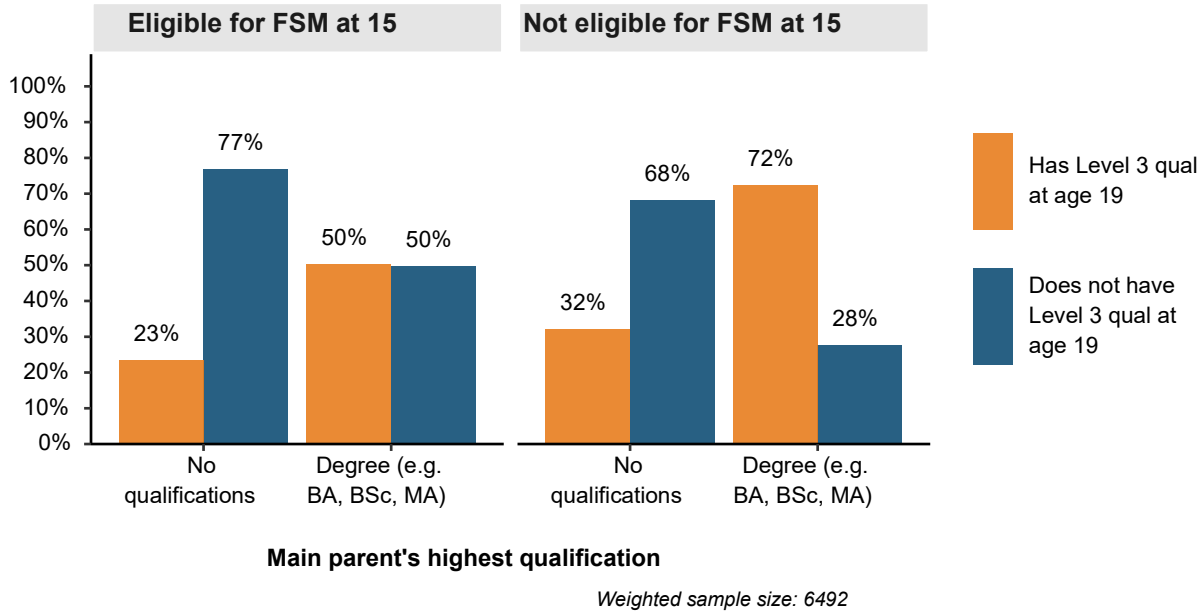
Figure 5 Percentage of students obtaining L2 and L3 qualifications by main parent's highest qualification and FSM eligibility

Level 2 qualifications:



Weighted sample size: 6492

Level 3 qualifications:



Weighted sample size: 6492

Homework completion monitoring

Table 7 presents the distribution of pupils by how often someone at home ensures they complete their homework. The five possible responses were: every time, sometimes, occasionally, never and depends on what it is.

The highest proportion of pupils reported that homework completion was monitored every time at home (49%). A smaller proportion indicated that their homework was never checked (3.7%) by their parents. This measure of homework completion monitoring was further disaggregated by FSM eligibility to explore potential differences in family engagement (appendix 1).

Table 7 Frequency of ensuring homework completion

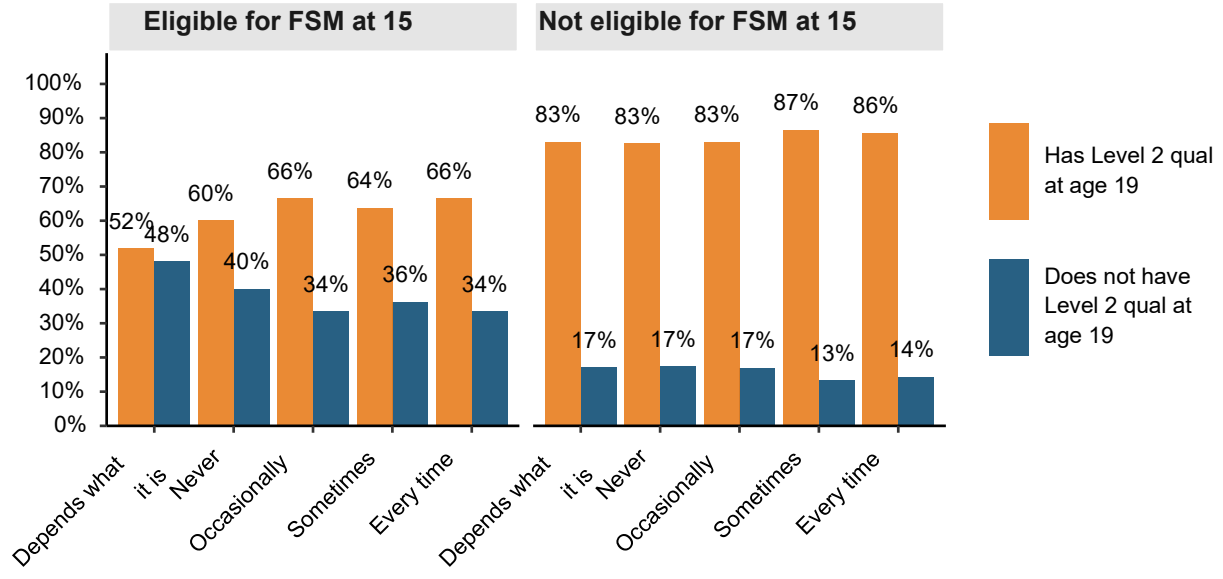
Characteristics	Overall (n = 6492)
Every time	3,184 (49%)
Sometimes	1,954 (30%)
Occasionally	935 (14%)
Never	242 (3.7%)
Depends on what it is	176 (2.7%)

For FSM pupils, frequency of homework monitoring by main parent was associated with increased rates of L2 attainment. When homework completion was monitored every time at home 66% of pupils attained L2 qualifications compared to 60% when homework completion was never monitored. Similarly, for non-FSM pupils 83% young people who were never monitored for homework completion obtained L2 qualifications compared to 86% when monitored every time.

Differences were noted in L3 attainment as well (Table 1). A lower percentage of FSM students achieved L2 and L3 qualifications compared to their non-FSM peers (Figure 6). For FSM pupils with no homework monitoring 24% achieved L3 qualifications and when monitored every time 33% achieved L3 qualifications. For non-FSM pupils who were never monitored, 47% achieved L3 qualifications, while 58% achieve L3 when monitored every time.

Figure 6 Percentage of students achieving L2 and L3 qualifications by FSM and homework completion monitoring at home

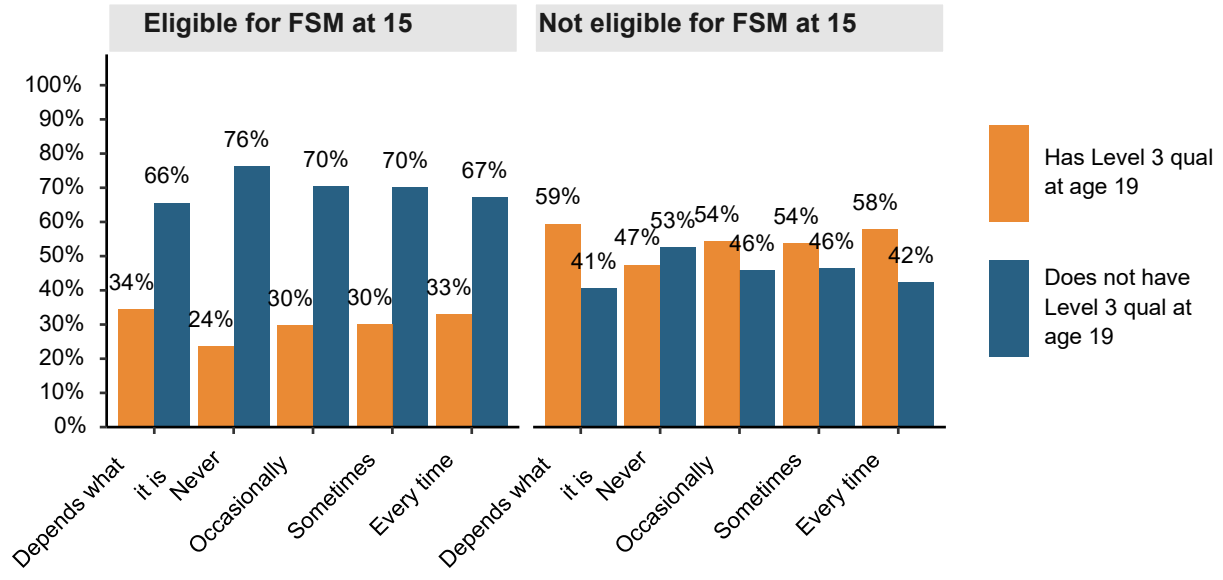
Level 2 qualifications:



Frequency of ensuring homework completion

Weighted sample size: 6492

Level 3 qualifications:



Frequency of ensuring homework completion

Weighted sample size: 6492

Receiving homework and homework help

Table 8 presents descriptive statistics on two aspects of pupils' home learning environment: whether they receive homework from school and whether they receive help with their homework at home.

Most pupils reported receiving homework form school, with 99% indicating that they are regularly assigned homework. In terms of support, 83% of students stated that someone at home helps them with their homework, while 16% reported receiving no such help (Table 8). A small proportion 1.4% indicated that they do not receive any homework at all. Appendix 1 provides a breakdown by FSM eligibility. 84% of non-FSM pupils and 79% of FSM pupils said they received help with homework at home (Appendix 1).

Table 8 Being helped with homework at home

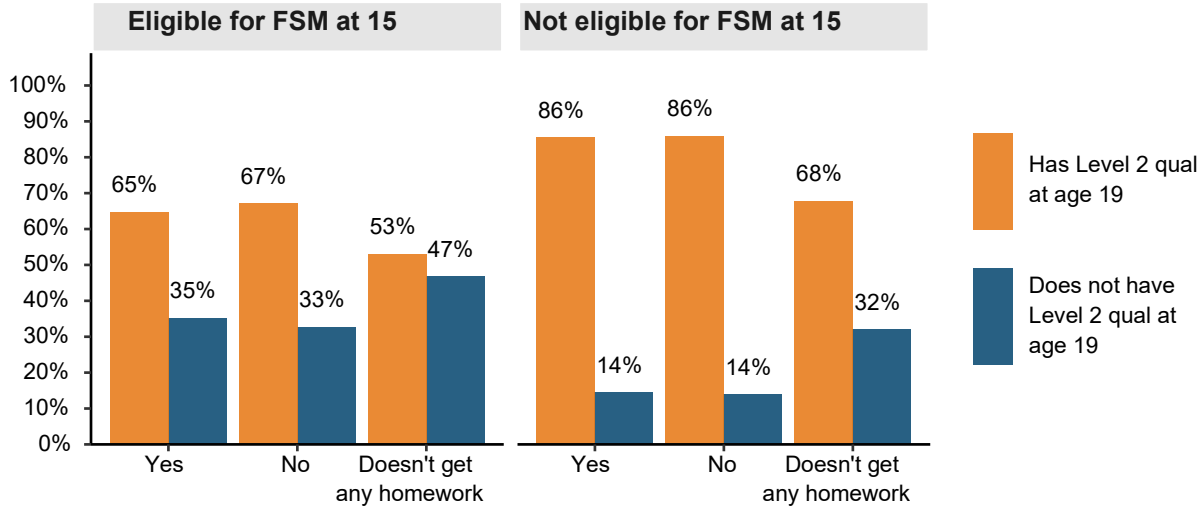
Characteristics	Overall (n = 6492)
Does not get any homework	91 (1.4%)
Does not get any help with homework	1,010 (16%)
Gets help with homework at home	5,392 (83%)

Figure 7 illustrates the relationship between FSM eligibility, being helped with homework at home and attainment of L2 and L3 qualifications. For L2 attainment, among FSM pupils, attainment rates were similar for those who received homework help (65%) and those who did not (67%), while attainment was lower (53%) for those who reported not receiving any homework from school. Among non-FSM pupils, attainment rates were notably higher overall, with 86% achieving L2 irrespective of whether they received help with homework or not. However, attainment dropped to 68% among those who reported not receiving any homework.

For L3 attainment, a similar pattern was observed. Among FSM pupils, 30% of those who received homework help attained L3 qualifications, compared to 35% of those who did not receive homework help and 29% of those who did not receive homework. For non-FSM pupils, 56% attained L3 qualifications regardless of whether they were helped homework at home or not but this dropped to 26% for those who reported not receiving any homework.

Figure 7 Percentage of young people achieving L2 and L3 qualifications by FSM and being helped with homework at home

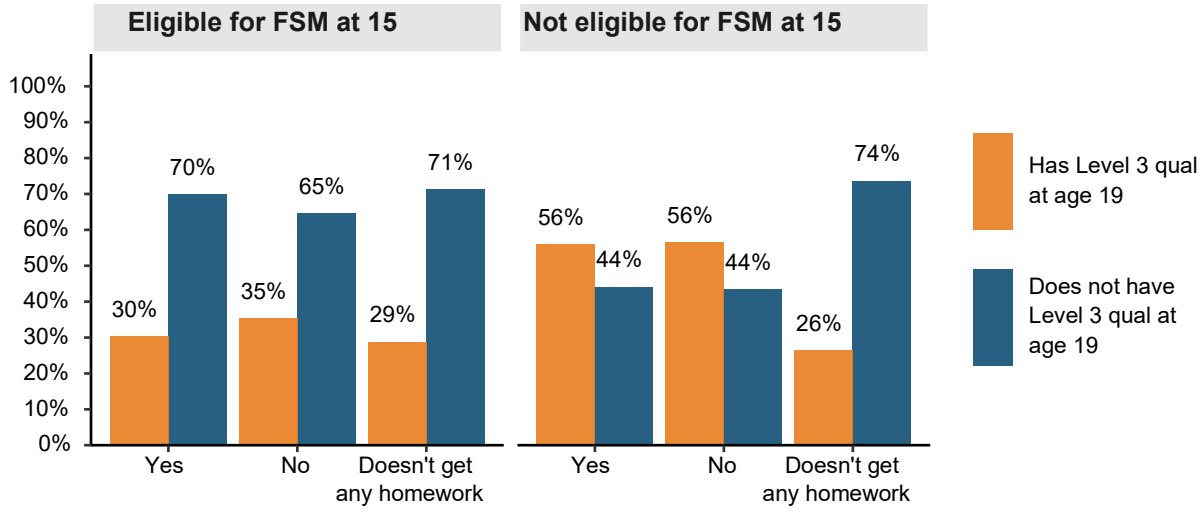
Level 2 qualifications:



Does anyone help with homework?

Weighted sample size: 6492

Level 3 qualifications:



Does anyone help with homework?

Weighted sample size: 6492

Parent-child relationships

Table 9 presents descriptive statistics on how young people reported getting on with their main parent. Responses were recoded into two categories: getting on well and not getting on well.

Most students reported getting on well with their main parent (99%), while a smaller proportion indicated that they do not have a good relationship (0.7%). These figures provide context for understanding the role of parent-child relationships in shaping pupils' emotional wellbeing and potential engagement with education (Table 9). Appendix 1 shows 0.7% of non-FSM pupils and 1.2% of FSM pupils reported not getting on well with their parents.

Table 9 How well YP gets on with main parent

Characteristics	Overall (n = 6492)
Very well/Fairly well	6,444 (99%)
Fairly badly/Very badly	48 (0.7%)

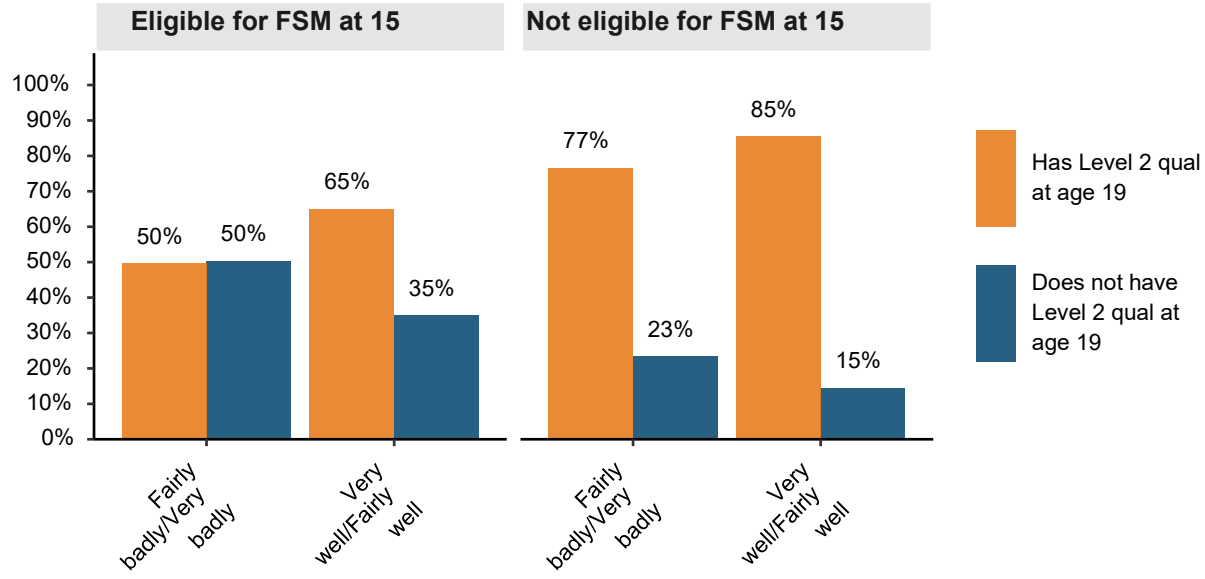
Figure 8 shows positive relationships with parents correlated with higher attainment of both L2 and L3 qualifications. In the sub-group of FSM pupils who reported not getting on well with the main parent only 50% students achieved L2 qualifications compared to 65% of those FSM pupils who reported getting on well with their parents.

For non-FSM pupils 77% of those who reported not getting on well with their main parent obtained L2 qualifications at 19 compared to 85% of those who reported getting on well with their parents.

27% of FSM pupils who did not get on well with the main parent had an L3 qualification by the age of 19 compared to 31% of those FSM pupils who reported getting on well with their main parent. For non-FSM pupils 59% of those who did not get on well with main parent achieved L3 qualifications compared to 56% of those who got on well.

Figure 8 Percentage of students achieving L2 and L3 qualifications by FSM eligibility and how well they get on with their main parent

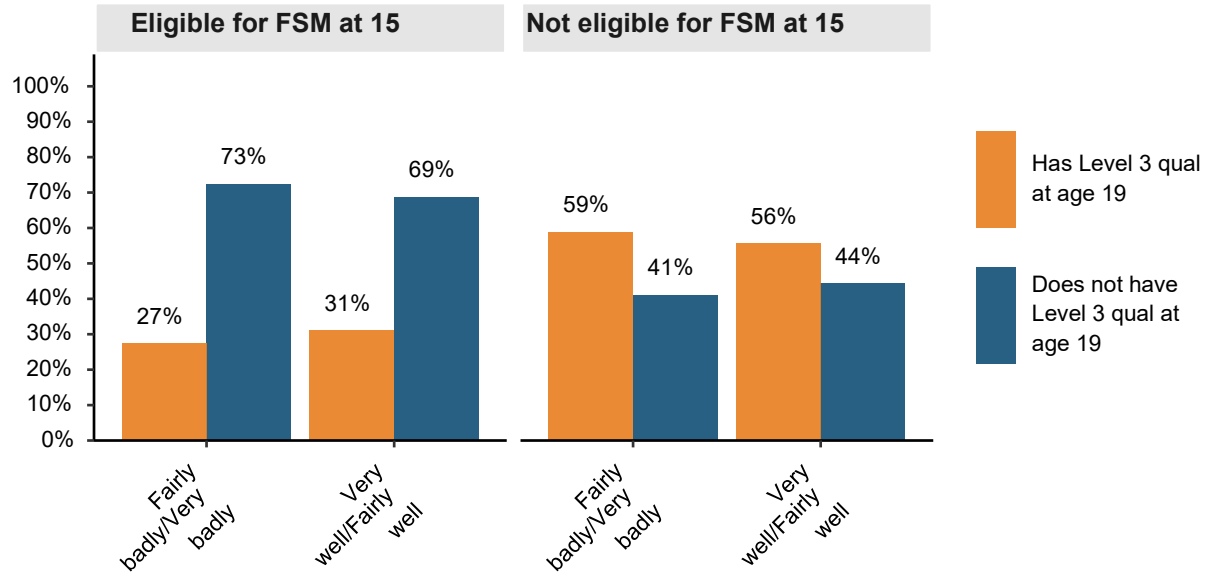
Level 2 qualifications:



How well young person gets on with main parent

Weighted sample size: 6492

Level 3 qualifications:



How well young person gets on with main parent

Weighted sample size: 6492

Risk factors

Table 10 presents the distribution of pupils according to the number of risk factors they acknowledge. Based on their responses they were grouped into three categories: no risk factors acknowledged, one to three risk factors and four or more risk factors.

The largest proportion of students were in the zero risk factor category (62%), followed by one to three risk factors (34%). A smaller proportion (4.1%) said they had engaged in more than four types of negative behaviours. Appendix 1 shows 3.6% of non-FSM pupils and 6.9% of FSM pupils said they had engaged in more than four types of negative behaviour items.

Table 10 Number of risk factors acknowledged by YP

Characteristics	Overall (n = 6492)
0 risk factors acknowledged	4,043 (62%)
1-3 risk factors acknowledged	2,185 (34%)
4+ risk factors acknowledged	265 (4.1%)

Figure 9 shows antisocial risk-taking behaviours acknowledged by young people reflected in the proportion of those who went on to achieve L2 and L3 qualification by 19 for all pupils. Only 41% of FSM pupils who acknowledged more than 4 risk factors achieved L2 qualifications, compared to 60% of those FSM pupils who acknowledged one to three factors and 73% of those FSM pupils who never engaged in anti-social behaviours.

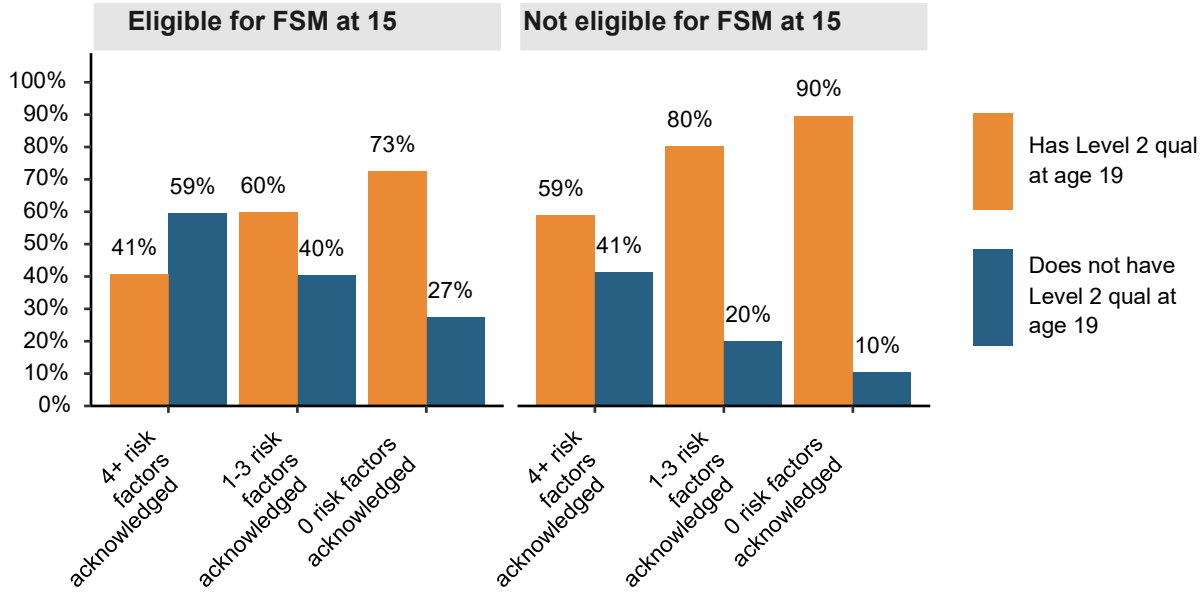
Similarly, within the non-FSM sub-group 59% of pupils with more than four risk factors obtained L3 qualifications compared to 80% of those who acknowledged one to three risk factors and 90% of those who did not engage in anti-social behaviour (Figure 9).

Similar patterns were noted for L3 qualifications. Only 10% of FSM pupils who acknowledged more than four risk factors obtained L3 qualifications. At the same time 25% of those who acknowledged one to three risk factors and 40% of those who did not engage in antisocial behaviour achieved L3 qualifications.

In the non-FSM pupils' subgroup only 27% of those who acknowledged more than four negative behaviours obtained L3 qualifications, compared to 44% of those who engaged in one to three negative behaviours and 63% of those who did not engage in any antisocial behaviour.

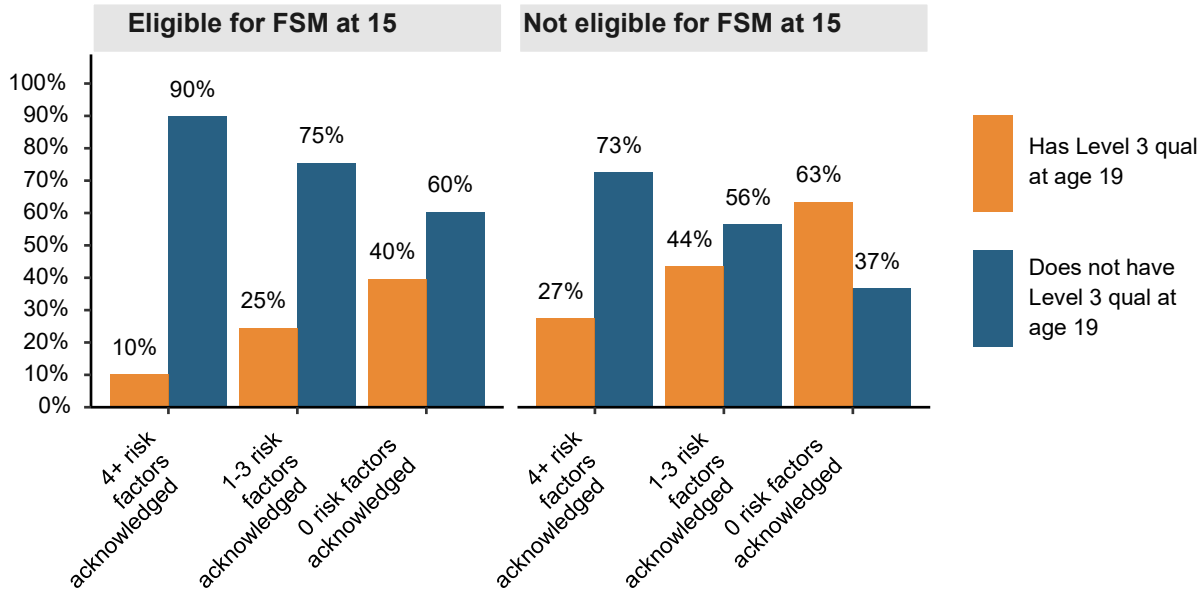
Figure 9 Percentage of students attaining L2 and L3 qualifications by their risk-taking behaviour and FSM eligibility

Level 2 qualifications:



Weighted sample size: 6492

Level 3 qualifications:



Weighted sample size: 6492

Perceptions of safety

Table 11 shows the distribution of pupils' responses to the statement 'I feel safe in the area where I live,' categorised into five main response options: strongly agree, agree, neither agree nor disagree, disagree and strongly disagree. These findings provide insights into pupils' sense of safety where they live.

Most pupils reported feeling safe in their local area, with 41% selecting strongly agree and 41% selecting agree. A smaller proportion expressed uncertainty (13%) or disagreement (4%), with 1.1% selecting strongly disagree (felt very unsafe).

Table 11 YP's agreement with the statement: I feel safe in the area where I live

Characteristics	Overall (n = 6492)
Strongly agree	2,645 (41%)
Agree	2,644 (41%)
Neither agree nor disagree	869 (13%)
Disagree	261 (4.0%)
Strongly disagree	74 (1.1%)

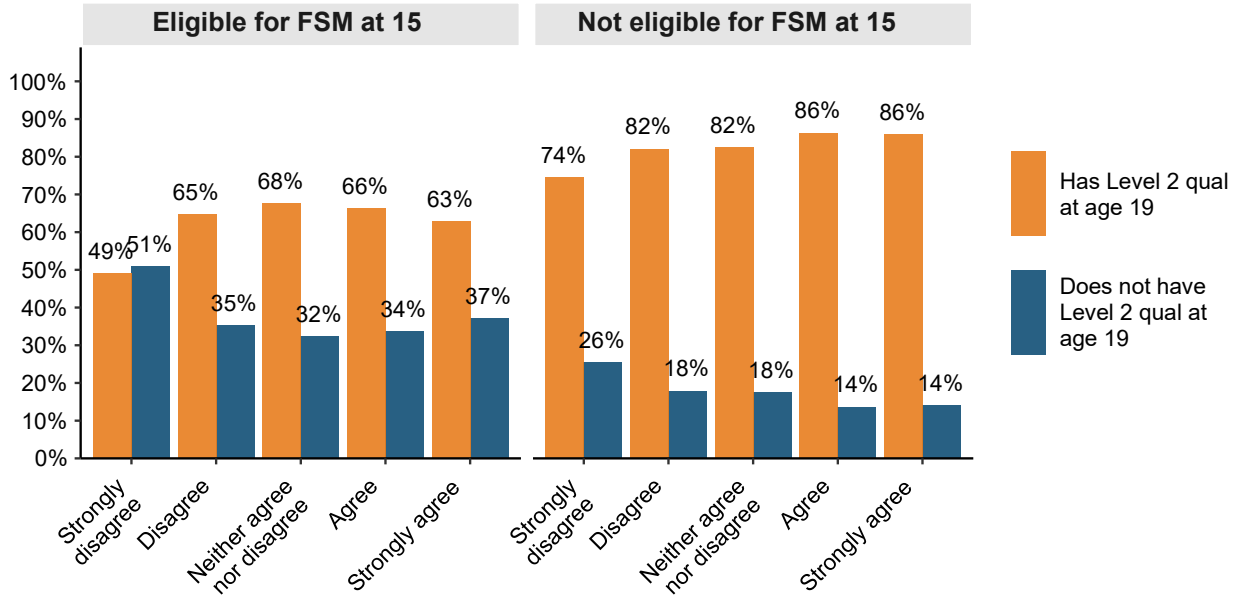
Appendix 1 shows 83% of non-FSM pupils and 74% of FSM eligible pupils said they felt safe where they lived. At the same time 4.6% non-FSM pupils and 8.6% FSM pupils said they did not feel safe where they lived.

Figure 10 illustrates the percentage of students who achieved L2 and L3 qualifications categorised by their eligibility for FSM and their perception of safety. Only 49% of FSM pupils who did not feel safe where they lived achieved L2 qualifications compared to 63% of those who felt safe where they lived and went on to achieve L2 qualifications. Within the non-FSM subgroup 74% of those who did not feel safe where they lived achieved L2 qualifications compared to 86% of those who felt safe and achieved L2 qualifications.

For L3 only 25% of FSM pupils and 48% of non-FSM pupils who did not feel safe where they lived achieved L3 qualifications compared to 30% of FSM and 57% of non-FSM pupils who felt safe where they lived and went on to achieve L3 qualifications (Figure 10).

Figure 10 Percentage of students achieving L2 and L3 qualifications by FSM eligibility and their perceptions of safety in the area where they live

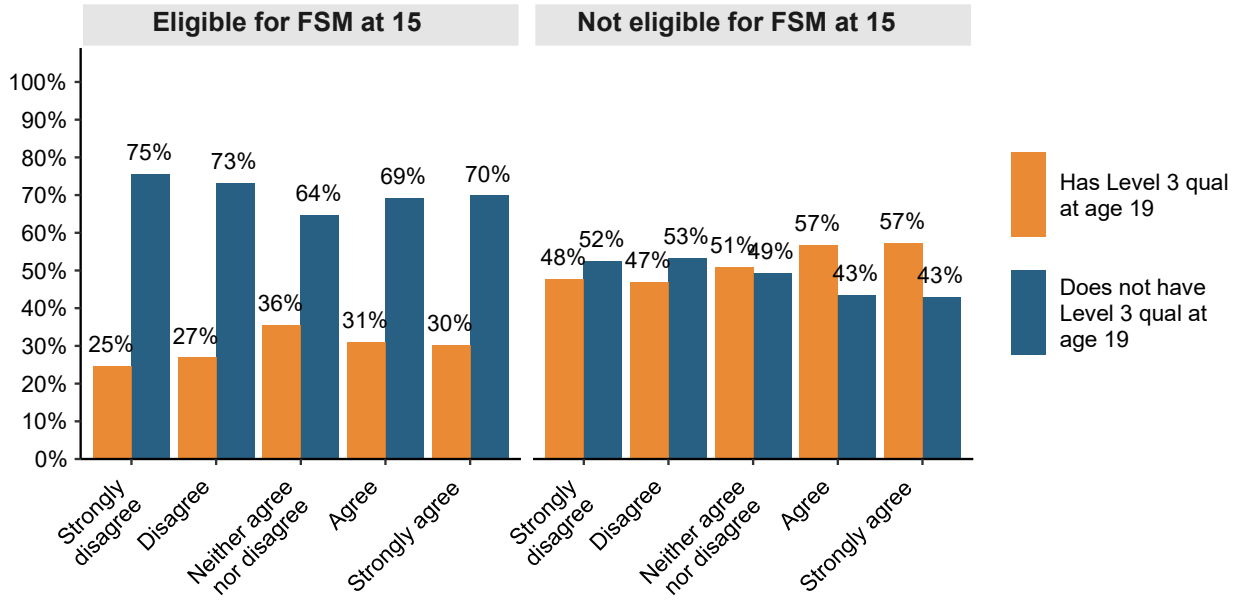
Level 2 qualifications:



Young person agreement with statement: I feel safe in the area where I live

Weighted sample size: 6492

Level 3 qualifications:



Young person agreement with statement: I feel safe in the area where I live

Weighted sample size: 6492

Table 12 Results from multivariate logistic regression showing the odds of attaining L2 and L3 qualifications by age 19 (See also Appendix 3)

Characteristic	L2	L3
FSM eligibility at 15 (Not FSM eligible=reference)		
Eligible for FSM at 15	0.47	0.52
MP's highest qualification (Degree e.g. BA, BSc, MA=reference)		
HE below degree level	0.65	0.62
A/AS levels or equivalent	0.53	0.53
5 or more GCSEs at A*-C or equivalent	0.51	0.41
Some GCSE passes or equivalent	0.35	0.31
Entry Level qualifications/Other qual	0.32	0.38
No qualifications	0.21	0.20
How well YP gets on with MP (Very well/fairly well=reference)		
Fairly badly/Very badly	0.56	1.19
Does anyone help with homework? (Does not get homework=ref)		
No	2.24	2.57
Yes	1.67	1.96
Homework completion monitoring (Every time=reference)		
Sometimes	1.08	0.87
Occasionally	0.95	0.95
Never	1.07	0.77
Depends on what it is	0.92	1.33
Risk factors (0 risk factors acknowledge-=reference)		
1-3 risk factors acknowledged	0.51	0.46
4+ risk factors acknowledged	0.20	0.22
YP: I feel safe where I live (Strongly agree=reference)		
Agree	1.11	1.04
Neither agree nor disagree	0.99	0.96
Disagree	1.06	0.88
Strongly disagree	0.66	0.94
Self-reported learning difficulty (Yes=reference)		
No learning difficulty/No information	2.41	2.07

Multivariate analysis: Logistic regression models for L2 and L3 attainment

This section presents results from the multivariate analysis. The predictive model examines the relationship between the independent variables and the likelihood of obtaining L2 and L3 qualifications by the age of 19. Odds ratios (OR) are summarised in Table 12. A slightly detailed table with ORs along with 95% confidence intervals (CI) and p-values has been provided in Appendix 2 and 3. Appendix 2 shows univariate models and Appendix 3 shows multivariate models to illustrate the strength, significance and direction of these associations. The plot in Figure 11 shows the results from multivariate logistic regression models predicting the odds of attaining L2 and L3 by age 19.

Modelling L2 attainment at age 19

The model examined the factors associated with attaining L2 qualifications by age 19, adjusting for socioeconomic background, parental education, HLE related factors and other individual characteristics.

The results show strained relationships with parents, antisocial behaviour and feeling unsafe where young people lived led to lower odds of achieving L2, even after controlling for other covariates. Additionally, parental education, socioeconomic status (FSM eligibility) and disability were strong predictors of L2 attainment, with pupils from higher socioeconomic background (non-FSM) and those who parents had a degree qualification being significantly more likely to achieve L2.

Homework engagement, including being set homework by school and receiving help with homework showed positive coefficients in the model indicating that higher values of these variables are associated with higher odds of the outcome. The following section presents detailed results illustrating the relative strength of these associations.

Key findings

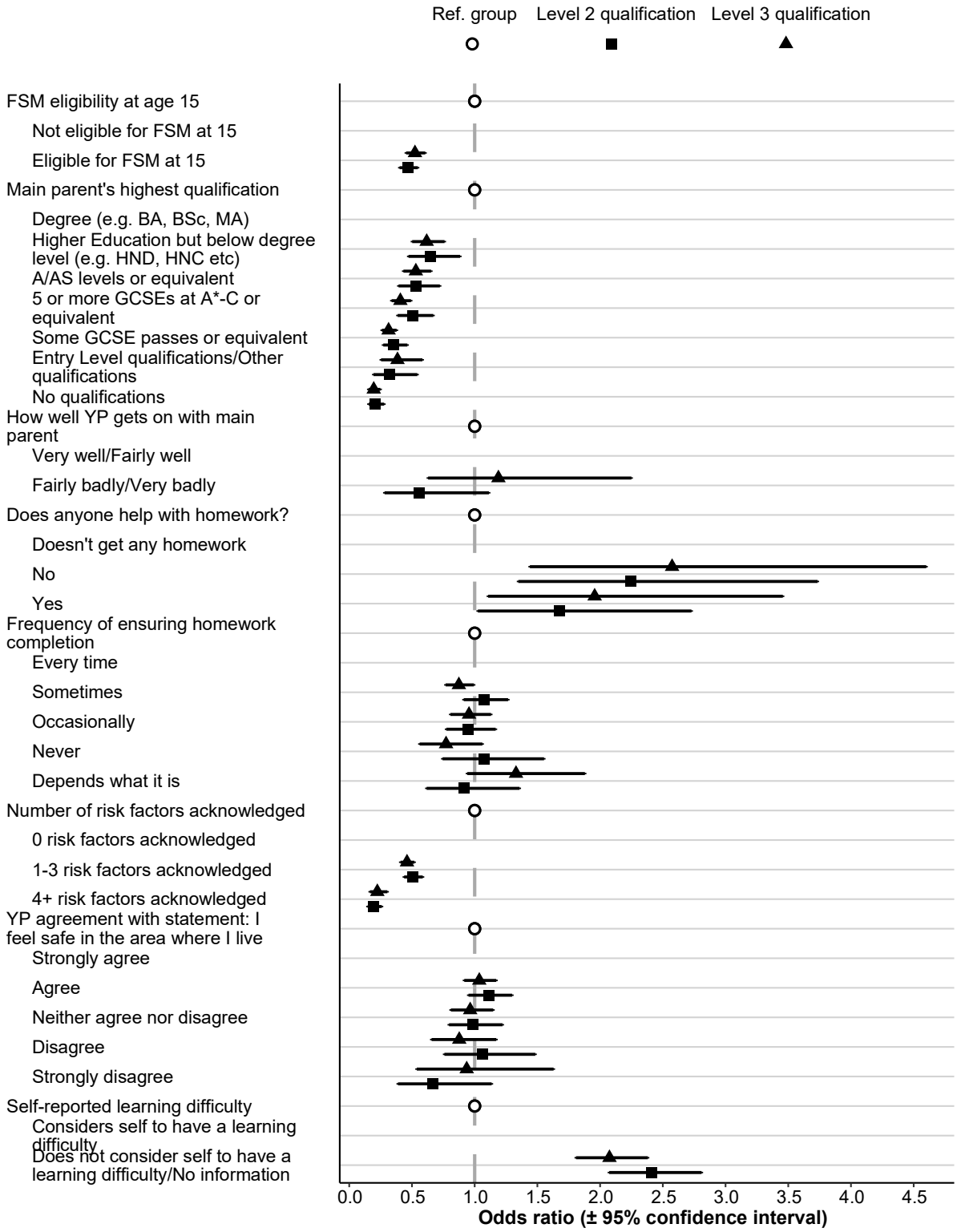
- FSM eligibility: FSM pupils had significantly lower odds of achieving L2 qualifications by age 19 compared to their non-FSM peers (OR = 0.47, CI = 0.40, 0.55). FSM eligibility was associated with less than half the odds of attaining L2, demonstrating a strong negative relationship between socioeconomic disadvantage and educational attainment.
- Parental education: Main parent's highest qualification strongly predicted the likelihood of achieving L2 qualifications by age 19. Compared to young people whose parents had university degrees those with parents having lower qualifications had significantly lower odds of attaining L2. The odds ratios were 0.65 (CI = 0.47, 0.88) for students with main parent having higher education but

below degree level qualifications, 0.53 (CI = 0.39, 0.72) when main parent had A/AS levels or equivalent qualifications, 0.51 (CI = 0.39, 0.67) for main parent with five or more GCSE passes or equivalent qualifications, 0.35 (CI = 0.27, 0.46) for some GCSE passes or equivalent, 0.32 (CI = 0.19, 0.54) for entry level qualifications and 0.21 (CI = 0.15, 0.28) for no qualifications.

- Parent-child relationships: Compared to those students who got on well with their parents, students who reported not getting on well had lower odds of obtaining L2 by 19 (OR = 0.56, CI = 0.28, 1.11).
- Homework-related factors: The logistic regression analysis identified predictive relationships between L2 attainment and two aspects of homework engagement – homework help at home and homework completion monitoring. Compared to pupils who did not receive any homework, those who received homework but were not helped at home had 2.24 times higher odds (OR = 2.24, CI = 1.35, 3.73) of achieving L2, while those who received homework and were helped had 1.67 times higher odds (OR = 1.67, CI = 1.03, 2.73). Thus, receiving homework had higher ORs for L2 attainment.

  The frequency of homework completion monitoring was also examined in relation to L2 attainment. Compared to pupils whose homework was monitored every time, those whose homework was monitored sometimes had similar higher odds of attaining L2 (OR = 1.08, CI = 0.91, 1.27), while those monitored occasionally had slightly lower odds (OR = 0.95, CI = 0.77, 1.17). Students whose homework was never monitored had an OR of 1.07 (CI = 0.74, 1.55), and those whose monitoring depended on the type of homework had an OR of 0.92 (CI = 0.62, 1.36).
- Perceptions of safety: Young person's perception of whether they felt safe in the area where they live showed lower odds of obtaining L2 qualifications at 19 when they felt very unsafe (OR = 0.66, CI = 0.39, 1.14) compared to those who reported feeling safe.
- Risk factors: More risk factors (score for negative behaviour) led to lower odds of attaining L2 qualifications. Students who acknowledged one to three risk factors had lower odds (OR = 0.51, CI = 0.44, 0.59) and the odds reduced further for those who acknowledged more than four risk factors (OR = 0.20, CI = 0.15, 0.26) compared to those who did not have any negative behaviour
- Learning disability: The odds of obtaining L2 qualification by 19 were higher for those who did not consider themselves to have a learning difficulty compared to those who did (OR = 2.41, CI = 2.07, 2.81)

Figure 11 Plot showing the results from multivariate logistic regression models predicting the odds of attaining L2 and L3 by age 19



Modelling attainment of L3 qualifications

A logistic regression analysis was conducted to examine the relationship between HLE, behaviour and attainment. The independent variables used in the analysis were SEB, main parent's highest educational qualification, parent-child relationships, homework related factors, young person's perceptions of safety, risk factors acknowledge by them and disability. The attainment measure used in the model was the likelihood of obtaining L3 qualifications by the age of 19.

Similar patterns were noted for the odds for L3 qualifications as for L2 qualifications, indicating consistent effects across these levels (see Figure 11 and Table 12).

Key findings

- FSM eligibility: FSM eligible pupils had significantly lower odds of achieving L3 qualifications by age 19 compared to their non-FSM peers (OR = 0.52, 95% CI = 0.45, 0.61). This demonstrates a strong negative relationship between socioeconomic disadvantage and educational attainment for L3, like L2.
- Parental education: Main parent's highest qualification predicted the likelihood of achieving L3 qualifications by age 19. Compared to students whose parents had university degrees those students whose parents had lower qualifications had significantly lower odds of attaining L3. The odds ratios were 0.62 (CI= 0.5, 0.76) for parents with higher education but below degree level qualifications, 0.53 (CI = 0.43, 0.65) for a A/AS levels or equivalent qualifications, 0.41 (CI = 0.34, 0.49) for five or more GCSE passes or equivalent qualifications, 0.31 (CI = 0.26, 0.38) for some GCSE passes or equivalent, 0.38 (CI = 0.25, 0.58) for entry level qualifications and 0.20 (CI = 0.15, 0.25) for no qualifications.
- Parent-child relationships: Students who did not get on well with their parents have 1.19 times the odds of achieving L3 qualifications compared to students who got on well with their parents. However, this value is close to 1 and suggests a weak association. The confidence interval (0.63, 2.25) is quite wide and includes 1. This implies that the odds ratio could be anywhere between 0.63 and 2.25, indicating a high level of uncertainty about the effect size.
- Homework-related factors: Being set homework was associated with higher likelihood of obtaining L3 qualifications when compared to not being set homework by school (OR=1.96, CI = 1.11, 3.46). Also, homework completion monitoring at home was associated with higher likelihood obtaining L3. When homework completion was never monitored the odds of achieving L3 were 0.77 (CI = 0.56, 1.06)

- Perceptions of safety: Students showed lower odds of obtaining L3 qualifications at 19 when they felt unsafe in the area where they lived (OR = 0.88, CI = 0.66, 1.17) compared to those who did.
- Risk factors: Engagement in more risk factors led to lower odds of attaining L2 qualifications. Young people who acknowledged one to three risk factors had lower odds (OR = 0.46, CI = 0.41, 0.52) and those with more than four risk factors had much lower odds (OR = 0.22, CI = 0.17, 0.30) compared to those who did not have any negative behaviour issues.
- Learning disability: The odds of obtaining L3 qualifications by 19 were higher for those who did not consider themselves to have a learning difficulty compared to those who did (OR = 2.07, CI = 1.81, 2.38)

Discussion

This chapter discusses the findings from the analysis of factors predicting attainment among young people, based on both bivariate and a multivariate logistic regression model. The discussion interprets the significant predictors, links them to existing literature to explore possible mechanisms and reflect on the implications for policy, practice and further research.

Bivariate analysis identified ten variables that significantly correlated with attainment (Appendix 2). These included individual level, family level and environmental factors. For example, socioeconomic indicators such as household occupational status, household income and FSM eligibility consistently predicted educational outcomes. Additionally, family dynamics including homework monitoring, parental support, and parent-child relationships showed meaningful associations with attainment. The findings also showed how the persistent educational inequalities linked to socioeconomic disadvantage are exacerbated by behavioural and environmental factors such as perceptions of safety.

The logistic regression was subsequently developed including eight predictors and one binary outcome variable representing attainment (Appendix 3). The multivariate model revealed five statistically significant predictors: FSM eligibility, disability, parental education, young person’s negative behaviour and perception of safety in their area. These findings show that educational attainment is influenced by a complex interplay of socioeconomic, behavioural and environmental factors.

Socioeconomic indicators and parental background

Consistent with existing literature (Crawford et al., 2022; Banerjee, 2016), findings demonstrate a clear association between **parental occupation** and educational attainment. Students from households with higher occupational status showed higher rates of achieving L2 and L3 qualifications. This aligns with previous research indicating that higher parental occupational status is linked with greater economic, cultural, and social capital, enhancing students' educational opportunities through additional academic resources, stability, and aspirations (SMC 2023).

Household income similarly emerged as a determinant, demonstrating the link between economic capital (financial resources) in a family and educational outcomes. Students from higher-income families may benefit from additional resources, including private tutoring, technology, and extracurricular learning opportunities, facilitating attainment. The clear relationship between income disparities and educational

outcomes underscores persistent structural inequalities and highlights the need for targeted interventions to address these barriers.

Eligibility for free school meals was used as a proxy indicator of socioeconomic background as it is consistently recorded through administrative data sources, providing more reliable and complete data compared to self-reported measures of occupation or income, which can suffer from missing responses or inaccuracies. Moreover, the FSM eligibility indicator offers a straightforward binary classification in terms of whether a student is eligible or not eligible for FSM, making it easier to interpret and compare groups. This stability and simplicity are particularly advantageous in longitudinal research contexts where measures such as parental income and occupation may fluctuate over time or require complex categorisation.

However, as FSM eligibility provides only a binary view of socioeconomic status it may exclude disadvantaged students whose families fall just outside eligibility criteria and those who were eligible but did not claim FSM. Despite these limitations, FSM remains widely adopted due to its reliability, practicality and clear policy relevance. FSM eligibility aligns closely with established policy definitions of socioeconomic disadvantage, making it particularly relevant for research informing educational interventions and policymaking. It has also demonstrated strong predictive value regarding educational outcomes, attainment gaps and progression to further education.

The analysis shows that a higher proportion of non-FSM students achieved L2 and L3 qualifications compared to FSM students. This supports long standing evidence that socioeconomic disadvantage is a strong predictor of educational outcomes. FSM eligibility may serve as a proxy for a range of stressors that interfere with engagement and act as barriers. It is important to consider other underlying factors influencing disparity that could be linked to environment.

Parental qualifications were positively associated with attainment, reflecting well documented patterns. Students whose main parent held a degree level qualification had the highest rates of attainment, with a significantly larger proportion achieving both L2 and L3 qualifications by age 19. In contrast students from households where the main parent had no formal qualifications had the lowest attainment rates. More educated parents may be better positioned to support their children academically, navigate the school system and set high expectations (Goodman & Gregg, 2010).

Behavioural factors

Self-reported negative behaviours were also associated with lower attainment. Behavioural **risk factors** such as truancy, disruptive behaviour, crime involvement, and substance abuse - are associated with lower educational attainment. Such negative behaviour may disrupt progress and attainment in education directly through school exclusion or disengagement or indirectly by generating punitive school responses and reducing students' opportunities to engage positively with learning environments. These results reinforce the importance of behavioural interventions, particularly those that address underlying psychological determinants, as an integral component of strategies to close attainment gaps.

Environmental factors

Student **perception of neighbourhood safety** was significantly associated with attainment. Students who perceived their neighbourhoods as unsafe had lower odds of attainment. This variable often overlooked in educational research highlights the importance of environmental and psychological safety. Feeling unsafe can increase anxiety and stress and can reduce focus, attendance or academic engagement (Wilkinson and Pickett, 2010). Students who felt safer in their neighbourhoods had higher attainment rates.

Three variables included in the model were not statistically significant. While these may have shown bivariate correlations with attainment, their effects diminished once other variables were controlled for. This suggests potential collinearity or shared variance with stronger predictors and underscores the importance of multivariate analysis in identifying independent effects.

Help received at home for **homework completion** and monitoring were two factors associated with parental engagement with learning. Students receiving regular **homework monitoring** at home were more likely to achieve higher qualifications, potentially reflecting the positive impact of structure, time management, and accountability on educational success. However, the impact of homework monitoring appeared less clear-cut among FSM pupils, suggesting that structural barriers associated with socioeconomic disadvantage may attenuate the positive effects of parental homework involvement. These differences may reflect varying home circumstances and cultural norms around parental involvement and are important for understanding educational engagement across pupil groups. Nevertheless, these findings are consistent with Education Endowment Foundation (EEF, n.d.) evidence that structured homework routines typically enhance secondary school pupils'

attainment, highlighting the potential value of interventions that encourage regular parental monitoring or structured support for homework completion.

The analysis demonstrated the critical role of **parent-child relationship** in supporting educational attainment. Pupils who reported warm, supportive relationships with parents or guardians had consistently higher odds of achieving L2 and L3 qualifications. Positive relationships at home enhance emotional well-being, motivation, and overall engagement in academic activities, aligning with previous literature emphasising the centrality of emotional support to academic success (Jessiman et al., 2022; Demiröz, 2020).

Conversely, frequent conflicts and arguments with the main parent, was negatively associated with attainment. Such conflict creates emotional stress, reduces motivation, and diminishes parental involvement, thereby adversely affecting students' educational progress. These findings reinforce the importance of fostering positive family dynamics as a strategy for improving academic outcomes, particularly among disadvantaged students facing additional stressors.

The results highlight the strong influence of socioeconomic factors on educational outcomes, while also demonstrating the role of behavioural and environmental factors and family dynamics. These findings suggest clear policy directions: strategies that combine economic support, behavioural interventions, and family-focussed programmes could effectively mitigate educational inequalities and support equitable outcomes.

Future research

While the model highlights key predictors, it does not establish causality. Future research could extend this analysis using longitudinal data to explore mediating pathways such as those linked to mental health and teacher expectations). There is also scope for test and learn interventions in this space to evaluate impacts using experimental or quasi-experimental designs.

This chapter has discussed how attainment among young people is shaped by intersecting socio-economic, behavioural, and environmental factors. By identifying significant predictors such as behaviour and perceptions of safety the findings offer a robust evidence base for informing equity-driven educational policy and practice. Holistic approaches that address both in-school and out-of-school influences are essential to improving outcomes for disadvantaged young people.

Behavioural insights and the COM-B model

Given that behaviour is among the strongest predictors of attainment, it is important to examine it closely, considering the multiple aspects that shape and influence it. COM-B is a behavioural framework that conceptualises behaviour as the result of the interaction between Capability (C), Opportunity (O), and Motivation (M). This model is frequently used in public health, education, and policy contexts to design interventions that change behaviour by addressing these three core components.

This chapter applies the COM-B model (Michie et al., 2011) to extend the findings from the regression models. The aim is to interpret the findings through the lens of the COM-B model offering a theoretically informed discussion of how behaviour and environment influence attainment. The model recognises that behaviour is shaped by both internal and external conditions and that change requires addressing all three components.

Capability

Psychological capability includes parents' knowledge and understanding of how their involvement impacts their offspring's academic outcomes. Parents with a higher educational background may possess greater awareness of effective academic support methods, from establishing study routines to setting expectations. Enhancing parents' capability to support learning can be achieved through educational resources or guidance on effective engagement strategies. Children from more educated households often have greater academic support and cognitive stimulation.

Psychological capability also includes students' understanding of school tasks, revision strategies and how time management influences capabilities. When applying COM-B to education, improving student capability involves ensuring that learners have the necessary knowledge and skills to engage. This can include teaching study skills and metacognitive strategies to help students plan, monitor and evaluate their own learning. It also involves providing differentiated instruction to match varying learning needs, ensuring that all students can access and engage with the curriculum. Offering scaffolding or targeted interventions can support students in building up their skills and understanding, enabling them to develop greater confidence and independence in their learning.

Physical capability refers to an individual's health conditions and learning difficulties. Disability can be a potential barrier to psychological or physical capability. Young people with disabilities may experience difficulties in processing information, concentrating, or managing tasks required for learning. This may be compounded by

a lack of adapted learning strategies or accessible resources. The presence of disability in the model suggests that interventions must enhance individual capability through tailored support and inclusive teaching practices. Strengthening capability in this context requires inclusive practices and provision that recognise and respond to diverse learning needs.

Opportunity

Physical opportunity is shaped by external factors like income and occupation, which impact the resources that can be accessed and the time available for engagement. For instance, parents in higher-income households may have the means to provide academic resources, while parents working irregular hours may struggle to be consistently available for support. Interventions might include providing accessible resources and flexible engagement opportunities for working parents.

Social opportunity includes cultural norms and social influences, such as the broader attitudes toward education within a family or community. For example, parental attitudes toward schooling, shaped by their own educational experiences, creates an environment that influences the young person's motivation and aspirations. Parental engagement, including help with homework and monitoring its completion, creates both social and environmental opportunity for learning. When parents are involved in academic routines, children are more likely to complete work, develop good study habits, and feel that learning is valued at home. This form of parental involvement is a protective factor, particularly for those at greater risk of underachievement.

It is also important to consider whether the environment facilitates or hinders learning Unsafe neighbourhoods for example hinder learning. Feeling unsafe in the local area limits opportunity. Fear, stress, and instability can reduce school attendance, concentration, and impact well-being. Young people preoccupied with personal safety may also have difficulty engaging confidently in academic tasks. A sense of safety is fundamental to educational engagement and wellbeing. Safe, secure environments that support learning are crucial and establishing it exists requires collaboration between schools, families, and communities.

Motivation

Reflective motivation in the form of parents' beliefs, attitudes, and intentions regarding their children's education are crucial for engaging in supportive behaviours. Parents who place a high value on education are more likely to model positive academic behaviours, fostering similar attitudes in their children. Reflective motivation can be strengthened by providing evidence on the long-term benefits of parental engagement

or by recognising the role of parental expectations in shaping children's educational aspirations.

Automatic motivation involves emotional responses and habitual behaviours within the parent-child relationship, such as routinely checking on homework or discussing school. Consistent, positive interactions build a supportive environment, whereas frequent conflict or stress may reduce a young person's academic motivation. Encouraging habits that promote a positive academic culture at home, such as routine homework checks, can reinforce positive behaviour.

In addition to providing motivation warm relationships with a parent or carer support emotional development and regulation which are also important aspects of psychological capability. Where relationships are strained, young people may struggle with emotional self-regulation, behaviour, and focus, all of which are key to learning. Positive relationships provide a stable foundation for resilience, confidence, and engagement in schoolwork.

Young person's risk-taking behaviour

Behavioural challenges such as aggression or disengagement may stem from deficits in self-regulation, an important aspect of psychological capability. Poor emotional regulation can undermine focus, persistence, and goal setting, all of which are essential for attainment. Behavioural interventions must therefore focus on building socioemotional skills and resilience to improve capability.

Beyond capability, negative behaviour may also reflect low motivation - especially if young people lack belief in the value of education, have low self-efficacy, or do not see attainable academic pathways. Restorative and relational approaches can help rebuild motivation by fostering belonging and providing meaningful feedback.

Engaging in risk behaviours - such as substance use, truancy, or frequent rule-breaking - may reflect low reflective motivation (e.g., reduced belief in education as a pathway to success) or automatic motivation (e.g., habits formed in response to stress or peer norms). These behaviours can disrupt learning directly and signal disengagement. Addressing risk behaviour requires more than discipline; it calls for motivational support that foster purpose, identity, and aspiration. It is important to address behaviour and consider the various factors influencing it, as behaviour has been identified as one of the strongest predictors of attainment.

Implications for intervention design

Improving educational attainment requires interventions that address capability, opportunity, and motivation simultaneously. A multi-layered intervention approach is essential. For example, a tutoring programme for disadvantaged students might combine academic support (capability), access to learning materials (opportunity), and confidence-building exercises (motivation).

Moreover, interventions should be context-sensitive - responsive to the social and economic realities faced by students and families - and delivered in partnership with communities and families, not just through schools. This integrated approach reflects the interdependence of behavioural drivers and aligns with broader goals of equity and social justice in education.

Applying COM-B in education shifts the focus from individual deficits to systems thinking - understanding how environmental and structural factors interact with individual traits. It avoids blaming students for underachievement and instead recognises the dynamic interplay of their circumstances, support networks, and internal processes. It also provides a practical framework for designing, implementing, and evaluating interventions, making it well suited to schools, local authorities aiming to close attainment gaps.

Building on current efforts and introducing new approaches

Some of the strategies discussed in this section build on ongoing initiatives. However, the challenge lies not merely in implementation but in enhancing, scaling, and innovating within these frameworks. This involves moving beyond traditional approaches to embrace a more personalised, data-driven approach to intervention to address the unique challenges and needs of each student and their families within the HLE. By expanding support systems and developing new methods that consider social, emotional, and technological dimensions of education, these key principles recognise the importance of individualised support, community involvement, and continuous feedback.

- Promoting family engagement

One way of addressing this could be through parenting workshops developing and disseminating resources aimed at helping parents build positive relationships with their children and reducing family conflict. Encouraging schools to host regular parental engagement events to educate parents on effective strategies for supporting their young person's education at home.

Strengthening home school communication channels between schools and parents, ensuring that parents are informed about their young person’s progress can be a good starting point. Additional school year group specific information on how parents can assist with homework and study habits can add value. At the same time implementing parent-teacher partnerships that focus on collaborative approaches to support student learning and address any emerging issues early on could be particularly beneficial.

- Data driven personalisation and precision in interventions

While data-driven approaches are being used, there is potential to deepen personalisation by creating more sophisticated data models that predict individual student needs more accurately and tailor interventions specifically for them. For example, using AI to analyse students' progress and suggesting specific resources, tutoring, or support tailored to their learning styles and challenges could provide valuable insights.

In addition to broad parental engagement programmes, setting up targeted family support programs could be beneficial. For example, developing targeted interventions that address the specific needs of families. This could include tailored workshops or home visits for families identified as needing additional support based on predictive analytics or teacher feedback.

- Peer mentorship and learning hubs

The most structured form of tutoring designed explicitly to reduce attainment gaps has been the National Tutoring Programme. Many schools often organise after-school clubs. Beyond traditional tutoring it is also possible to leverage the relatability of peers. Building upon the ongoing initiatives, a further promising avenue is establishing a peer mentoring program where older students or recent graduates' mentor younger students focussing on academic support as well as providing emotional and social guidance.

Another approach could be creating local community-based learning hubs that provide academic support, enrichment activities, and family workshops, particularly in areas with high levels of deprivation. These hubs could be run in partnership with local councils, charities, and businesses. They may also be able to guide students who do not feel safe where they live or are involved in risk factors.

- Addressing the emotional and social dimensions of education

To begin with it is important to integrate *mental health support* more deeply into the education system, ensuring that emotional well-being is prioritised alongside academic success. This could include training teachers to recognise signs of emotional distress and providing students with regular access to counsellors.

Alongside this it is important to start considering the introduction of *conflict resolution programs* that specifically teach students and families conflict resolution skills to reduce family tension. This can be useful as the data shows behavioural and HLE related issues can negatively impact educational outcomes.

- Innovation in schools

A further consideration is creating a national platform for sharing best practices, where schools can showcase successful initiatives. Recognised programs could receive additional funding to scale their efforts and support other schools in implementing similar strategies. By offering innovation grants to schools that develop and pilot innovative approaches such as new teaching methods, community partnerships, or technology integration projects it may be possible to share examples of good practice.

- Long-term, holistic approaches

In the longer term encouraging a cultural shift towards lifelong learning, starting with the education system but extending into community programs that offer continuous education and skill development opportunities for students and parents alike may offer significant benefits. Holistic models that support the entire family unit, addressing not

just educational needs but also economic, health, and social challenges are worth examining.

- Continuous feedback and iteration

Additionally, it is important to implement real-time feedback loops and mechanisms where teachers, students, and parents can provide ongoing input on educational strategies, allowing for agile adjustments to programs and interventions. Instead of periodic evaluations, adopting a more continuous evaluation model where programs are assessed and adjusted on a rolling basis, ensuring they remain relevant and effective are important to consider.

Conclusion

The report identifies key principles for targeted interventions and innovative strategies aimed at reducing educational disparities by addressing the complex and varied needs of students and their families. By prioritising data-driven personalisation, leveraging technology, strengthening school, community and family engagement, and embedding an integrated approach to education it will be possible to foster an environment where each student has the support needed to thrive.

Continuous feedback and real-time evaluations are essential to monitor these efforts, allowing initiatives to adapt responsively and remain effective over time. Together, these recommendations offer a path towards a more equitable and effective education system that is inclusive and attuned to the challenges faced by students within their HLE.

Implications for policy and practice

These findings reinforce the importance of multi-level interventions that go beyond the classroom. Key policy implications include:

- Targeted academic and pastoral support for students including mentoring and enrichment opportunities.
- Enhanced SEN provision and inclusive pedagogical strategies to support young people with disabilities.
- Behavioural interventions that are restorative rather than punitive, especially for students at risk of exclusion.
- Community-level interventions that promote neighbourhood safety and wellbeing.
- Parental engagement programmes, particularly in communities where parental education levels are low

Behaviour is at the heart of educational attainment. Educational outcomes are not just a function of ability or motivation, but also of access, safety, and structural opportunity. Behavioural frameworks allow for a better understanding of how to support young people, particularly those facing multiple disadvantages. Future policies and programmes aiming to improve attainment should consider interventions that simultaneously build capability, expand opportunity, and strengthen motivation.

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