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# Literacy Changes Lives 2014: A new perspective on health, employment and crime

**Joe Morrisroe  
National Literacy Trust**

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*Words for life*

**Registered address:** National Literacy Trust, 68 South Lambeth Road, London SW8 1RL  
**t:** 020 7587 1842 **f:** 020 7587 1411 | [contact@literacytrust.org.uk](mailto:contact@literacytrust.org.uk) | [www.literacytrust.org.uk](http://www.literacytrust.org.uk)

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## About the National Literacy Trust

We are a national charity dedicated to raising literacy levels in the UK. Our research and analysis make us the leading authority on literacy. We run projects in the poorest communities, campaign to make literacy a priority for politicians and parents, and support schools.

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## Executive summary

### Introduction

This report was written by the National Literacy Trust and commissioned by Save the Children. The research for this report has informed the publication *'How reading can help children escape poverty'* produced by the Read On. Get On. coalition. The Read On. Get On. campaign brings together teachers and other professionals, charities, businesses, publishers and local communities to argue for the historic goal of all children reading well by the age of 11 by 2025.

Since 2008, the financial crisis has had a profound social and economic impact on the UK's most vulnerable communities. Literacy influences individual capability in all spheres of life. In times of economic instability, low literacy makes individuals and communities more vulnerable to inequality, increasing the risk of social exclusion and undermining social mobility. In this document we explore how low literacy in the UK affects both employment and economic outcomes, health levels and health inequalities, and exacerbates factors associated with criminal offending. Using *Literacy Changes Lives* (2008) as a starting point, this report goes further to uncover the impact of poor literacy on the individual, society and the UK.

This report is published within a challenging national context that enables us to refocus on why literacy is a fundamental issue in the UK. The financial crisis has impacted the young and unskilled hardest. Since 2008, youth unemployment has risen substantially and levels of child poverty are projected to continue to rise. Furthermore, the economy is changing, with the number of jobs requiring graduate qualifications surpassing those requiring none. We are faced with a productivity gap and skills shortages. On top of this, health inequality within the UK remains high with a seven-year difference in life expectancy between the richest and poorest communities. This comes at a time when the National Health Service faces increasing pressure from rising costs. In relation to crime, the prison population continues to rise, with a high social and economic cost attached. This context provides us with the motivation to examine how low literacy is contributing to these challenges.

Worryingly, this report comes at a time when the youngest generation has been found to have literacy levels only matching those of the eldest generation, indicating stagnant rather than improving literacy levels, a feature unique to the UK. This report demonstrates how low levels of literacy contribute to health inequalities, drive poverty, narrow the opportunities of young people and exacerbate risk factors linked to crime. We also show how improvements in literacy can impact the individual, society and the UK to create positive long-lasting change.

## Key findings

### Literacy, employment and the economy

- Low literacy levels could be a defining factor holding back the recovery of the UK economy following the financial crisis and could pose a threat to future economic sustainability. Poor literacy is contributing to skill shortages and employer dissatisfaction, and may be a factor in the UK productivity gap. Furthermore, an increase in basic skills could reduce the number of low-paid jobs in the UK.
- New analysis of the PIAAC data shows us that in England and Northern Ireland there is greater inequality of literacy levels for those at the top and bottom of the pay scale than in all other surveyed countries. This is also true for the literacy levels of those in full-time employment and those who are unemployed. This, along with further evidence, suggests the association between literacy and labour outcomes is greater in the UK than in other countries.
- The challenges we face are unique to the UK, where the youngest generation has literacy scores only equivalent to the eldest generation, indicating stagnating literacy levels rather than much needed improvements.
- Low literacy is positively related with better earnings: those with functional literacy skills earn on average 16% more than those with lower literacy skills. At the level of the minimum wage (£6.31) this equates to £1.01 more per hour. This is particularly significant for women. Higher literacy is associated with higher earnings at an increasing rate.
- Low literacy is negatively related with lower employment rates and spells of unemployment. Again, this is particularly significant for women.
- Low literacy is associated with poverty, and may be a driver of broader inequalities in the UK. Those with low literacy are more likely to be in routine work, receive working age benefits, live in disadvantaged housing conditions and more deprived areas and experience homelessness. Women with low literacy are more likely to experience homelessness than men.

### Literacy and health

- Individuals with poor literacy are less able to obtain, process and understand information about healthy living and self-regulate existing medical conditions.
- Studies show that those with inadequate literacy are up to 18 times less likely to be able to identify their medications compared to those with adequate literacy. They are also less likely to demonstrate how to take their prescription correctly.
- 9 in 10 adults (92%) with adequate literacy skills can recognise a high level blood pressure reading compared to just over half (55%) with the lowest reading level.
- 95% of patients with diabetes and adequate health literacy know the symptoms of hypoglycaemia compared with 50% of those with inadequate literacy.
- Literacy is also associated broadly with poor health and in conjunction with educational levels is linked to negative health behaviours.
- One-third (34%) of those rating their health as very poor had entry level literacy skills compared to 1 in 10 (11%) rating their health as very good.

- Those with lower literacy and lower qualifications are more likely to have poor health and are more likely to smoke, drink heavily and be obese.
- Those with entry level literacy (Entry Level 2) are three times more likely to have daily activity limited by poor health than those with functional literacy (Level 2) and are three times more likely to report deteriorating health.

## Literacy and crime

- Poor literacy is prevalent amongst young offenders and the prison population.
- 48% of offenders in custody have a reading age at or below the expected level of an 11-year-old. Similarly, in a survey of prisoners' self-perception, 47% of prisoners said they had no qualifications.
- Offenders in their middle teens – the peak period for offending – frequently have poor reading skills: over half have literacy skills below the level of an 11-year-old compared with two-fifths of the wider prison population and one-fifth of the adult population.
- Poor literacy exacerbates risk factors associated with offending behaviour.
- Literacy holds a significant relationship with the number of times a 30-year-old man has been stopped and questioned and with the number of times a 42-year-old man has been arrested.
- Factors associated with crime – low attainment, negative experiences at school, exclusion, truancy and poor employment prospects – all hold a relationship with low literacy.
- Low literacy is also associated with lower employment prospects, a factor linked with offending behaviour. The majority of young adult offenders (aged 18 to 20) are male and out of work and nearly two thirds (63%) are likely to have been unemployed at the time of arrest compared with 46% of those over 25.
- Low educational attainment as a contributing factor to crime is significantly associated with low literacy skills.
- Evidence suggests that young people who are not in education, employment or training (NEET) are 20 times more likely to be convicted of a crime (PRT, 2010)<sup>1</sup>.
- Negative experience at school is also a key factor linking literacy to crime. Those with low literacy are more likely to be excluded from school and more likely to truant. 9% of very poor readers are persistent truants compared to 2% of those who are average or above average readers.
- Exemplifying how low literacy exacerbates risk factors, we see that of offenders released after sentences of less than a year, 1 in 3 (32%) of those with a spell of employment reoffend compared to over two-thirds (69%) without employment. Furthermore, for prisoners with sentences under one year, 63% of offenders who had been expelled or permanently excluded from school were reconvicted within a year, compared with 44% of offenders who were not.

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<sup>1</sup> Devitt, K. (2011) *Young Adults Today: Education, Training and Employment and Young Adults in the Criminal Justice System Fact File*. Brighton: Young People in Focus.

## Understanding the evidence in this report

This report draws on available research to explore the links between low literacy and life outcomes within the context of current and ongoing trends in society. Various sources of evidence are cited, including longitudinal data and analysis, academic journals and domestic and international surveys.

This report recognises that the nature of disadvantage is complex, and factors affecting the issues highlighted in this report are dynamic and overlapping. Many challenges faced by society relating to health, employment and crime can be traced back to low literacy, but in all cases low literacy in isolation does not explain the whole problem. We have indicated where it is reasonable to suggest low literacy is or may be a factor in the highlighted issues, or where we believe ongoing socioeconomic trends are relevant to those with low literacy.

This report does not suggest that literacy has a simple relationship with health, poverty and crime. Indeed, further research may show these positions to be under or over-stated. However, we believe that the picture painted shows the prominence of poor literacy in the profile of disadvantaged adults. This narrative gives a fuller understanding of why functional literacy is fundamental to our society and we hope that additional research will explore the issues further.

### Definitions

**Drawing on the Leitch Review (2006) this paper defines functional literacy as literacy levels above Level 1.**

**Entry Level 1** is the national school curriculum equivalent for attainment at age 5-7. Adults below Entry Level 1 may not be able to write short messages to family or select floor numbers in lifts.

**Entry Level 2** is the national school curriculum equivalent for attainment at age 7-9. Adults with below Entry Level 2 may not be able to describe a child's symptoms to a doctor or use a cash point to withdraw cash.

**Entry Level 3** is the national school curriculum equivalent for attainment at age 9-11. Adults with skills below Entry Level 3 may not be able to understand price labels on pre-packaged food or pay household bills.

**Level 1** is equivalent to GCSE grades D-G. Adults with skills below Level 1 may not be able to read bus or train timetables or check the pay and deductions on a wage slip.

**Level 2** is equivalent to GCSE grades A\*-C. Adults with skills below Level 2 may not be able to compare products and services for the best buy, or work out a household budget.

Source: Skills for Life (2011)<sup>2</sup> and Leitch Review (2006)<sup>3</sup>

<sup>2</sup> Department for Business, Innovation and Skills (2012) *The 2011 Skills for Life survey: A Survey of Literacy, Numeracy and ICT Levels in England*. London: DfBIS.

<sup>3</sup> HM Treasury (2006) *Leitch Review of Skills. Prosperity for All in the Global Economy – World Class Skills. Final Report*. London: HM Treasury.

## Literacy, employment and the economy

As a nation, the UK faces severe challenges. The financial crisis has impacted the young and the unskilled and with levels of child poverty projected to rise there is an urgent need to commit to raising literacy levels. Low literacy drives poverty and inequality and may be a significant factor in holding back economic recovery. Furthermore, as this report highlights, the challenge facing the UK is unique. Internationally, the UK displays the largest inequality between the literacy levels of the highest and lowest earners, with the exception of Russia, and the largest inequality between those in and out of employment. Furthermore, unlike all other surveyed countries in the PIAAC literacy study, the literacy levels of the youngest generation of workers in the UK only match, rather than surpass, the literacy levels of the oldest generation.

In recent years research examining literacy and economic outcomes has consolidated a strong evidence base that demonstrates the relationship between literacy, wages and employability. As a core skill literacy not only enables individuals to leave school with an ability to gain further qualifications but, as the evidence shows, also improves an individual's capability and employment prospects within its own right.

### Key findings

- Low literacy levels could be a defining factor holding back the recovery of the UK economy following the financial crisis and could pose a threat to future economic sustainability. Poor literacy is contributing to skill shortages and employer dissatisfaction, and may be a factor in the UK productivity gap. Furthermore, an increase in basic skills could reduce the number of low-paid jobs in the UK.
- New analysis of the PIAAC data shows us that in England and Northern Ireland there is greater inequality of literacy levels for those at the top and bottom of the pay scale than in all other surveyed countries. This is also true for the literacy levels of those in full-time employment and those who are unemployed. This, along with further evidence, suggests the association between literacy and labour outcomes is greater in the UK than in other countries.
- The challenges we face are unique to the UK, where the youngest generation has literacy scores only equivalent to the eldest generation, indicating stagnating literacy levels rather than much needed improvements.
- Low literacy is positively related with better earnings: those with functional literacy skills earn on average 16% more than those with lower literacy skills. At the level of the minimum wage (£6.31) this equates to £1.01 more per hour. This is particularly significant for women. Higher literacy is associated with higher earnings at an increasing rate.
- Low literacy is negatively related with lower employment rates and spells of unemployment. Again, this is particularly significant for women.
- Low literacy is associated with poverty, and may be a driver of broader inequalities in the UK. Those with low literacy are more likely to be in routine work, receive working age benefits, live in disadvantaged housing conditions and more deprived areas and experience homelessness. Women with low literacy are more likely to experience homelessness than men.

### Literacy, employment and wages: The background

Research examining the relationship between literacy and employment finds that those with better literacy skills are more likely to be employed and more likely to earn more. Comparisons of longitudinal data from both the British Cohort Study 1970, taken in 2004,

and the National Child Development Study 1958 cohort, taken in 1995, demonstrate that adults in their thirties with better literacy skills have a higher probability of being in employment than those with lower skills. Furthermore, higher literacy and numeracy skills levels are associated with higher earnings at an increasing rate.<sup>4</sup>

On average those with functional literacy skills (above Level 1) earn 16% more than those with poorer skills. Even after factoring in education levels, better literacy skills still equate to 12% higher earnings.<sup>5</sup> At the level of national minimum wage a 16% premium would equate to increased earnings of £1.01 per hour, an increase from £6.31 to £7.32. At the level of the national average salary this would equate to an annual difference of £4,240, an increase from £26,500 to £30,700.<sup>6</sup>

Literacy also improves employability chances. Analysis of the Government's Skills for Life survey data from 2003 shows that adults with Level 1 literacy skills have a 6% higher probability of finding employment than those with Entry Level 3 literacy skills, after controlling for education levels. However, these findings also uncover a significant gender factor: the effect between Level 1 and Entry Level 3 literacy skills on employment is twice as large for women (8%) than the effect for men (4%). The data also demonstrates that, after controlling for demographics and qualifications, women with Level 1 literacy skills have a 26% wage premium above those with Entry Level 2 literacy skills. For men this premium was only 9%.<sup>7</sup> The difference in gender is also detected within the longitudinal data: men with Entry Level 2 literacy skills are three times as likely as men with Level 1 literacy to have experienced three spells of employment while women are five times as likely.<sup>8</sup>

This evidence shows clearly that low literacy is associated with lower earnings and employment rates, particularly for women. However, data from the most recent Skills for Life survey in 2011 gives a clearer picture of what this means in the UK:<sup>9</sup>

- 1 in 4 (24%) of those who were not in work had entry level literacy skills. By contrast, 1 in 10 (11%) of those who were in work had entry level literacy skills.
- More than 1 in 4 (26-27%) of those with earnings of less than £10,000 had entry level literacy skills. By contrast, only 4% of those who earned over £30,000 had entry level literacy skills.
- 24% of those receiving working age benefits had entry level literacy skills, while 13% of those not receiving working age benefits had entry level skills.
- Only 5% of those in higher managerial, lower managerial or professional occupations had entry level literacy skills, while 1 in 4 of those in routine occupations (25%) had entry level literacy skills.

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<sup>4</sup> Vignoles, A., et al. (2008) *The Value of Basic Skills in the British Labour Market*. London: Centre for the Economics of Education

<sup>5</sup> McIntosh, S. and Vignoles, A. (2001) Micro-analysis of the Effects of Literacy and Numeracy. In: Bynner et al. 2001. *Improving Adult Basic Skills: Benefits to the Individual and to Society*. London: Centre for Longitudinal Studies.

<sup>6</sup> BBC (2012) *Average earnings rise by 1.4% to 26,500, says ONS*. BBC News [online]. Available at: <http://www.bbc.co.uk/news/business-20442666> [Accessed 22 August 2014].

<sup>7</sup> Grinyer, J. (2005) *Literacy, numeracy and the labour market: Further analysis of the Skills for Life survey*. London: Department for Education and Skills.

<sup>8</sup> Bynner, J. and Parsons, S. (2007) *Illuminating disadvantage: Profiling the experiences of adults with Entry level literacy or numeracy over the lifecourse*. London: NRDC.

<sup>9</sup> Department for Business, Innovation and Skills (2012) *The 2011 Skills for Life survey: A Survey of Literacy, Numeracy and ICT Levels in England*. London: DfBIS.

Although not directly related to earnings, a number of associated factors also demonstrate the impact of low literacy, low earnings and low employment rates:

- 1 in 4 (26%) of those living in the most deprived areas of England had entry level literacy skills, compared to 1 in 20 (6%) who lived in the least deprived areas.
- 1 in 10 (9%) of those who owned the property they lived in had entry level literacy skills, compared with 1 in 5 who rented from a private land-lord (21%) and 1 in 3 who rented from a local authority (36%).
- 13% of women with Entry Level 2 literacy skills had experienced homelessness compared with 6% of those with Level 1 literacy. This was also higher than men, where 7% with Entry Level 2 literacy had experienced homelessness compared to 4% with Level 1.<sup>10</sup>
- Women with entry level skills were twice as likely to be single mothers and more likely to have more children.

## Literacy as a driver of inequality in the UK

As this evidence demonstrates, low literacy is not only an inequality in itself, but a driver of wider inequalities. The relationship between poor literacy and low earnings as a driver of poverty has been recognised in recent government policy.<sup>11</sup> Both poverty and literacy are intergenerational issues; children growing up in a poor family are more likely to live in poverty themselves, and children growing up with parents with poor literacy skills are less likely to gain the literacy skills they need in later life.

Problematically, low literacy and poverty are also linked; low literacy negatively impacts a household's earnings, and low earnings also impact literacy through a lack of access to resources. This relationship creates a negative cycle, or a trap, which is hard to break. In 2013, only 38.7% of economically disadvantaged pupils<sup>12</sup> gained an English GCSE with a grade A\*-C compared with 65.3% of their more affluent counterparts.

The relationship between poverty and literacy suggests that raising literacy levels could be a significant tool to alleviate poverty in the UK. A recent government review of the drivers of child poverty claims that: "An improvement in the skills of the least qualified could also help to reduce the proportion of low-paid jobs in the economy, although these effects are more complex and uncertain" (p.60).<sup>13</sup>

Despite this, worrying evidence from the Organisation for Economic Co-operation and Development's (OECD) Survey of Adult Skills (PIAAC) shows that unlike all other developed countries, the youngest generation in England (aged 16 to 24) only score at the same level in literacy assessments as the eldest adults surveyed (aged 55 to 65) indicating long-term stagnation in improvements of literacy levels [see Fig. 1.0]. Furthermore, younger adults show some of the lowest scores for their age group, ranking 22nd out of 24 surveyed countries. The OECD has cautioned that the "talent pool of highly

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<sup>10</sup> Bynner, J. and Parsons, S. (2007) *Illuminating disadvantage: Profiling the experiences of adults with Entry level literacy or numeracy over the lifecourse*. London: NRDC.

<sup>11</sup> *Ibid.*

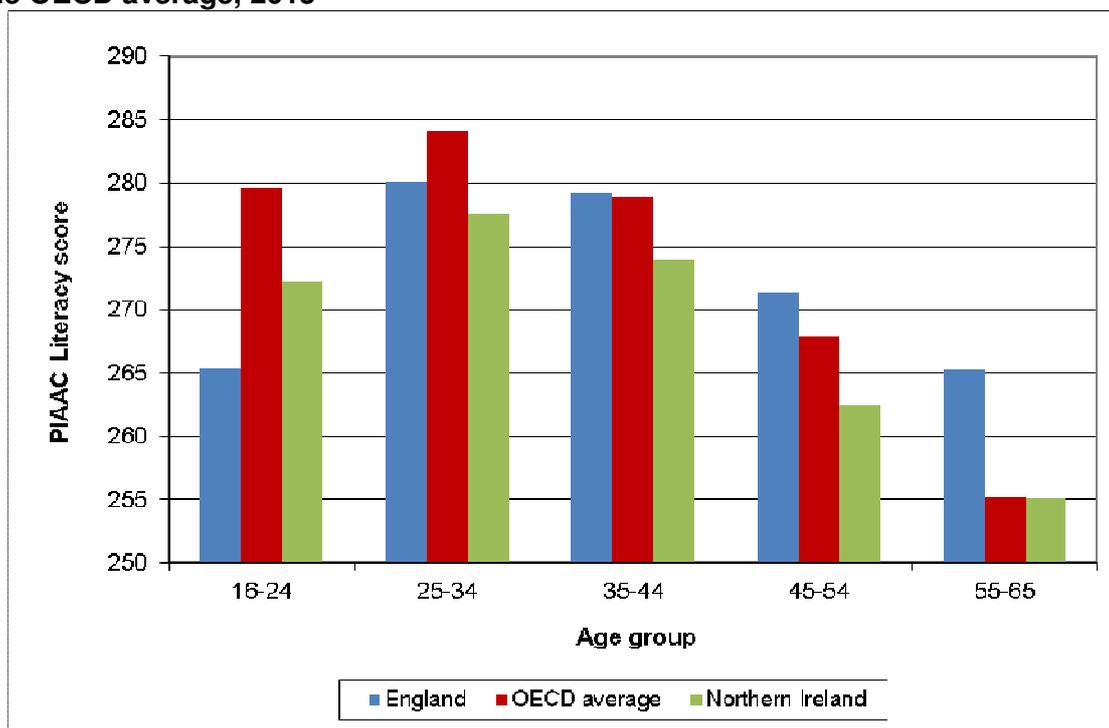
<sup>12</sup> Defined by eligibility to Free School Meals

<sup>13</sup> HM Government (2014) *An evidence review of the drivers of child poverty for families in poverty now and for poor children growing up to be poor adults*. London: HM Government.

skilled adults in England and Northern Ireland is likely to shrink relative to that of other countries".<sup>14</sup>

The challenge to raise literacy levels is compounded by the effects of the economic crisis. In the UK, the number of children living in poverty has also been projected to rise.<sup>15</sup> This could increase the number of children who are educationally disadvantaged by poverty. Unless the poverty-literacy link is broken, this may lead to a new generation of young people with little opportunity for social mobility and a society with further entrenched inequality.

**Fig. 1.0 PIAAC literacy score by 10-year age groups: England, Northern Ireland and the OECD average, 2013**



Source: OECD Survey of Adult Skills (PIAAC: 2013)<sup>16</sup>

## How does the relationship between literacy and employment outcomes in the UK compare internationally?

The UK has a globalised, competitive economy and the impact of poorer labour outcomes caused by low literacy has consequences for the global competitiveness of our economy and our future ability to compete.

<sup>14</sup> The Guardian (2013). England's young people near bottom of global league table for basic skills. *The Guardian*, [online] 8 Oct 2013. Available at: <http://www.theguardian.com/education/2013/oct/08/england-young-people-league-table-basic-skills-oecd> [Accessed 4 August 2014]

<sup>15</sup> The Guardian (2014) Number of UK youth living in poverty could reach 5m by 2020, says charity. *The Guardian*, [online] 28 May 2014. Available at: <http://www.theguardian.com/society/2014/may/28/child-poverty-act-5m-2020-save-children-uk> [Accessed 4 August 2014]

<sup>16</sup> OECD (2013) *OECD Skills Outlook 2013: First results from the survey of adult skills*. OECD Publishing. Available at: [http://skills.oecd.org/documents/OECD\\_Skills\\_Outlook\\_2013.pdf](http://skills.oecd.org/documents/OECD_Skills_Outlook_2013.pdf). [Accessed 22 August 2014].

Examining data from the OECD Survey of Adult Skills (PIAAC), we find that a greater inequality exists between the literacy scores of individuals in England and Northern Ireland at the top and bottom end of the pay spectrum compared with all other surveyed European countries and the OECD average. Furthermore, the difference in literacy ability between those who are in full-time employment and those who are unemployed in England and Northern Ireland is also larger than any other surveyed country.<sup>17</sup>

Taking the difference in literacy scores between those in the top and eighth deciles of monthly earnings we see that the gap in literacy ability is widest in England and Northern Ireland at 55 points compared with the OECD average, where the gap is 36 points [see Fig 1.1 overleaf].<sup>18</sup> This difference shows that the literacy ability of the highest earners and lowest earners in England and Northern Ireland is equivalent to 7.9 years of education or training compared to the OECD average of 5.1 years.<sup>19</sup> Comparing all surveyed countries, England and Northern Ireland rank second only to the Russian Federation for inequality of literacy levels between top and bottom earners.<sup>20</sup>

Further analysis also shows there is a greater inequality in literacy scores in England between those who are employed full time and those who are unemployed compared to all other European countries. The gap in literacy ability in England and Northern Ireland scores at 30 points, or 4.4 years of education or training compared with the OECD average of 21 points, or 3.0 years [see Fig 1.2 overleaf]. This is the largest gap of all countries surveyed by the OECD.<sup>21</sup>

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<sup>17</sup> Scotland and Wales did not take part in the PIAAC literacy survey.

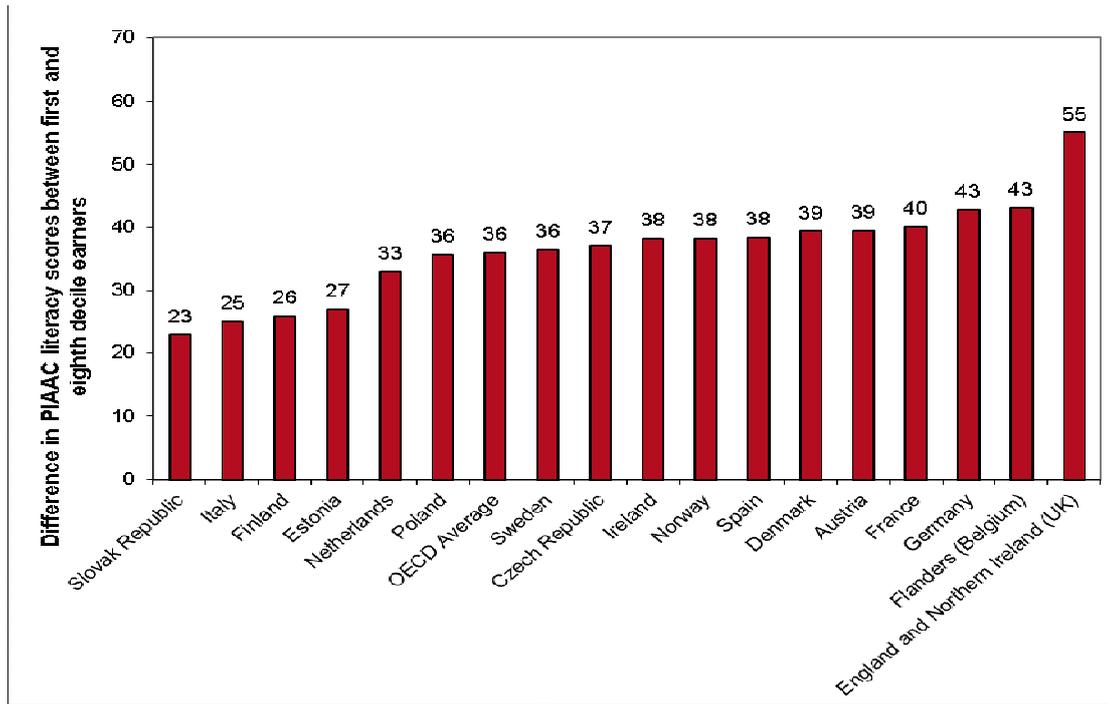
<sup>18</sup> The majority of selected EU countries display lowest literacy levels within the lowest 20-30% of the pay spectrum. We anticipate this is due to the bottom two deciles capturing part-time workers and casual workers whose earnings may not reflect skill levels. For example, the median earnings of a part-time worker in the UK is located within the bottom two deciles, however the wage of an individual working the average number of full-time hours on minimum wage would be situated within the lowest 20-30%.

<sup>19</sup> Using seven points as a benchmark of 1 year of education or training. See: OECD (2013) *OECD Skills Outlook 2013: First results from the survey of adult skills*. OECD Publishing. Available at: [http://skills.oecd.org/documents/OECD\\_Skills\\_Outlook\\_2013.pdf](http://skills.oecd.org/documents/OECD_Skills_Outlook_2013.pdf). [Accessed 22 August 2014].

<sup>20</sup> Including Republic of Korea; Federation of Russia; Japan; Australia; Canada; United States; in addition to European countries listed in Fig. 1.1 and 1.2.

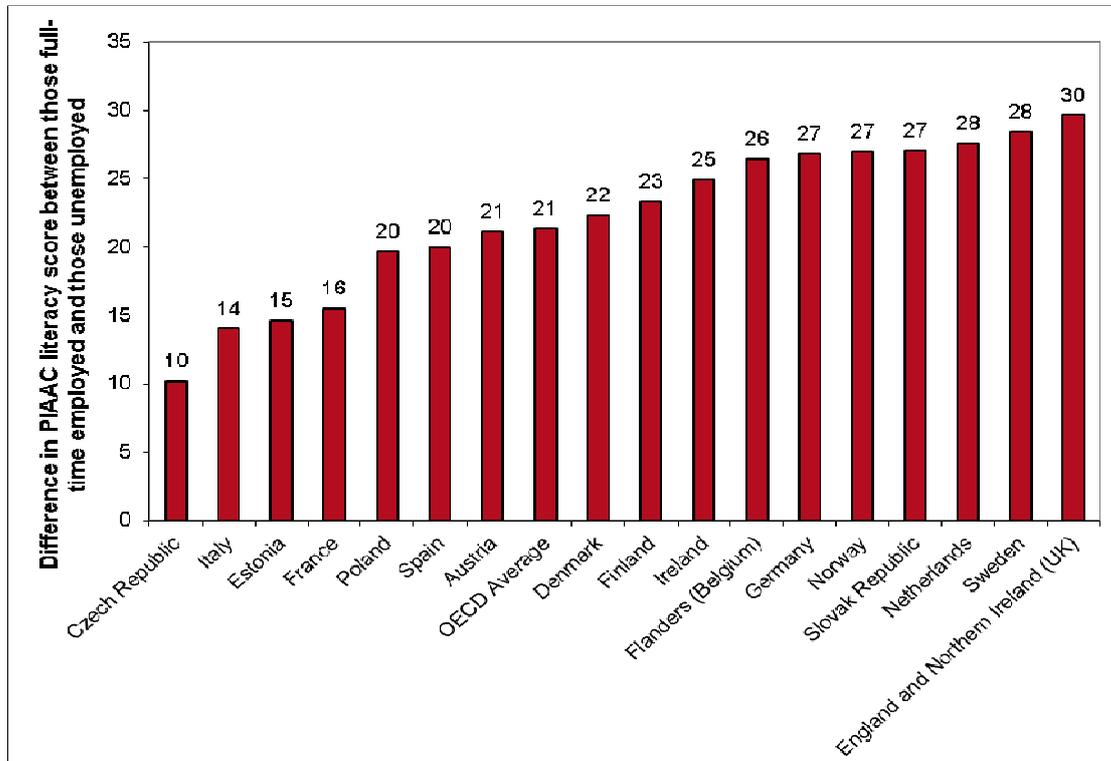
<sup>21</sup> Including Republic of Korea; Federation of Russia; Japan; Australia; Canada; United States; in addition to European countries listed in Fig. 1.1 and 1.2.

**Fig. 1.1 Difference in PIAAC literacy score between earners in the first and eighth deciles: Surveyed European countries: 2013**



Source: OECD Survey of Adult Skills (PIAAC: 2013)<sup>22</sup>

**Fig. 1.2 Difference in PIAAC literacy score between those employed full time and those unemployed: 2013**



Source: OECD PIAAC<sup>23</sup>

<sup>22</sup> OECD (2013) *OECD Skills Outlook 2013: First results from the survey of adult skills*. OECD Publishing. Available at: [http://skills.oecd.org/documents/OECD\\_Skills\\_Outlook\\_2013.pdf](http://skills.oecd.org/documents/OECD_Skills_Outlook_2013.pdf). [Accessed 22 August 2014].

This evidence shows that low literacy has a stronger and more significant association with low pay and unemployment than in other countries; the lowest earners in the UK are more likely to have much lower literacy skills than the highest earners and those who are unemployed are likely to have significantly lower literacy skills than those who are employed. The significance of this is two-fold: first, literacy may be a more prominent driver and determinant of inequality and poverty in the UK than in other countries. Nickell (2003) suggests that the relatively high proportion of workers in the UK with very low skills compared with many other Northern European countries may help to explain higher levels of poverty rates.<sup>24</sup> Secondly, this finding also suggests that improvements in literacy levels in the UK may bolster levels of pay and employment more significantly than in other countries. Supporting evidence supporting includes research finding that the economic return on improving literacy skills in the UK appears to be significantly higher compared to other countries (Denny et al. 2003; Hansen and Vignoles, 2005).<sup>25</sup>

## How literacy impacts the economic recovery in the UK

The trend of stagnating literacy levels, where the youngest generation are not improving on the literacy levels of the eldest generation, is even more worrying because since the financial crisis the economic climate has become more difficult for young people and those with few or no qualifications. Youth unemployment has risen, peaking in 2012, and at 17.8% remains above its pre-crisis level.<sup>26</sup> The number of jobs requiring a degree has overtaken the total number of posts that do not require any qualifications. Among part-time workers, the proportion of jobs available to the unqualified has fallen even further, down by more than half since the mid-1980s.<sup>27</sup> While this may indicate increased competition within the jobs market, those with low literacy and low qualifications will find gaining employment increasingly difficult nonetheless. Within Europe, reports also find that the economic crisis has had the biggest impact on the most vulnerable, unskilled and least educated workers.<sup>28</sup>

Low literacy could be a significant factor holding back growth in the UK economy. This year the UK Commission for Employment and Skills stated that economic growth and recovery may be constrained by skill shortages as the labour market responds to employer requirements; the report cites that almost 3 in 10 vacancies are hard to fill. Since 2011 there is an increased difficulty in finding employees with appropriate oral and written communication, literacy and numeracy skills; of the skills lacking among applicants in 2013, 41% lacked oral communication, up 4% since 2011, and 34% lacked literacy skills, up 6% from 2011.<sup>29</sup>

CBI has also reported employers' responses to the issue of literacy within their adult, graduate, and youth workforces. In 2013, one third of employers (32%) expressed

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<sup>23</sup> OECD (2013) *OECD Skills Outlook 2013: First results from the survey of adult skills*. OECD Publishing. Available at: [http://skills.oecd.org/documents/OECD\\_Skills\\_Outlook\\_2013.pdf](http://skills.oecd.org/documents/OECD_Skills_Outlook_2013.pdf). [Accessed 22 August 2014].

<sup>24</sup> HM Government (2014) *An evidence review of the drivers of child poverty for families in poverty now and for poor children growing up to be poor adults*. London: HM Government.

<sup>25</sup> Vignoles, A., et al. (2008) *The Value of Basic Skills in the British Labour Market*. London: Centre for the Economics of Education

<sup>26</sup> Mirza-Davies, J. (2014) *Youth unemployment statistics*. House of Commons Library. Available at: [www.parliament.uk/briefing-papers/sn05871.pdf](http://www.parliament.uk/briefing-papers/sn05871.pdf). [Accessed on 25 July 2014].

<sup>27</sup> Coughlan, S. (2013) More jobs for graduates than the unqualified in UK – study. *BBC News* [online] 24 April 2013. Available at: <http://www.bbc.co.uk/news/education-22268809>. [Accessed on 4 August 2014].

<sup>28</sup> European Commission (2014) *European Vacancy and Recruitment Report 2014*. Luxembourg: Publications Office of European Union.

<sup>29</sup> UKCES (2014) *UK Commission's Employer Skills Survey 2013: UK results*. London: UKCES

dissatisfaction with the literacy skills of school and college leavers. 16% of employers had provided remedial training for literacy or use of English for adult employees, 15% for school and college leavers and 5% for graduates.<sup>30</sup>

Many business leaders believe the UK faces an imminent skills crisis. A recent survey of senior directors by The Prince's Trust found that while two-thirds (63%) of business leaders said their business is growing faster than this time last year, a similar proportion (64%) also believe that faster growth in their organisation will lead to a shortage of necessary skills. 6 in 10 senior directors (59%) say this is already happening. Furthermore, 8 in 10 (79%) believe skills shortages will limit the growth of the UK economy and 73% think skills shortages will lead to a significant skills crisis across the UK in the next three years, which would hit the economy and undermine the UK's ability to compete internationally. The impact of this is reportedly increased stress and anxiety of staff (67%) and a decline in employee morale and satisfaction (64%).<sup>31</sup>

The UKCES reports that where employees lack the skills required to be fully proficient in their job (a "skills gap") this may hinder establishments' ability to function efficiently. Currently the UK faces a productivity gap, where productivity is 16% below its pre-crisis performance and is less productive than other similar developed countries by around one fifth.<sup>32</sup> Skills gaps, caused in part by low literacy, may be a factor contributing to this challenge.

## Conclusion

In summary, literacy impacts on employment outcomes for the individual in multiple ways. Individuals with low literacy are less likely to be in employment, more likely to earn less and more likely to live in disadvantaged housing conditions. The negative effect of low literacy on earnings, employment and likelihood of homelessness is greater for women than for men. Low literacy is a driver of inequality in the UK as well as an inequality in itself. Literacy levels have a stronger association with earnings and employment in the UK than in any other country, with the exception of Russia, indicating serious ramifications for the competitiveness of the economy and inequality within the UK if literacy levels fail to improve. Within an international context the UK faces significant challenges. Economic recovery has increased optimism about the UK's future, but with this comes serious concern over skill shortages. At the same time, young people with basic qualifications and low literacy have been hit hardest by the financial crisis. The potential for economic and social gain from improvements in literacy are dramatic: Improvements in literacy levels will help to close the skill gap and may help to tackle the UK productivity crisis, reduce the number of low-paid jobs, and reduce inequality and poverty in the UK.

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<sup>30</sup> CBI (2013) *Changing the Pace: CBI/Pearson education and skills survey 2013*. London: CBI.

<sup>31</sup> The Prince's Trust (2014) *The Skills Crunch: Upskilling the workforce of the future*. London: The Prince's Trust

<sup>32</sup> BBC News (2014) Bank of England 'puzzled' by productivity gap. *BBC News* [online] 16 June 2014. Available at: <http://www.bbc.co.uk/news/business-27857472>. [Accessed on 4 August 2014].

## Literacy and health

The UK faces serious challenges to the current and future health of its population. In the UK levels of health are highly unequal; there is a persistent gap between the life expectancies of the poorest and richest in our society. For example, those living in the poorest neighbourhoods will on average die seven years earlier than people living in the richest neighbourhoods.<sup>33</sup>

However, health inequality is not the only challenge. Rising costs and demands on the National Health Service are causing strain within the system. By some estimates the NHS faces a £30 billion funding gap by 2020.<sup>34</sup> This increase in cost stems in part from a population living for longer, but also from negative health-behaviours such as smoking, heavy drinking and obesity. Preventing poor health outcomes is therefore a crucial step in lowering costs to the system. Yet, as this section will show, there is evidence to suggest that poor literacy is holding back many people from accessing the information they need to live a healthy life.

Literacy levels are associated with health in a number of ways. Firstly, those with low literacy also have generally poorer levels of health. Sentell and Halpin (2006) found that models incorporating low literacy remove the predictive power of commonly used indicators for detecting health disparities.<sup>35</sup> However, isolating the distinct impact of literacy in these cases is difficult due to the relationship between better literacy and 'third factors' such as earnings, safer work environments and socioeconomic status.<sup>36</sup>

The direct relationship between education and health has been explored in this respect (see De Coulon et al. 2010 for a summary).<sup>37</sup> Theories suggest that having better education levels is linked to better access to information, critical skills and understanding of symptoms. This may explain why low literacy and education levels correlate with poorer health-related behaviours, such as smoking, heavy drinking and obesity.

This report explores a third area to further uncover literacy's relationship with health. Drawing on evidence from the US, we see that low literacy limits an individual's ability to obtain, process and understand information about health. This is demonstrated by evidence that those with low literacy are less able to self-regulate medication for existing health conditions. This perspective, we believe, further demonstrates the negative impact of low literacy on the individual.

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<sup>33</sup> Public Health England (2014) *Tackling health inequalities* [press release] 26 Feb 2014. Available: <https://www.gov.uk/government/news/tackling-health-inequalities>. [Accessed on 4 August 2014].

<sup>34</sup> My Health London NHS (2014) *Today's NHS – our current challenges*. Available at: <http://www.myhealth.london.nhs.uk/your-health/call-action/nhs-today> [Accessed on 1 September 2014].

<sup>35</sup> Sentell and Halpin (2006) Importance of Adult Literacy in Understanding Health Disparities. *Journal of General Internal Medicine*, 21(8). Pp.862-866.

<sup>36</sup> De Coulon, A. Meschi, E. and Yates, M. (2010) Education, basic skills and health-related outcomes. London: NRDC.

<sup>37</sup> Ibid.

## Key findings

- Individuals with poor literacy are less able to obtain, process and understand information about healthy living and self-regulate existing medical conditions.
- Studies show that those with inadequate literacy are up to 18 times less likely to be able to identify their medications compared to those with adequate literacy. They are also less likely to demonstrate how to take their prescription correctly.
- 9 in 10 adults (92%) with adequate literacy skills can recognise a high level of blood pressure compared to just over half (55%) with the lowest reading levels.
- 95% of patients with diabetes and adequate health literacy know the symptoms of hypoglycaemia compared with 50% of those with inadequate literacy.
- Literacy is also associated more broadly with poor health and in conjunction with educational levels is linked to negative health behaviours.
- A third (34%) of those rating their health as very poor had entry level literacy skills compared to 1 in 10 (11%) rating their health as very good.
- Those with lower literacy and lower qualifications are more likely to have poor health and are more likely to smoke, drink heavily and be obese.
- Those with entry level literacy (Entry Level 2) are three times more likely to have daily activity limited by poor health than those with functional literacy (Level 2) and are three times more likely to report deteriorating health.

## Literacy, health and behaviours

In the previous *Literacy Changes Lives* 2008 report we demonstrated that poor literacy in Scotland was associated with poorer physical health.<sup>38</sup> Since then, longitudinal data collected in 2004 and 2008 from the British Cohort Study 1970 has also demonstrated that those with poor literacy skills (Entry Level 2) are more than three times more likely to have daily activities limited by their health compared to those with functional literacy (Level 2). Furthermore, it was almost three times as likely that those without functional literacy skills would report deteriorating health during this period.<sup>39</sup>

Data from the Skills for Life survey in 2011 finds that a higher proportion of individuals with entry level literacy skills perceive their health to be poor or very poor compared to those with functional literacy skills. 1 in 10 (11%) of those who rated their health as very good and 15% of those rating their health as good had entry level literacy skills, compared with over a third of those who rated their health as poor (34%) or very poor (37%).<sup>40</sup>

Together, poor literacy and low education levels are also associated with negative health-related behaviours. Those with Level 5 qualifications are 9% less likely to be obese than those with no qualifications, 20% less likely to be smokers and 12% less

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<sup>38</sup> See: Parsons and Bynner, 2008. In Dugdale, G. and Clark, C. (2008) *Literacy Changes Lives: An advocacy resource*. London: National Literacy Trust.

<sup>39</sup> Ricardo Sabates & Samantha Parsons (2012) *The Contribution of Basic Skills to Health-Related Outcomes During Adulthood: Evidence from the BCS70*. London: DfBIS.

<sup>40</sup> Department for Business, Innovation and Skills (2011) *Skills for Life survey: appendix of tables*. London: DfBIS.

likely to be heavy drinkers.<sup>41</sup> However, identifying a distinct causal effect of basic skills alone is difficult due to its interrelating nature with education levels.

Studies do find, however, that those with non-functional literacy skills (Entry Level 2) are nearly three times more likely to smoke compared to those with functional literacy. This remains significant after controlling for previous smoking behaviour and highest qualifications at age 34, but only remains significant for men after factoring out childhood factors.<sup>42</sup>

## Literacy and health literacy

Literacy is not only a contributing factor to health outcomes and behaviours but also impacts an individual's ability to understand preventative health literature and health awareness campaigns and interpret and follow prescription directions.<sup>43</sup> Health literacy is defined as the degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make basic decisions. Measures used to signify health literacy such as The Test of Functional Health Literacy in Adults (TOFHLA) are highly correlated with other standard literacy tests (Baker, 2006)<sup>44</sup>.

In the US, individuals with lower literacy are less likely to be able to identify their medications compared to those with marginal or adequate literacy. Kriplani et al (2006) found that patients with inadequate literacy skills were 10 to 18 times more likely to be unable to identify all their medications compared to those with adequate literacy skills. 57% of patients with inadequate literacy were able to identify all their medications compared to 25% with marginal literacy and 7% with adequate literacy.<sup>45</sup>

Individuals with low literacy are also less likely to be able to describe how to take medications. Gazmarian et al. (2003) found that nearly half (47.5%) of adults with inadequate literacy skills incorrectly described the timing of medication doses when looking at a pill bottle compared to 1 in 4 (24.4%) with marginal literacy and 1 in 10 (11.5%) with adequate literacy.<sup>46</sup>

The relationship between reading and understanding instructions has also been explored further [see Fig 2.0]. Davis et al. (2006) found that of those with adequate literacy, 89.4% could read instructions and 80.2% could properly demonstrate the correct number of pills to be taken. For those with marginal literacy, 84.1% could read instructions with 62.8% able to demonstrate the prescription. For those with inadequate literacy skills, 70.7% could read instructions with 34.7% able to demonstrate how to take the correct prescription. The majority of incorrect patient

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<sup>41</sup> De Coulon, A. Meschi, E. and Yates, M. (2010) Education, basic skills and health-related outcomes. London: NRDC.

<sup>42</sup> Ricardo Sabates & Samantha Parsons (2012) *The Contribution of Basic Skills to Health Related Outcomes During Adulthood: Evidence from the BCS70*. London: DfBIS.

<sup>43</sup> De Coulon, A. Meschi, E. and Yates, M. (2010) Education, basic skills and health-related outcomes. London: NRDC.

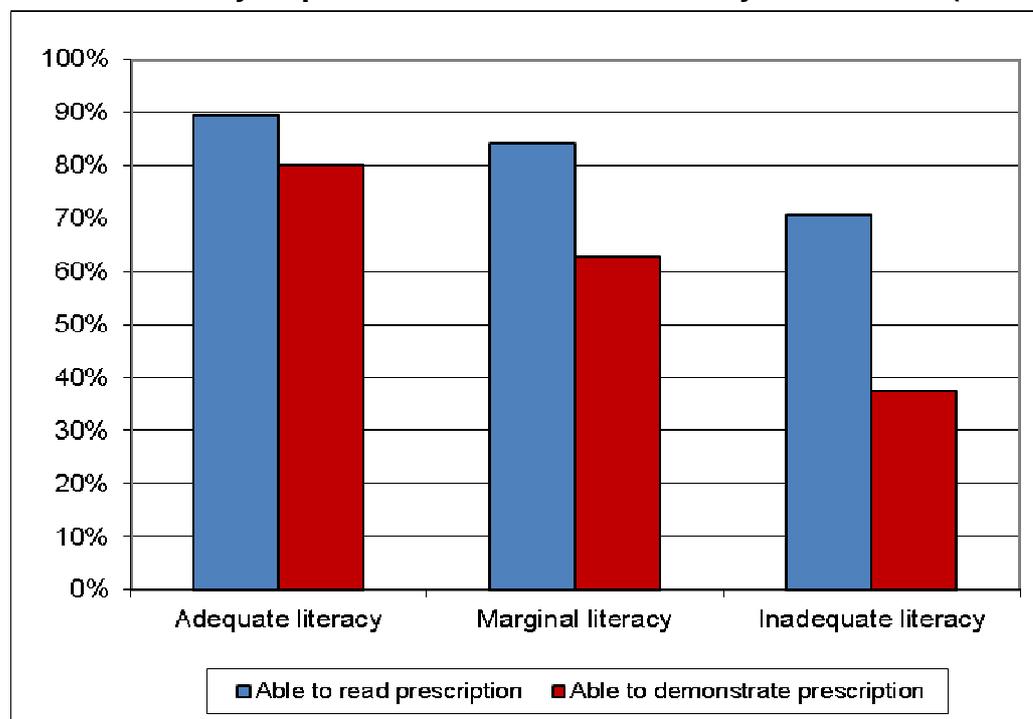
<sup>44</sup> Ibid.

<sup>45</sup> Kriplani, S. et al. (2006) Predictors of Medication Self-management Skill in a Low-literacy Population. *Journal of General Internal Medicine*. 21 (8). Pp.852-856.

<sup>46</sup> Gazmarian, JA. et al. (2003) Health literacy and knowledge of chronic disease. *Patient Education Counselling*. 51. Pp.267-75.

responses reflected an error in dosage (51.8%) with many also reflecting an error in frequency (28.2%).<sup>47</sup>

**Fig. 2.0 Patient ability to read and demonstrate prescription by literacy level defined by Rapid Estimate of Adult Literacy in Medicine (REALM)**



Source: Davies et al, 2006.

Studies developing the understanding that literacy impacts an individual's ability to self-regulate conditions and obtain, process and understand information about their condition have examined specific conditions further.

Williams et al. (1998) found that 9 in 10 (92%) patients with adequate literacy skills recognised a high level blood pressure reading compared to just over half (55%) with the lowest reading level. In addition, 95% of patients with diabetes and adequate health literacy knew the symptoms of hypoglycaemia compared with 50% of those with inadequate literacy.<sup>48</sup>

Low health literacy was also associated with a lower asthma-related quality of life including worse physical function and more emergency department use over a period of two years. This was explained by those with poorer literacy skills having a poorer knowledge of asthma and its potential harmful effects.<sup>49</sup>

Studies also found that those with low literacy are less likely to understand the health consequences of obesity<sup>50</sup> and less able to read nutritional labels.<sup>51</sup>

<sup>47</sup> Davis, T. et al (2006) Literacy and misunderstanding prescription drug labels. *Annals of Internal Medicine*. 145 (12). Pp.887-894.

<sup>48</sup> Williams, MV. et al (1998) Relationship of Functional Health Literacy to Patients' Knowledge of Their Chronic Disease: A Study of Patients With Hypertension and Diabetes. *Archives of Internal Medicine*. 158 (2). Pp.166-172.

<sup>49</sup> Mancuso, CA. and Rincon, M. (2006) Impact of health literacy on longitudinal asthma outcomes. *Journal of General Internal Medicine*. 21 (8). Pp.813-7

<sup>50</sup> Ibid.

## Conclusion

Low literacy affects health through a number of ways. Firstly, it is associated with factors increasing the likelihood of living a healthier lifestyle. However, literacy also has a direct impact on an individual's ability to obtain, process and understand information relating to healthy living. Those with poor literacy are less likely to access information affecting their understanding of the condition they have, and are less able to self-regulate their medication. Furthermore, individuals with low literacy and education levels are more likely to be susceptible to negative health-related behaviours, such as heavy drinking, smoking and obesity.

If the UK is serious about tackling health inequality and decreasing pressure placed on the NHS, we must take action to ensure fair and equal access to a healthy life. Improving literacy skills is an essential part of a strategy for promoting healthy living.

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<sup>51</sup> Rothman, RJ. et al. (2006) Patient Understanding of Food Labels: The Role of Literacy and Numeracy. *American Journal of Preventive Medicine*. 31 (5). Pp.391-398.

## Literacy and crime

The economic and social cost of crime is a major challenge to the UK and our society. Since the early 1990s the prison population has increased on average by 3.6% in each year.<sup>52</sup> Studies have demonstrated that low literacy increases the risk of crime. In this report we propose that low literacy holds a relationship with crime because it exacerbates risk factors associated with offending: negative experiences of education, exclusion and truancy, poor attainment and poor employment outcomes all hold a relationship with poor literacy skills. This perspective also takes into account that low literacy narrows opportunities available to young people and contributes to outcomes that are associated with offending behaviour.

The relationship between literacy and crime is complex due to the many factors associated with criminal behaviour. At face value the association seems clear: the UK prison population has drastically low levels of literacy. However, drawing lines of causality is difficult and it is important to be aware of this. In this section we explore how low literacy can contribute to a life course that increases the risk of offending. This perspective, we believe, may help to unpick the complexity of this issue and provide an understanding of how low literacy contributes to the factors associated with crime.

### Key findings

- Poor literacy is prevalent amongst young offenders and the prison population.
- 48% of offenders in custody have a reading age at or below the expected level of an 11-year-old. Similarly, in a survey of prisoners' self-perception, 47% of prisoners said they had no qualifications.
- Offenders in their middle teens – the peak period for offending – frequently have poor reading skills: over half have literacy skills below the level of an 11-year-old compared with two-fifths of the wider prison population and one-fifth of the adult population.
- Poor literacy exacerbates risk factors associated with offending behaviour.
- Literacy holds a significant relationship with the number of times a 30-year-old man has been stopped and questioned and with the number of times a 42-year-old man has been arrested.
- Factors associated with crime – low attainment, negative experiences at school, exclusion, truancy and poor employment prospects – all hold a relationship with low literacy.
- Low literacy is also associated with lower employment prospects, a factor linked with offending behaviour. The majority of young adult offenders (aged 18 to 20) are male and out of work and nearly two thirds (63%) are likely to have been unemployed at the time of arrest compared with 46% of those over 25.
- Low educational attainment as a contributing factor to crime is significantly associated with low literacy skills.
- Evidence suggests that young people who are not in education, employment or training (NEET) are 20 times more likely to be convicted of a crime (PRT, 2010)<sup>53</sup>.

<sup>52</sup> Berman, G. and D. Aliyah., (2013) *Prison Population Statistics*. House of Commons Library. Available: [www.parliament.uk/briefing-papers/SN04334.pdf](http://www.parliament.uk/briefing-papers/SN04334.pdf) [Accessed 22 August 2014].

<sup>53</sup> Devitt, K. (2011) *Young Adults Today: Education, Training and Employment and Young Adults in the Criminal Justice System Fact File*. Brighton: Young People in Focus.

- Negative experience at school is also a key factor linking literacy to crime. Those with low literacy are more likely to be excluded from school and more likely to truant. 9% of very poor readers are persistent truants compared to 2% of those who are average or above average readers.
- Exemplifying how low literacy exacerbates risk factors, we see that of offenders released after sentences of less than a year, 1 in 3 (32%) of those with a spell of employment reoffend compared to over two-thirds (69%) without employment. Furthermore, for prisoners with sentences under one year, 63% of offenders who had been expelled or permanently excluded from school are reconvicted within a year, compared with 44% of offenders who were not.

## Literacy and the prison population

The relationship between education and crime has been well established, with research indicating that disaffection with school and a record of poor attainment are both important components of delinquent and criminal behaviour.<sup>54</sup>

Studies show that literacy levels among the prison population are far lower than the wider adult population with 48% of offenders in custody having a reading age at or below the expected level of an 11-year-old. Similarly, in a survey of prisoners' self-perceptions, 47% of surveyed prisoners said they had no qualifications.<sup>55</sup> However, the prevalence of low literacy among prisoners does not necessarily demonstrate a causal link between low literacy and offending: Parsons (2002: 11) argues "The backgrounds of men and women who have a poor grasp of the basic skills are also characterised by disadvantage and marginalisation".<sup>56</sup>

## How does low literacy contribute to crime?

Low literacy is associated with crime because it exacerbates factors seen to increase the risk of offending. One risk factor can reinforce the next, creating a path where choice in later life becomes limited. For example, leaving school with no qualifications increases the risk of unemployment. With this understanding, Bynner (2009) develops a 'life-course' perspective from which we view literacy and its relationship to crime. Through this perspective Bynner et al. (2004; 2009) argue that crime does not emerge in adolescence or adulthood but has its foundation in a whole set of lifetime experiences and contexts through which individuals develop.<sup>57</sup>

Parsons (2002) finds that poor literacy scores kept a significant relationship with the number of times a 30-year-old man had been stopped and questioned or arrested

<sup>54</sup> See. Bynner, J. (2009) *Lifelong Learning and Crime: A Life-course Perspective. Inquiry into the Future for Lifelong Learning, 4*. Leicester: NIACE.

<sup>55</sup> Hopkins, K (2012). Hopkins, K. (2012) *The pre-custody employment, training and education status of newly sentenced prisoners: Results from the Surveying Prisoner Crime Reduction (SPCR) longitudinal cohort study of prisoners*. London: Ministry of Justice.

<sup>56</sup> Parsons, S. (2002) *Basic Skills and Crime: Findings from a study of adults born in 1958 and 1970*. London: Centre for Longitudinal Studies.

<sup>57</sup> Bynner, J. (2009) *Lifelong Learning and Crime: A Life-course Perspective. Inquiry into the Future for Lifelong Learning, 4*. Leicester: NIACE.

and with the number of times a 42-year-old man had been arrested.<sup>58</sup> Examining factors increasing the risk of criminal behaviour beyond literacy, Parsons concludes that: “Other important risk factors for men were lack of parental involvement and interest in their child’s education, disaffection and alienation from school, drug use and disrupted employment. For women, disaffection and alienation from school together with drug use were equally important, with the home environment and early signs of disruptive behaviour holding more significance than they did for men.” (pp.29)<sup>59</sup>

Low educational attainment, poor employment prospects and higher levels of truancy and exclusion are all factors associated with low literacy. Firstly, low literacy is significantly related with lower educational attainment. Those starting from a lower platform of early years development, for example, are significantly less likely to attain the expected level of literacy by the end of primary school, and those entering secondary school without expected levels of literacy are more likely to leave school without qualifications. In short, educational disadvantage is cumulative and widens throughout school.

Furthermore, low literacy is likely to prevent further education once leaving school, a factor significantly associated with better employment prospects. However, more directly (as this report covers), low literacy is associated with reduced employment prospects. Bynner argues that the phenomenon of pupils leaving schools without the necessary skills to find work in mainstream employment may force young people towards casual unskilled employment or alternative methods of generating income that may increase likelihood of offending: “...late teens [are] characterised by lack of education, employment and training and often an alternative lifestyle tied to gang life, drugs and other means of making money and maintaining self-esteem” pp.14 (SEU, 1999; Bynner and Parsons, 2002).<sup>60</sup>

Evidence also suggests that literacy is associated with truancy. Those entering secondary school with poor reading skills are four times more likely to truant than those who enter with age-appropriate skills. A 2006 analysis of Year 9 pupils showed that 9% of those who had been very poor readers at the end of primary school were classified as persistent truants in Year 9, compared to 2% of those who had been average or above average readers. Those with poor literacy were also more likely to be excluded from school than their peers; those entering secondary school with literacy attainment below the expected level at Key Stage 2 had an exclusion rate five times that of pupils entering meeting the expected level.<sup>61</sup>

The understanding that poor literacy shapes risk factors associated with criminal behaviour appears to resonate with statistics about the education and employment levels of offenders:

- Offenders in their middle teens – the peak period for offending – frequently have poor reading skills, with just over half below the level of an 11-year-old

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<sup>58</sup> Basic Skills and Crime: Parsons (2002) Parsons, S. (2002) *Basic Skills and Crime: Findings from a study of adults born in 1958 and 1970*. London: Centre for Longitudinal Studies.

<sup>59</sup> Ibid.

<sup>60</sup> Bynner, J. (2009) *Lifelong Learning and Crime: A Life-course Perspective. Inquiry into the Future for Lifelong Learning, 4*. Leicester: NIACE.

<sup>61</sup> Every Child a Chance Trust (2009) *The long-term costs of literacy difficulties, 2<sup>nd</sup> ed.* Available at: [http://readingrecovery.org/images/pdfs/Reading\\_Recovery/Research\\_and\\_Evaluation/long\\_term\\_costs\\_of\\_literacy\\_difficulties\\_2nd\\_edition\\_2009.pdf](http://readingrecovery.org/images/pdfs/Reading_Recovery/Research_and_Evaluation/long_term_costs_of_literacy_difficulties_2nd_edition_2009.pdf) [Accessed 1 September 2014].

compared with two-fifths of the prison population and one-fifth of the adult population.<sup>62</sup>

- The majority of young adult offenders (aged 18 to 20) are male and out of work. Nearly two-thirds (63%) are likely to have been unemployed at the time of arrest compared with 46% of those over 25.
- The Basic Skills Agency (1994) found that 96% of prisoners are excluded from work due to a lack of basic skills.<sup>63</sup>
- There is evidence that young people who are not in education, employment or training (NEET) are 20 times more likely to be convicted of a crime (PRT, 2010).<sup>64</sup>

The understanding that literacy increases risk factors associated with offending can be demonstrated through reoffending levels. Reoffending rates are substantially higher for those who do not enter employment. Of offenders who were released after sentences of less than one year, 1 in 3 (32%) of those with a spell of employment reoffended compared to over 2 in 3 (69%) without employment.<sup>65</sup> While this does not demonstrate that literacy plays a role in reoffending, we know that better literacy is associated with improved employment prospects, thereby decreasing the risk of offending. Furthermore, for prisoners with sentences under one year, 63% of offenders who had been expelled or permanently excluded from school were reconvicted within a year, compared with 44% of offenders who were not. For those with sentences over one year, nearly a fifth (18%) reoffended after a spell of employment compared with over two-fifths (43%) without any employment.

## Conclusion

Ultimately, a combination of risk factors, some mutually reinforcing, increase the chance of becoming involved in criminal behaviour. Low literacy exacerbates risk factors by narrowing employment and attainment opportunities and contributing to a negative experience at school. While the causal outcomes of these factors in relation to crime are unreliable, as 'risk' suggests, it is reasonable to assume that increasing literacy levels could be a protective measure against the risk of involvement in crime. However, due to the complexity of this behaviour it may not be effective in isolation. Nonetheless, low literacy impacts the lives of many of those in prison and at risk of offending through low attainment, poor employment prospects, truancy, exclusion and wasted opportunity.

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<sup>62</sup> Bynner, J. (2009) Lifelong Learning and Crime: A Life-course Perspective. *Inquiry into the Future for Lifelong Learning*, 4. Leicester: NIACE.

<sup>63</sup> Ibid.

<sup>64</sup> Devitt, K. (2011) *Young Adults Today: Education, Training and Employment and Young Adults in the Criminal Justice System Fact File*. Brighton: Young People in Focus.

<sup>65</sup> Ibid.

## Discussion

Within a challenging national context, both socially and economically, it is important to rethink long-lasting problems in new ways. As this report demonstrates, the impact of low literacy is not confined to schools or educational outcomes, but impacts individuals, society and our nation in a profound way. While low literacy will not resolve these problems in isolation, a concerted effort to improve literacy levels in the UK will empower and enable millions of individuals to realise their capability. And while this report has examined many negative consequences of low literacy and the challenging context we face, it seeks to demonstrate the potential social and economic gains to be made by improving literacy levels. Within all these areas we believe that further research will enable us to better understand how improving literacy levels will provide relief for communities across the UK.