

The social determinants of young people's health

Identifying the key issues and assessing
how young people are doing in the 2010s

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Abstract

This paper provides an overview of evidence on the social determinants of young people's health. Drawing on a model of social determinants that includes money and resources, living conditions, family factors, peers and social groups, education and work and worklessness, we ask (a) what is known about the most important social determinants of health in the 12-24 age group and (b) what proportions of today's young people experience the kinds of social disadvantage we know are associated with poorer health outcomes? Social determinants are particularly powerful at times of transition, and the ages 12-24 are defined by transitions in a range of different biological, psychological and social domains.

Overall, although there is much agreement about the importance of the broad categories of social determinants included here, there is less precision about the special issues arising in the 12—24 age group, either in terms of current associations with poor health, or longer-term associations with later health outcomes. In addition, some social determinants may manifest specifically in this age group, such as the importance of sofa-surfing as a form of insecure housing, or the impact of a precarious labour market at the point of transition between education and work.

However, despite the lack of precision about this particular age group, by measures we know are associated with later health, the second half of this report demonstrates that significant proportions of today's young people aged 12-24 are experiencing disadvantage that is likely to be associated with long term health outcomes.

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Introduction

It is clear that a range of different kinds of social experiences are linked to health throughout the lifespan. The World Health Organisation definition of the social determinants of health includes “the conditions in which people are born, grow, live, work and age” (1). These conditions can be structural (national wealth, income inequality, educational opportunities and other national infrastructures), and proximal determinants that flow from the structural (family factors, social support, neighbourhood environment, school ethos). In fact, it has been argued that health is more a function of lifestyles linked to living and working conditions than a function of healthcare.

The World Health Organisation estimates that 50% of inequalities in major non-communicable diseases are accounted for by social inequalities in risk factors (1). The research literature provides us with a number of examples relating to the effects of, for example, relationships and social support on mental health (2), trauma and adversity on cardiometabolic outcomes (3), marital history and a wide range of physical health outcomes (4), childhood maltreatment and brain development (5) deprivation and obesity (6) (Senese et al 2009), and unemployment and depression (7). Marmot et al (2010) (8) have estimated that 2.3 million years of life were prematurely lost among people aged 30-59 in the year 2003, as a result of socio-economic inequalities. Although it is hard to demonstrate, a consensus is growing that many of the connections between earlier social experiences and later health outcomes may be causal. A range of potential psychological and physiological explanations have been suggested to explain the links (8).

However, there has been less research looking specifically at the evidence on the social determinants of health for adolescents and young people as distinct from other age groups. Although there is no question that health inequalities exist in adolescence (9,10) and that significant proportions of young people are facing disadvantage (11), the precise relationship between social determinants and health outcomes for this age group is less clear. Many of the data relate to adult samples only or do not disaggregate young people from younger children or adults. However, the contexts and challenges of life as a teenager and young adult can be markedly different to those of other ages (12). In addition, studies vary as to whether they address how young people experience the social determinants of health, whether they explore the effects of social determinants on their current health, or whether they study how social determinants might be associated with future health. The answers to these questions might be quite different.

As a starting point for organising some of this literature, in this paper we collated evidence on:

- (a) What is known about the social determinants of health in the 12-24 age group?
- (b) What proportions of today's young people experience the kinds of social disadvantage we know are associated with poorer health outcomes? For example, what proportions are living in poverty, temporary accommodation or in areas of deprivation, or are unemployed or in debt, or in other high-risk groups?

Methods

This paper provides an overview of evidence on the social determinants of young people's health. As such, it is not a comprehensive review, although we have drawn on electronic database searches that we have done for previous pieces of work, collation of official statistics and policy report undertaken as part of AYPH's recent publication '*Key Data on Young People 2017*' (11), and we have followed up leads from relevant existing reviews and from contacts in the field.

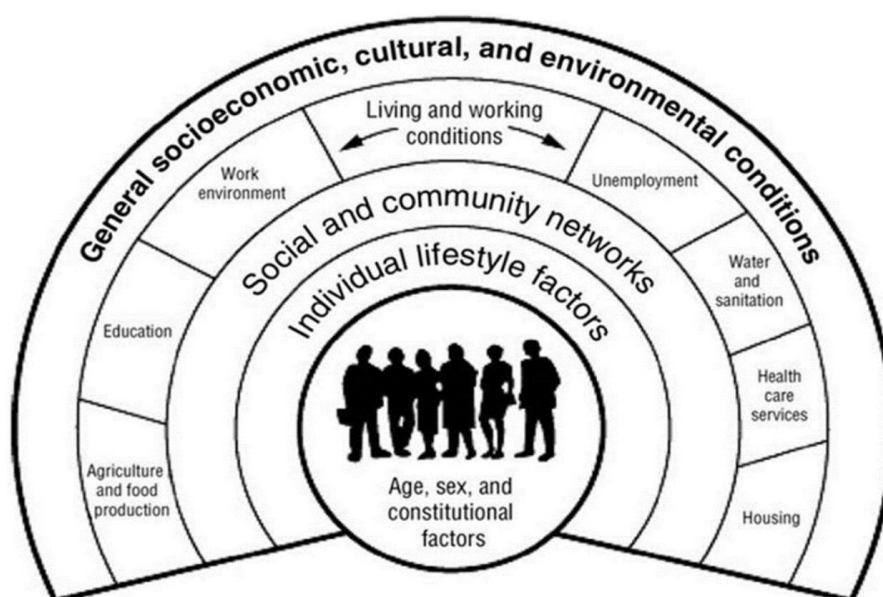
The paper provides a context for subsequent outputs from the inquiry into young people's health. It helps to formulate some of the questions the Health Foundation's youth health inquiry will tackle and provides a background for later analysis of how the social determinants experienced by young people now may have changed when compared to earlier generations.

Defining social determinants

There are many different ways of grouping social determinants. The majority follow similar classification systems to that used by the US government's 'Healthy People' programme. This suggests five categories including economic stability, education, social and community context, health and healthcare, and neighbourhood and built environment (13). Many classification systems in the UK draw on Dahlgren and Whitehead's (14) similar schema as shown in Figure 1.

Figure 1: The broad social and economic circumstances that together determine the quality of health of a population are known as the 'social determinants of health'

The broad social and economic circumstances that together determine the quality of the health of the population are known as the 'social determinants of health'



Source: Dahlgren and Whitehead (1991)

For the purposes of this working paper, we suggest a consistent and straightforward conceptual framework suitable for the 12-24 age group, focusing more on the upstream determinants of health, and how they might relate to health. Less of an emphasis is put on illness and the use of health services. We have also excluded the broader environmental factors such as water, sanitation, agriculture and food production, concentrating on the economic, social and community elements. To reflect the particular life stage of the 12-24 age group we have specified family (not just 'social'), separated out peers from family, and have included work and worklessness as a separate category from economic income, as it is

such a large part of the transition to adulthood as establishment of independent identity. Our framework includes:

- Money and resources: household income, measures of poverty, savings and debt, welfare and benefits
- Living conditions: housing standards, tenure, housing insecurity, area deprivation, area crime
- Family: separation, instability, state care, custody, quality of relationships
- Peers and social groups
- Education: level, attainment, skill level, potential to engage in good quality work
- Work and worklessness: unemployment, underemployment, insecure employment, low pay

Health 'habits' in adolescence as a determinant of later health outcomes are not usually classed as social determinants in the literature and have not been included in this review, although they might be considered part of 'individual lifestyle factors' in the Dahlgren and Whitehead model (14). Habits are individual behaviours, which arise from gradients in social determinants. They are certainly important as a determinant of health, and we will return to them in later working papers.

This paper will not address the specific causal pathways between determinants and outcomes. These might include, for example, psychological pathways through stress, impact on material deprivation, practical pathways through availability of services, or effects on health behaviours as shaped by these factors. This paper focuses on identifying the key social determinants, what we know about their relationship with current and future health outcomes and the proportion of the current population of young people they may be differentially affecting.

Why are the social determinants of health particularly important in the 12-24 age group?

It seems possible that the relationships and mechanisms linking deprivation to current and later health outcomes may be different in adolescence when compared with those for younger children (embedded in families) and older adults (living entirely independently). Young people experience huge physical, psychological and behavioural changes as they mature from children to adults which allow unique opportunities for social determinants to affect health (10).

The transitions and changes affecting the age period from 12-24 include:

- **Physical development** – development of the central nervous system and puberty which drives young people to develop an identity, adopt certain behaviours which may either be protective or have negative influences on ill health.
- **Cognitive development** – Recent work has revealed that the brain undergoes a huge re-organisation and ‘fine tuning’ in the adolescent years. During their second decade, young people become better at weighing up risk, learning from experience, moral thinking, political thought and at controlling impulses (12)(15).
- **Emotional development** – Key tasks in this age-group include firming up a sense of personal identity and self-esteem, developing autonomy and learning coping strategies for dealing with life events and challenges (16). Young people seek more independence and responsibility and transition to taking responsibility for their own health, which may have either positive or negative impacts.
- **Social development** – Peer groups become of paramount importance and peer influences are powerful in either positive or negative health risk behaviours, although families remain very significant (17). This age-group also experience challenges related to relationships, such as establishing and maintaining more intimate (both psychologically and romantically/sexually) relationships while simultaneously balancing position within larger peer networks (18).

- **Behavioural development** – Brain changes during this life stage also mean that adolescents are more likely than any other age group to seek out novel experiences and take risks. Many lifelong health behaviours are set in train during adolescence.

All the physical, emotional, behavioural and social development changes that occur in the 12-24 age group influence experiences of important transitions for young people, which are points where the social determinants of health can alter trajectories for their health and well-being. Social determinants are particularly powerful at times of transition. The World Health Organisation has identified the following important transitions for young people (19);

- **Education:** transition from secondary school to some form of higher education
- **Work:** Transition from education into the workforce (or to being unemployed)
- **Health:** transition to responsibility for their own health
- **Family:** transition from family living to autonomy (housing and relationships)
- **Citizenship:** transition to responsible citizenship

What is known about the most important social determinants of health in the 12-24 age group?

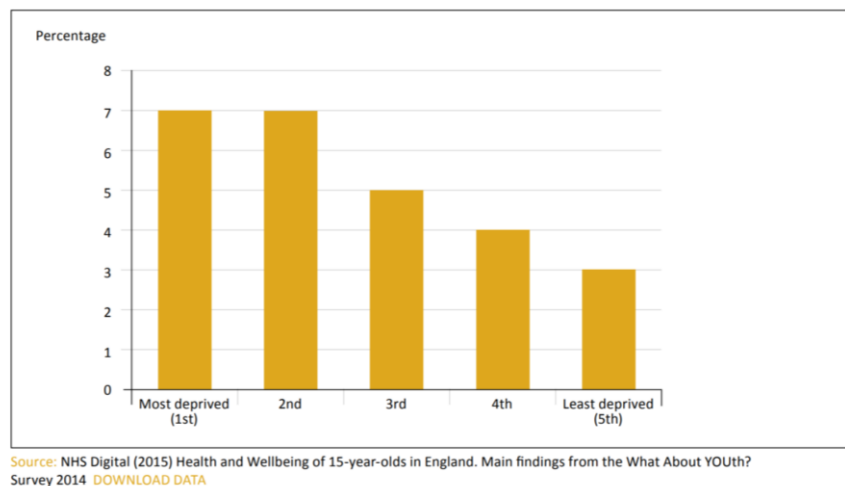
In this section we take each of the six domains of social determinants and investigate (a) the evidence for an association with current health for 12-24-year olds, and (b) the evidence for an association with longer-term health later in adulthood.

Money and resources

Low income is the most salient disadvantage, and a clear associate of poor health. This is where most research on social determinants has been focused including a series of English government commissioned reports (8,20–22). The Joseph Rowntree Foundation's (JRF) 2014 paper on '*How does money influence health*' provides a comprehensive review of the evidence (23). They concluded that there was considerable evidence on the association, but that causal pathways were less clear (and that health influences income as well as vice versa), leading to a "complex web of causal factors". The JRF report notes that while health overall has generally improved for the population, health inequalities have proved more intractable.

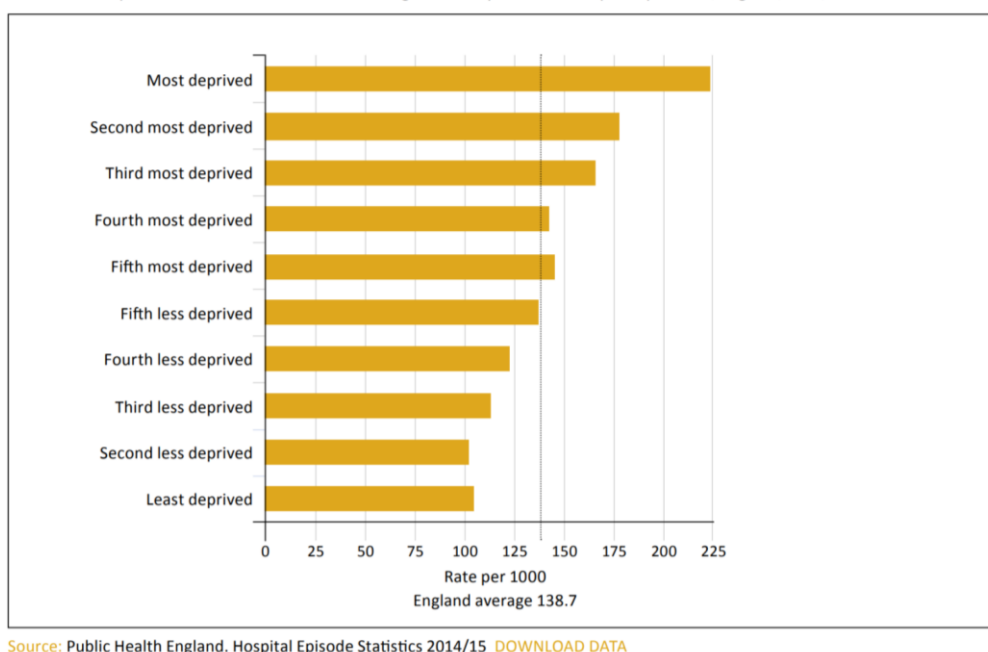
In terms of concurrent associations with health outcomes, young people from more disadvantaged backgrounds report lower levels of health-promoting behaviours, poorer health outcomes, and less social support (24). Studies can use a range of measures as a proxy for deprivation including parental income or measures of neighbourhood deprivation. Young people living in the most deprived areas are two times more likely to be obese, twice as likely to report that they smoke regularly (Figure 2 below), two times more likely to conceive under the age of 18 and more likely to be admitted to hospital with asthma, compared to young people living in the least deprived areas (see Figure 3) (11). There is evidence from the Millennium Cohort study that there is an inverse relationship between parental education and prevalence of mental health problems in 11-year olds, meaning children with parents who had the lowest levels of education had the highest rates of mental health problems (25). Pedestrians aged 10-14 living in deprived areas are also 3.7 times more likely to be killed or seriously injured on the roads(26). However deprivation in young people does not appear to be associated with alcohol consumption or eating disorders (11).

Figure 2: Regular smoking in 15 year olds by Index of Multiple Deprivation quintiles, England, 2014



Source: Key Data on Young People 2017 (11)

Figure 3: Hospital admissions for asthma for those aged 10-18 by Index of Multiple Deprivation, England, 2014/15



Source: Key Data on Young People 2017 (11)

Overall, among the 12-24 age group, the relationship to income is stronger for some health outcomes and weaker for others. The differences between groups may not be quite as extreme in adolescence as they are at other age groups. Evidence for some kind of 'equalisation' in health inequalities in adolescence was suggested two decades ago (27)(27), but later analyses have since largely disproved this (9,28).

Longer-term, children from economically disadvantaged backgrounds have poorer adult health. Graham and Power's 2004 review for the NHS Health Development Agency (as it was then) suggested that people from more disadvantaged childhoods experienced double the death rate by their mid-50s, more coronary heart disease and respiratory disease, higher BMI and more obesity, poorer cognitive function and poorer mental health (29). The associations with adult outcomes remained after taking account of adult economic status.

However, few of these kinds of studies predict from adolescence or early adulthood; most are concerned with deprivation in the early years. Yet health behaviours initiated or acquired in adolescence are likely to be major contributors to links between deprivation and inequality and later health. Smoking, for example, is clearly linked to later health outcomes (30). Similarly, high relative weight at age 14 is associated with higher mean BMI across adult life (31).

As well as more focus directly on the 12-24 age group, a clearer distinction needs to be made between the effects of absolute levels of income for this age group compared to actual or perceived financial inequality. And what happens in the transition into early adulthood, the transition from family socioeconomic status to a young person's 'own' socioeconomic status, has not received much attention.

Living conditions

Living conditions, and housing in particular, are inextricably linked to physical and mental health. This is through direct effects such as an increased risk of accidents and spread of disease, respiratory conditions, lead and asbestos ingestion, and physical effects of overcrowding (for example on heart rate), and also through indirect effects on relationships, feeling of safety and refuge, social stations and sense of inclusion. The Chartered Institute of Environmental Health provides a clear overview of housing as a gateway to health, listing the hazards and their relationship to physical and mental health outcome (32). As well as the physical qualities of accommodation, other important factors are the tenure of housing; housing insecurity; homelessness, and neighbourhood deprivation.

There is not much evidence on the impact of poor housing specifically on young people's health aged 12-24. However, a study done by Shelter in 2006 found that children in poor housing are more likely to have mental health problems, respiratory problems, experience long-term ill health and disability, experience slow physical growth and have delayed

cognitive development (33). Secure housing is not just a physical shelter but also provides a sense of stability and security, for example in allowing for continuity and stability of education (33).

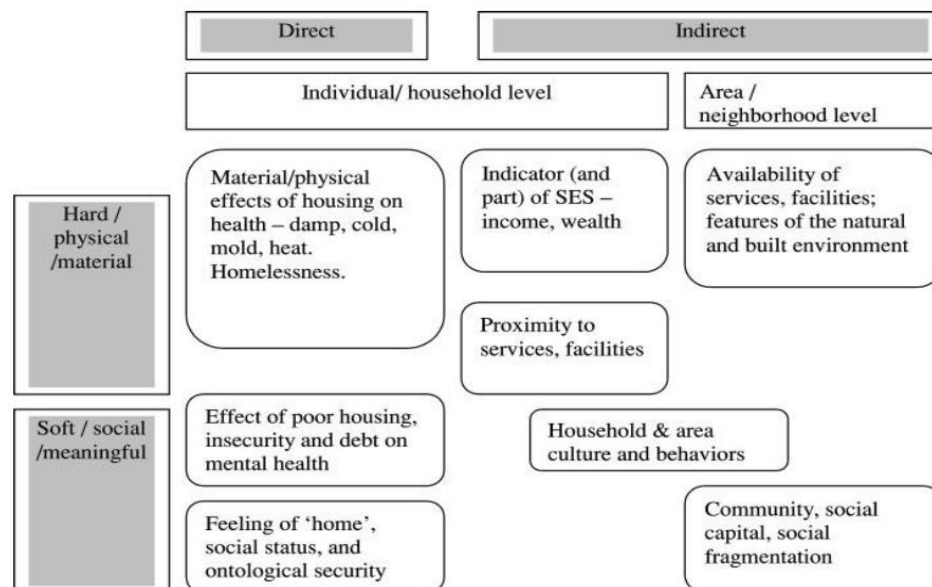
Housing tenure itself may have some implications, over and above poor conditions. There is some evidence to show that 23 year olds who have lived in owner occupied houses for most of their life have better self-reported health than their peers who have lived in rented or insecure housing (34). Certainly, youth homelessness can have detrimental effects on all aspects of a young person's life, adversely affecting their education and training prospects as well as employment prospects (35). Young people who become homeless are more likely to misuse drugs and alcohol (36), experience nutritional and infectious diseases, and experience anxiety and depression (37). Young people who are most at risk of homelessness in the UK include care leavers, runaways, young offenders and unaccompanied asylum seeking minors (38)(Homeless Link, 2015).

In the adolescent population, high levels of crime and low perceived safety in the local neighbourhood are associated with increased levels of psychopathology (39,40), cannabis use (41), decreased physical activity (42) and increased body mass index (43). A systematic review and meta-analysis found that adolescents in rural areas have a 26% greater chance of being obese, compared to adolescents in urban areas (44).

Overall, there are a number of direct and indirect ways housing and neighbourhood characteristics can potentially affect later health, as suggested in Figure 2 from (Shaw 2004) (45). However, concrete research specifically on the 12-24 age group is not extensive and is limited to particular issues such as youth homelessness, rather than quality and tenure of housing. In one rare example, a longitudinal study examined the influence of perceived neighbourhood safety during adolescence on subjective health 20 years later; and found that if female adolescents perceived their neighbourhood as unsafe, they experience subjective deterioration of health in adulthood. This effect was not seen in males (39).

There is also growing evidence to support the beneficial effects on physical and mental health from access to green space in urban areas on all age-groups, however more youth specific studies are required. A recent survey on young people in the UK revealed that those from low income families are more likely to live in areas with fewer green spaces, with 30% of 16-24 year olds reporting they never visit a local park (46). There has been a recent drive by Public Health England to try and increase access to green space as a way of reducing health inequalities (47).

Figure 4: Illustration of the direct and indirect ways that housing can impact on health



Source: Shaw 2004 (45)

As well as possible direct effects on later physical health, there is evidence from the *State of the nation 2017: social mobility in Great Britain* report to suggest that where a young person lives can be a cause of inequalities in social mobility (48) with long-lasting effects into adulthood. Disadvantaged young people living in urban areas can be more socially mobile compared to disadvantaged young people living in isolated rural or coastal areas. Some of the reasons young people in isolated rural and coastal areas are particularly disadvantaged are because of 1) the lack of employment or apprenticeships opportunities in sparsely populated areas, 2) the travel time to higher educational institutions acts as a barrier; and 3) weaker partnerships between local organisations (48). These geographical inequalities in social mobility lead to worse economic outcomes for disadvantaged young people living in rural or coastal isolated areas of Britain, and therefore also widen the gap in health inequalities.

Family

Clearly a range of different aspects of family, social and community life are associated with successful human development. This includes family structure, family relationships, parental health, friendships and engagement in political, religious & social groups. A huge literature

confirms associations with physical and mental health both concurrently and in later life (49,50).

Looking specifically at the 12-24 age group, research has pointed to:

- (a) **Family structure.** Family structure during adolescence might influence health across the lifespan (51). Adolescents from two-parent households have been found to have higher self-rated health at age 13, with these differences remaining into early adulthood (52). Additionally, there is an increased risk of smoking in young adults in adolescence who lived with a lone mother anytime up to the age of 16 (53). However, there are discrepancies in this finding, with other research suggesting that family structure during adolescence has little impact on obesity (54) and self-rated health (55) in young adults. In addition, children and adolescents with parents who have divorced have been found to have higher likelihood of attending psychiatric care compared those with non-divorced parents (56). However, further research has suggested that the impact of parental divorce is only significant among individuals who suffered depression in adolescence (57).
- (b) **Family relationships and connectedness:** Parenting styles which are referred to as authoritative that endorse family connectedness, shared norms and attitudes, have been shown to protect against poor health outcomes in adolescence and promote prosocial behaviour, greater school achievement and greater self-confidence (58). Parental support has been found to have a protective effect on health, with parental support and control linked to lower tobacco smoking and marijuana smoking (59) and lower substance use. Familial violence, lack of cohesiveness, and conflict within the family has been associated with depression and internalising problems in adolescence (60). Parental interest in their child's schooling has been associated with improved self-rated health in young adults (61) and a lower risk of obesity and diabetes in adulthood (62). Family connectedness (which draws in many constructs such as interest, support and control) seems to be one of the most important factors in young people's later outcomes (10).
- (c) **Parental ill health:** Suicidal ideation and behaviour in children and adolescents has been linked to parental psychopathology (63), with parental depression and antisocial personality having the largest effects (64). Parental death during adolescence has been associated with an increased risk of all-cause mortality in early adulthood, the risk being higher in the case of unnatural death compared to natural death (65). Many of these variables are presumably mediated through aspects of family functioning considered above. In addition, it is important to note that young people with caring responsibilities for others are often hidden, falling under the radar with respect to receiving additional support. Young adult carers face significant social and health inequalities; those aged 16-18 are twice as likely not to be in education,

employment, or training (NEET)(66). There is also evidence to show that young carers are 1.5 times more likely to have a special educational need or disability (67) and are more likely to report a mental health problem (68).

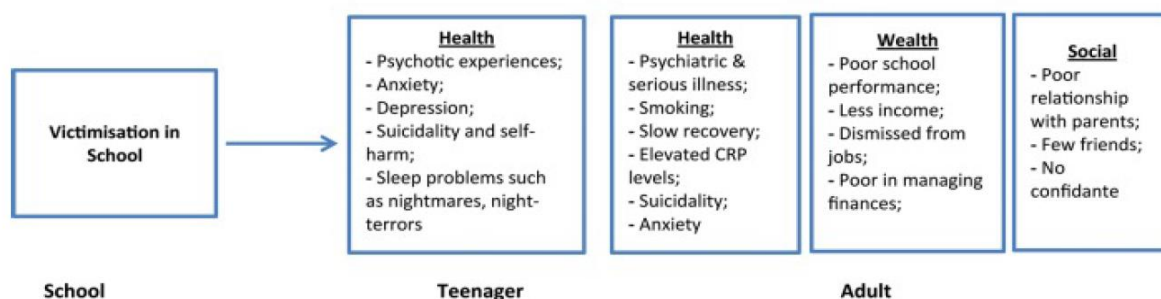
Peers and social groups

During adolescence, social determinants from outside the family become greater, with major influences of peers, wider social groups and the media becoming particularly important. Adolescents may be particularly susceptible to social influences given their developmental stage and developing brain (69)(70). Secondary school as an environment (in addition to a source of qualifications) is the critical setting for many of these influences, but others – such as engagement in political, religious and social groups – may arise outside the school environment as young people spend more time outside the parental home, and beyond parental influence.

Peers can provide positive and negative influences (71). Peers perceived as higher status, or more “popular” can be especially influential (72). Although there is a large literature on peer influence in the development of antisocial behaviour and substance misuse, for example (73), and sexual risk, violence and participating in criminal activity (74) (75), there is also a literature on how peers help and support each other and buffer the effects of life stressors and protect against health risk behaviours (10,76). Longitudinal research has demonstrated that the quality of social interactions at age 20 can have a direct, unmediated effect on age-50 social and psychological outcomes (77).

Bullying is an important part of peer group dynamics. Negative long-term health outcomes have been reported both for young people who bully others and for victims of bullying (78). Bullying perpetration is linked to increased delinquent behaviour, depression amongst girls, increased risk of suicidal ideation, poor school adjustment and increased risk of violence. Bullying perpetrators are at increased risk of substance misuse in early adulthood. Victims of bullying were also more likely to exhibit delinquent behaviour, experience higher rates of depression and internalising mental health problems, increased risk of suicidal ideation and self-harm; more likely to have had psychotic episodes by age 18, showed poor school adjustment and were more likely to be a young parent under the age of 20 (78).

Figure 5: The impact of being bullied on functioning in teenagers and adulthood



Source: Wolke and Lereya, 2015 (78)

With technological advances and the increased use of social media by young people cyberbullying has important implications for young people's health. Cyberbullying has many definitions, but the term is commonly used to describe bullying that occurs online through social networking sites, instant messaging and through use of mobile phones and tablets. Victimisation from cyber-bullying has been linked to poorer mental wellbeing (79). However, increasing research is required into the long-term effects of cyber-bullying on young people's health outcomes.

Beyond peer groups, civic engagement activities such as volunteering or participation in community activities can also promote healthy and successful development for individuals (80), and encourage future political participation (81). Civic engagement has also been associated with educational achievement (e.g., Denault et al., 2009)(82).

Education

There have been rapid changes in the UK's education systems in recent years. In England, for example, this has included the growth of the academy programme, the introduction of 'free schools', the extension of the age for compulsory participation in education or training to 18 years, and a raft of changes to the educational qualifications themselves.

There is clear evidence on the links between higher levels of educational achievement and better health outcomes, both immediately and in the longer term. The health benefits of education accrue at the individual level in terms of the life skills people acquire and access to income, and at the community level in terms of the health-related characteristics of the environments in which people work and live as a result of their employment. Education is one of the strongest social determinants of health(83). Unlike the other topics covered, much of the evidence on the health impact of education relates directly to the 12-24 age

group, as this is when a significant proportion of education takes place, particularly relating to qualifications that provide a gateway to higher status jobs in the longer-term.

Education shapes future employment opportunities, increases health literacy and health decision making, and enhances people's ability to marshal resources that affect health outcomes (84). The role that schools play in promoting health has been given increased importance recently, particularly in promoting adolescent wellbeing (85). Traditional methods such as incorporating personal, social and health education (PSHE) in curriculums on their own have not had sustained impacts, but are effective in promoting adolescent health when incorporated as part of a whole school approach (86). A whole school approach to health promotion does not confine health promotion to lessons alone, but instead embeds health promotion in the whole school ethos and involves schools engaging with parents, carers and outside agencies to promote health and wellbeing(87). Positive youth development interventions, some of which are based in schools have also been shown to reduce adolescent violence and health risk-taking behaviour such as substance misuse (88). It is thought that through development of positive skills, attitudes, relationships and identities as part of positive youth development interventions, young people develop self-regulation and multiple assets that buffer against involvement in youth violence and substance misuse(88).

Cross-sectional surveys have shown that completing secondary education is associated with improved health outcomes such as substance use and sexual health (10). Over a number of years, research from the Centre for Research on the Wider Benefits of Learning has found education to be beneficial across a range of health areas. Years of education and highest level of education predict later mortality, physical health and mental health. This includes effects on later depression, obesity, smoking and take up of preventative care (83,89). As well as direct effects on the kinds of environments and activities people will later work in, education affects self-esteem, social support, civic participation and income inequality. At the upper end of the spectrum, an 'elite education' can benefit health; findings from the 1970 British Cohort Study have demonstrated that private school and higher-status university attendance were related to better self-rated health, lower BMI, and favourable health habits at age 42 (90).

Work and worklessness

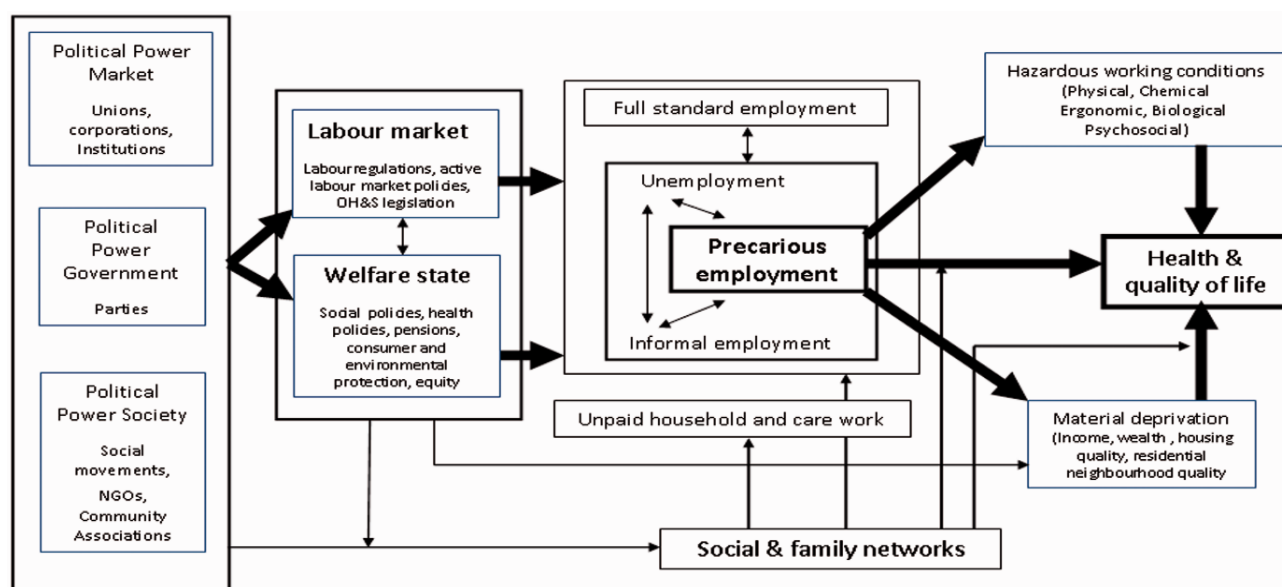
Employment is one of the most important determinants of physical and mental health. In particular the long-term unemployed have a lower life expectancy and worse health than those in work (91).

Looking specifically at age 12-24, most young people will only have just started to test the labour market. There are thus far fewer studies on the impact of unemployment, lower skilled jobs and insecure work on this age group than on those who have been in the labour market for longer. Much of the research that does exist relates not to longer term health

outcomes, but to effects on later employability. There is, for example, some evidence that there may be ‘scarring effects’ resulting from youth unemployment, emphasising the “...Importance of early and continuous labour market experience, both before and during further education, and of vocational education in the workplace for long-term labour market success” (92). Young people who are NEET are considered to be at greater risk of poor physical and mental health, being unemployed, and having low quality and low wage work in later life (93).

Although uncertainty in the labour market is appearing to be an important social determinant of health for young people, the investigation of the impact of a precarious market on health is still in its early days (94,95). There is some preliminary evidence that shows that young people on zero-hour contracts are more at risk of mental health and physical health problems than their peers, which is hypothesised to be due to the uncertain nature and financial insecurity that come with zero-hour contracts (96). However, there is still a need for more research into the specific pathways and mechanisms that precarious work can have an impact on young people’s health. Figure 3 below represents a conceptual model linking precarious employment to health and lifestyles.

Figure 6: Conceptual model linking precarious employment to health and lifestyles



Source: Benach et al 2014 (94)

Overall, although there is much agreement about the importance of the broad categories of social determinants included here, there is a lack of consideration about the special issues arising in the 12–24 age group, either in terms of current associations with poor health, or longer-term associations with later health outcomes. However, there is clearly a wide range of factors important in the adolescent years that impact on later health outcomes, and some hints that certain social determinants may be particularly salient for our age group. Some of

the determinants may take a particular form specific to the age group, such as the importance of sofa-surfing as a form of insecure housing, or the impact of a precarious labour market at the point of transition between education and work.

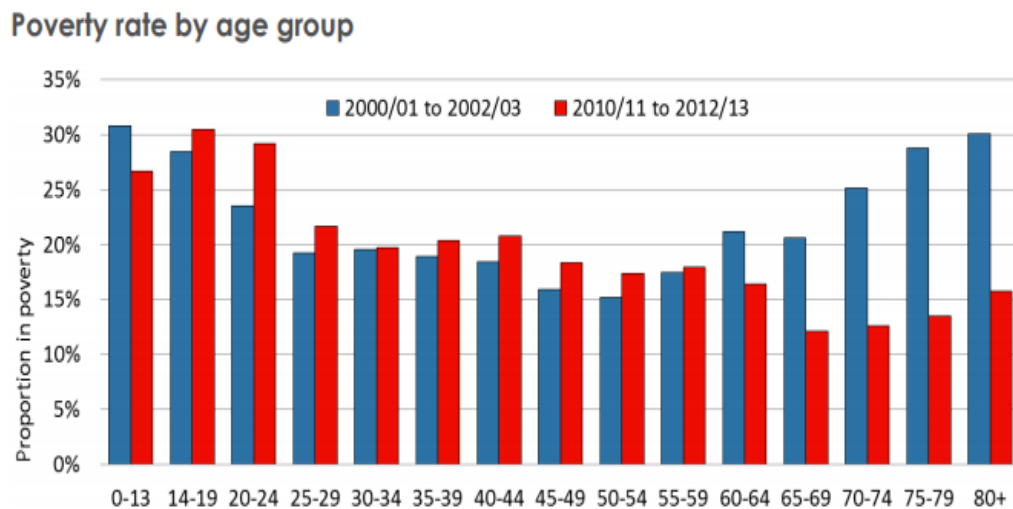
What proportions of young people today are exposed to the kinds of social disadvantage we know are associated with poorer health outcomes?

Money and resources

Government population surveys show that young people are disproportionately represented in families with lower levels of income. Overall, a fifth (22%) of young people aged 11-15 years live in families with the lowest levels of income, compared with 15% living with families with the maximum levels of income (97)(98). Recent estimates suggest that 1,032,520 young people aged 11-19 in England, Wales, Scotland and Northern Ireland are living in families receiving means tested child-related income supplements (97). One in seven young people live in a household where there is no parent at work. Overall, 14% of the secondary school age group are eligible for, and claiming, free school meals.

Analysis of DWP data by the New Policy Institute (2015) compared the poverty rate for children with those for older age groups and looked at how these rates had changed over the last decade. Figure 7 shows that the poverty rate for 14-19-year olds and 20-24-year olds has increased across this period, while the rate for those over 60 has fallen considerably. It is not clear what has driven this trend; it may be related to increased participation in education up to age 18, although significant proportions of university students are working as well as studying so this will not be the full answer.

Figure 7: Poverty rates by age group 2000/01 to 2012/13



Source: NPI (2015), *Households Below Average Income DWP (income after housing costs)*(98)

As they enter their early 20s, many young people are affected by debt worries and housing costs. In 2015 a survey reported that almost half of those aged 18-25 in the UK have debts other than student loans and/or mortgages, and the average amount owed was £3,109. The Institute of Fiscal Studies has calculated that graduates in England on average leave from university with a debt of more than £50,000 pounds, and this rises to £57,000 for the poorest students who borrow more to cover their living costs (99).

It has been estimated that the average debt-to-income ratio for 17-24 year olds is 70%, twice as high as for 25-29 year olds, and a fraction of the 11% ratio for those age over 60 (100). Bank overdrafts (39%) and credit cards (31%) were the most common forms of debt for the younger age group. Those not living with their parents have a much higher poverty rate (43% compared to 25%) (98). People renting their housing tend to have higher poverty rates; young people are disproportionately likely to be renting (if not living at home).

According to the Council of Mortgage Lenders (101) the average age of a first –time buyer in 2009 was 31 and current projections show that for a regular 21-year old who regularly saves, receives no additional financial support and has no children the age of becoming a home owner will be 43. Therefore, the majority of young people aged under 24 will be unable to afford their own homes in early adulthood. Despite not being able to afford to buy in early adulthood, young people aged 18-34 have the strongest expectation to buy their own home compared to older adults in the UK (102).

There have also been recent changes to housing benefits available to those aged 18-21 in the UK (103), and young people can be particularly disadvantaged by the distance between earnings and private rental costs. According to the English housing survey, in the private

rented sector, average weekly rents were similar for those aged 16-34 (£190), 35-44 (£187) and 45-64 (£182) (104). However, across all age groups, variation in rent and mortgage payments was greatest for those aged 16-34, ranging from £101 for social renters to £190 for private renters.

In addition, young people under the age of 25 who are employed are not entitled to the National Living Wage, which places additional strain on young people aged under 25 living independently (105).

Living conditions

Data on the living circumstances of young people aged 10-19 in the UK in 2015-16 shows that 60% of young people were living with married or civil partnered couple families, about 23% were living with children in lone parent families and an additional 10% were living with co-habiting parents (11). However, 7% were living in other situations, including halls of residence (3%) or newly constructed families (1.5% co-habiting or married and 0.5% were lone parents themselves).

Young people aged 15-34 are more likely to live at home than previously, with an increase of 800,000 people since 1996 (39% of this age group) and an increase of 600,000 people for those age 20-34 (25% of this age group). By age 25, 25% of young women and 35% of young men were still at home in 2016 (11). It is thought that the pattern of young people leaving the parental home is no longer simple, but protracted, so that a young person may return to live with their parents on several occasions before finally moving out later on (106).

Significant numbers of young people live in temporary accommodation or are being looked after by the local authority. In England on 31st December 2017 for example, there were 120,510 children and young people under 18 living in temporary accommodation (107), and a total of 37,730 young people aged 10-18 were being looked after by the local authority (104). Although the last 10 years have seen a steady reduction in the number of all looked after children, there have been increases in those aged 16 and over (108).

Homeless young people are decreasing in number according to official statistics with 12,930 households accepted as homeless where the main applicant is aged 16-24. However this is likely to be an under-estimate as several charities who work with homeless young people report an increase in numbers (38). Young people frequently sleeping on sofas of friends and family or on public transport are considered to be the 'hidden homeless'. The number of 'sofa surfers' amongst young people is rising and because they are not officially classed as homeless they do not receive the support that they require. A recent survey carried out on 2,000 16-24-year olds by Centrepont stated that 20% of young people had to sofa surf in the past year because they had nowhere else to go. Out of these young people 49% had sofa

surfing for over a month and 11% of those who had to sofa surf in the past year experienced domestic violence (109).

There are around 8,500 care leavers aged 16-18 in the UK every year (108). Young people often enter the care system as a result of family breakdown, and most will have experienced neglect, physical, sexual or emotional abuse. There is evidence to show that up to 20% of those in care experience homelessness within two years of leaving (109). 'Runaways' is a term used mainly for children and young people under the age of 16 that leave their family home, most likely due to relationship breakdown. It is estimated 77,000 children and young people run away every year (109). Running away is fairly common amongst young people who experience homelessness. There is also a strong link between young offenders and homelessness, with many studies showing that housing problems in young people are linked to involvement with the criminal justice system.

The quality of the local environment is also an important part of the social determinants of health, but figures on the numbers of young people living in areas of multiple deprivation are not available for England. The last English Index of Multiple Deprivation (IMD) indicated that over five million people lived in the most deprived areas of England and 38% of these were poor (98). Based on the fact that 12% of the population is aged 10-19, there could be approximately 600,000 adolescents living in the most deprived areas in England.

Family and community

A significant number of young people experience their parents getting divorced although this has lowered recently (11). In 2014 a total of 38,313 young people aged 11-15 had parents who divorced that year. Alongside the trends for marriage and divorce, it is important to note that the numbers of cohabiting couples continues to rise, and there are no data on how many young people experience the separation of cohabiting parents.

Adverse childhood experiences (ACEs) are stressful events that occur in childhood and early adolescence that may contribute to later health outcomes(110). They include being a victim of abuse, experiencing parental separation, and/or living with adults with serious problems of their own. Although the data are hard to obtain, the NSPCC has estimated that 13% of 11-17s and 14.5% of 18-24 year olds have experienced severe maltreatment by a parent or guardian during their childhood (111).

Based on Census figures there are estimated to be at least 376,000 young adult carers in the UK aged 16–25 helping to look after someone in their family who was ill, disabled, or misusing drugs or alcohol. The number of young carers under the age of 18 in the UK was estimated to be 177,918 (112). The Carer's Trust has estimated that this may represent as many as 1 in 12 secondary school children (66). Many miss school due to caring responsibilities, and as many as 68% have reported being bullied in school. With the majority of young carers between the

aged of 16-25, it is clear that this is a group of young people who face significant health inequalities as they transition into adulthood.

Peer and social groups

In the most recent Health Behaviour in School Aged Children (HBSC) survey, 54% of 15 year olds in the UK reported that they felt supported by their peers (113). Rates of bullying vary by survey. In the 'What About YOUth' (WAY) survey of 15 year olds in England in 2014, 63% of girls and 48% of boys said they were bullied in the last couple of months (114). The HBSC surveys reported a lower rate; differences in self-reported bullying between surveys may be attributed to variations in the methods used. Overall, recent statistics produced by an anti-bullying charity from the UK estimate approximately 2.9 million young people aged 12-20 have been bullied and 1.5 million of these have been bullied within the past year and 145,800 young people aged 12-20 are bullied on a daily basis (115). Findings from the English WAY survey reported that 10% of boys and 19% of girls reported cyberbullying in the past couple of months in 2014 (114).

Education

There have been rapid changes in the UK's education systems in recent years. In England, for example, this has included the growth of the academy programme, the introduction of 'free schools', the extension of the age for compulsory participation in education or training to 18 years, and a raft of changes to the educational qualifications themselves.

Almost all young people in the UK start on a programme of study at 14-16 (sometimes referred to as Key Stage 4) that is expected to lead to qualifications. In England in 2016, approximately half of the age 16 age group achieve the 'benchmark' of five or more GCSEs at grade A*-C including English and Maths, which is the basic level to allow progression to A levels and university degrees (116)(Dept of Education, 2017). This leaves nearly half of the age group with far fewer options for progression (and only 14% of looked after children achieve this level of GCSE qualification). In 2015/16, 71.5% of 16-18 year olds were in full time education in England, with the remainder in work based learning, employer funded training, other education and training, employment or NEET (116,117).

The latest figures show that 41% of the age group went on to higher education after age 18, again leaving 59% who do not (11). Poor skill levels in an increasingly competitive labour market are likely to have a real impact on work trajectories.

Work and worklessness

Changes in the labour market over recent decades have impacted particularly heavily on young people not taking an educational route at this age. In addition, in recent recessions, youth unemployment has risen more steeply than all-age unemployment (118).

Official statistics on unemployment for young people (16-24 years) currently suggest a rate of 11.9% (119). However, figures can be calculated in a number of different ways and may be an underestimate. Many young people do not sign up for benefits etc in a way that would allow them to show in official statistics. The unemployment rate is calculated as a proportion of the economically active population, which presupposes we know the number who are economically active. Yet young people are the most likely to be working 'cash in hand', not on formal contracts, and to slip below the official radars. Most estimates suggest that approximately 1 million young people are unemployed (e.g., CBI) but the latest House of Commons briefing on the topic suggested 523,000 young people 16-24 were unemployed in August-October 2017 (a rate of 12%)(120). Over the past two decades, the lowest officially recorded unemployment rate for young people was 11.6% in 2001 and the highest was 22.5% in 2011(119).

The proportion of young people employed by occupation types has remained fairly consistent between 2003 and 2011, with the lowest percentage of people employed in managerial and senior positions (3% in 2011; under 5% in 2003), and the highest percentage of people employed in sales and customer service (17.8% in 2011; roughly 40% in 2003) and elementary occupations (18.7% in 2011; roughly 25% in 2003)(117). The total available jobs is currently at its highest rate (780,000), with the lowest over the last 17 years being in 2009 (432,000) (117).

In the UK however, there has been a recent shift in working patterns with more business opting for zero-hour contracts since the global financial crisis, which has contributed to the precarious nature of the labour market faced by young people (97,121). Recent statistics show that young people aged 16-24 may be disproportionately disadvantaged by working practices such as zero-hour contracts (121). A third of people on zero-hour contracts are aged 16-24, compared to 12% for all people in employment. There are also few data on the combination of part-time work with studying, or practices such as having multiple part-time jobs, so it is hard to get a clear picture of this generation's work patterns.

Conclusions

Untangling social determinants and health outcomes for young people is complicated. There are important distinctions to be made between income, income inequality, educational achievements and other measures of disadvantage. There are also distinctions between different kinds of health outcomes. Links can be cross-sectional or longitudinal, with some socioeconomic inequalities in adolescence predicting to current associations with poor outcomes, while others predict to poor outcomes later in adulthood. Overall, important issues include the extent to which inequalities exist in adolescence and whether they narrow or widen at this stage of life.

There are fewer data relating specifically to adolescence rather than adult age groups. Clearly there are health inequalities linked to all of the social determinants included in this report. But some of these relationships are stronger for certain outcomes (including mortality, obesity and under 18 conceptions), and some are weaker than for other age groups (including risky health behaviours such as alcohol use). Evidence for some kind of 'equalisation' in health inequalities in adolescence has been suggested, but evidence on this is equivocal. In addition, how social inequalities play into the transition into early adulthood has not received much attention.

Despite the complexity of the patterns, it is clear that there are links between adolescent disadvantage and certain adolescent health outcomes. It is clear that young people in situations of disadvantage have poorer health outcomes and that this needs to be tackled. It is also clear that there are links between experiences as a young person and adult outcomes, and between childhood health difficulties and adult health difficulties. By measures we know are associated with later health, this report has demonstrated that significant proportions of today's young people aged 12-24 are experiencing disadvantage that is likely to be associated with poorer long term health outcomes.

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