Psychosocial pathways and health outcomes: Informing action on health inequalities

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About the UCL Institute of Health Equity

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

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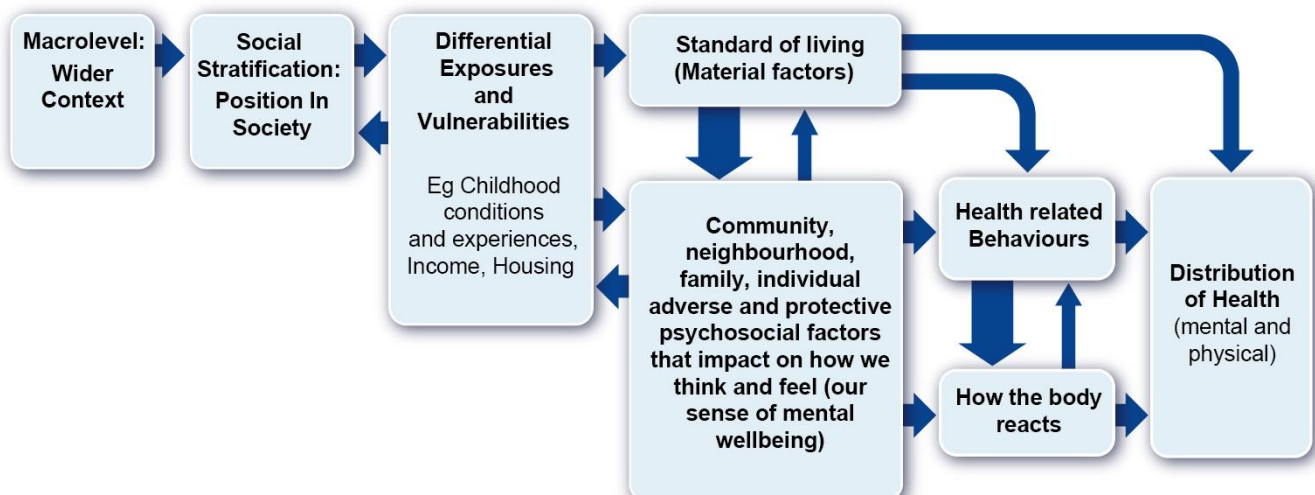SUSTAINABLE
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Executive summary

Unequal distribution of the social determinants of health, such as education, housing and employment, drives inequalities in physical and mental health. There is also extensive evidence that 'psychosocial' factors, such as work stress, influence health and wellbeing.

The term 'psychosocial' relates to the way that social factors affect states of mind. [1, 2]

This report highlights the current evidence that exists about the relationships between social determinants, psychosocial factors and health outcomes. It also provides a conceptual framework that focuses on the psychosocial pathways between factors associated with social, economic and environmental conditions, psychological and psychobiological processes, health behaviours and mental and physical health outcomes (summarised in Figure 1 below).

Figure 1: Psychosocial Pathway

Key messages

Psychosocial pathways help explain how social determinants shape health outcomes

Psychosocial pathways are significant in mediating the effects of social determinants (social, environmental, economic, political and cultural factors) on health. Yet despite their significance, these pathways are often not explicitly recognised as an important part of the framework of causes from social determinants to health outcomes. Psychosocial pathways need greater clarification and stronger recognition in policy and practice to reduce health inequalities.

Addressing social determinants is fundamental to tackling health inequalities

The accumulation of positive and negative effects of social, economic and environmental conditions on health and wellbeing throughout life is largely responsible for inequalities in health.

Taking a social determinants of health approach to tackling health inequalities requires an understanding of the social, economic and environmental aspects of the context in which people live in order to develop policies and interventions that help to address the factors that shape physical and mental health and health behaviours.

The significance of adversity and trauma

Stressors, from daily frustrations and difficulties at home or at work to major traumatic events, affect everyone to a greater or lesser extent. Their combined effect on population mental and physical health and wellbeing is substantial. Stressors exert effects from early childhood, throughout life. It is important to take a life course perspective in considering the health effects of stressors.

The importance of protective factors

Individual characteristics such as control, self-efficacy and resilience, as well as the social characteristics described as 'social capital', such as social networks, can protect health from the effects of stressors in some circumstances; and thus positively influence health outcomes.

How psychosocial pathways impact on health

Psychosocial pathways directly impact on physical health outcomes. Stressors experienced repeatedly or over a long period of time, including stressful living and working conditions, are associated with high blood pressure, development of diabetes, and ischemic heart disease.

Psychosocial pathways influence health-related behaviours, such as drinking alcohol, smoking, diet and physical activity. The relationship between social, economic and environmental contexts and health is complex and non-linear.

Taking action

The evidence suggests that psychosocial pathways are important to health inequalities and should be explicitly considered in efforts to reduce these inequalities.
It is important to ensure that psychosocial pathways are addressed as part of action across the whole social determinants pathway: a longer term, preventive approach to address wider social determinants of health (the root causes of health inequalities, including psychosocial pathways), and interventions to address the effects of adverse factors and promote protective

factors across the whole population at a scale and intensity that is proportionate to need, enabling people to have control over their lives and build social capital.

Local and national decision-makers are encouraged to consider this evidence and appropriate approaches to action. Potential implications for action include:

1. Addressing the wider determinants of health:

   a. Strategic and comprehensive approaches across the causal pathway: Improving the conditions in which people live and work, especially those experienced by the most disadvantaged groups, can reduce the stressors faced by the population, to improve health, prevent illness and reduce health inequalities. If not already doing so, local areas can apply the six Marmot principles within their strategic plans. This encourages stakeholders from different sectors to work together to ensure initiatives in one sector also support progress in others.

      Local authorities applying the Marmot principles can review progress periodically using relevant indicators, and make policy adjustments accordingly. Local areas can ensure a comprehensive approach across the causal pathway, addressing wider determinants and psychosocial factors to improve both physical and mental health and reduce health inequalities.

   b. Health in All Policies: Local areas can work with stakeholders to use a health in all policies approach to consider the impacts of policy and programmes on wider determinants, psychosocial factors and pathways to health and health equity; frameworks such as the Mental Wellbeing Impact Assessment Toolkit can help.

2. Addressing the effects of adverse factors and promoting protective factors among the whole population at a scale and intensity that is proportionate to need:

   a. Interventions early in the life course: Local action to improve early years experiences can address the causal pathway, including reducing child poverty, creating health-enhancing school and family environments, enabling resilient family relationships and good parenting and providing psychologically-informed support services.

      Local areas can invest in approaches that tackle the traumatic effects of adverse childhood experiences head on, by enabling people to access support in a way that is acceptable to them. This can help improve mental health and wellbeing for those who have experienced trauma in childhood. By using tools such as REACh, local areas can help tackle the intergenerational effects of adverse childhood

experiences. Local areas can help to prevent adversity in early life, including through existing safeguarding systems.

b. School: Local areas can work with schools and colleges to apply policies and programmes that address the psychosocial pathway by tackling adverse factors such bullying, stress and isolation, and promoting protective factors such as social networks, resilience, emotional wellbeing, social skills and social cohesion and sense of place and belonging.

c. Workplace: Local areas and employers can improve psychosocial working conditions by ensuring good quality of work and good employment conditions. Employers can support managers to improve psychosocial working conditions.

d. Community: Local areas can use their powers to improve the built, natural and social environment, that are inclusive and encourage empowerment, social cohesion, sense of belonging, social relationships and social capital.

e. Prevention services: Public health strategies to prevent diseases such as CVD, cancer and diabetes can consider action to address psychosocial factors and pathways as part of the overall causal pathway. Emphasis should be placed on addressing protective factors alongside risk factors. Those engaged in service delivery in local areas can help to orientate ill health prevention services towards addressing the social determinants of health and improving mental health and wellbeing.

3. Building system capacity and capability

a. Workforce development: Local areas can consider the workforce development implications of the need for greater attention to the wider determinants of health, including psychosocial pathways and factors. This includes building the knowledge and skills of the public health and wider workforce to address the root causes of health and for frontline staff to support and enable people they work with to address factors affecting their health.

b. Knowledge and intelligence: Local areas can collect and analyse data on psychosocial factors and pathways alongside the wider determinants of health. This will increase understanding of the causal pathway, for example the adverse and protective factors that influence lifestyle behaviours.

c. Research and development: Further work is required to understand how to apply evidence to practical interventions to improve wellbeing across the life course, as well as evaluation of interventions with regard to effects on wellbeing.

Key terms used in this report

Social determinants of health: These are the conditions in which people are born, grow, live, work and age and the distribution of power, money and resources that shape these conditions.

Wider determinants of health: A term used in the UK policy space to describe living conditions that shape health outcomes including factors such as housing, level of income/wealth, debt, the quality of the built environment.

Macro level determinants: Factors relating to the distribution of power, money and resources in society. These include social, economic and environmental inequality and the factors that drive levels of social, economic and environmental inequality.

Psychosocial: This term relates to the way social factors affect states of mind. [1, 2].

Psychosocial factor: An aspect of lived experience that affects states of mind, such as work stress. Psychosocial factors are understood as encompassing the nexus between social conditions and experiences, and psychological states. [1, 2]

Psychosocial pathways: This term is used to describe ways in which social determinants affect health outcomes via states of mind.

Stress: The response people have to a perceived threat or a demanding situation (stressor), which they do not have the resources to cope with effectively.[3] Acute stress, or intense, short term stress, elicits a temporary 'flight or fight' response in the body that can sharpen physical and mental responses. Exposure to stressors over a long period of time (chronic stress) can result in prolonged activation of the physiological stress response resulting in 'wear and tear' of the body (allostatic load) that can lead to disease.[4]

Health inequalities: Differences in health outcomes. In the UK context the term health inequality is conventionally used rather than the term health inequity.

Health equity: The absence of inequalities in health outcomes that are considered to be avoidable. Where health inequalities are avoidable and not avoided they are inequitable.

Life course approach: Taking a life course approach to understanding health status involves looking back at an individual's or a group's life experiences as well as taking into account their current living conditions. A life course approach to health equity recognises that

advantage/disadvantage starts before birth and accumulates throughout life. Therefore the earlier the intervention to reduce disadvantage, the greater the subsequent benefits in terms of improving health and reducing health inequalities.[5] Taking a life-course approach to health equity begins with pregnancy and early child development and continues with school, the transition to working life, employment and working, and continues to older ages.[6]

Introduction

Background

The mind is a gateway through which conditions of daily life affect health. Social and material conditions of daily life act through the mind to affect wellbeing and health [7] – this is what is meant by psychosocial pathways. Therefore, psychosocial pathways are an important part of the framework of causes that lead from social determinants to inequalities in wellbeing and health. However, the breadth of this causal framework, in particular the influence of psychosocial pathways, is not often explicitly recognised in policy and practice.

The Institute of Health Equity, commissioned by PHE, has produced a series of evidence reports on local action to reduce health inequalities in England through action on the social determinants of health, including the areas of early years experiences, education, employment, living wage, fuel poverty, access to green spaces and the built environment. A related report on local action to tackle social isolation was published in 2015. A connecting thread across these reports is the importance of psychosocial pathways to wellbeing and health.

While psychosocial pathways have been highlighted as important, stakeholders have identified a 'lifestyle drift', where public health interventions have become focused on changing individual behaviours and do not fully integrate the effects of living conditions and psychosocial contexts.[8] There is evidence that such person-based interventions, focused on prompting changes among individuals, may inadvertently widen inequalities, [9, 10] at least in the short term, because advantaged groups are usually in a better position to make healthy behaviour choices than the rest of the population. In addition, the evidence shows that psychosocial factors influence health in ways other than individual behaviours – via stress pathways.[7] For example, stress associated with adverse experiences in childhood sculpts the brain and affects child development, life chances and health across the life course.[11]

This report collates and synthesises evidence about psychosocial concepts and pathways to health and wellbeing, which will help to inform action on health inequalities that addresses the full complexity of causal pathways on health and wellbeing. This discussion is therefore wider than psychosocial influences on individual behaviours: it is about multiple factors outside the control of individuals that can have adverse or protective effects on people's lives and mental health and wellbeing via psychosocial pathways that impact on overall health. Therefore the emphasis is on the need to address the whole of the social determinants pathway in which psychosocial pathways are situated. This includes protective factors, such as social support, and protective influences organised in schools, neighbourhoods and work places.

Aims

This report aims to describe and provide evidence about the relationships between social determinants – that is, social, environmental, economic, political and cultural factors – and psychosocial factors, lifestyle, mental health and wellbeing and physical health. The report provides a conceptual framework that focuses on the psychosocial pathways (Figure 1) and describes pathways between factors associated with social, economic and environmental conditions, psychological and psychobiological processes, health behaviours and mental and physical health outcomes.

Readership

The report is aimed at those responsible for implementing action to reduce health inequalities, including local organisations, local government authorities, NHS clinical commissioning groups and their stakeholders and national organisations concerned with health inequalities. The report is also relevant to the work of community groups and the voluntary sector.

Methodology

This report builds on existing work carried out for the Commission on Social Determinants of Health, the Marmot Review, the WHO European Review of Social Determinants and the Health Divide and related work by IHE. It is a narrative review that synthesises relevant evidence from academic, peer-reviewed literature about the influence of psychosocial pathways in creating health and wellbeing. Literature searches, using PubMed and Google Scholar, were carried out on combinations of terms in the conceptual framework (Figure 1) to identify evidence examining the associations between factors at a particular point on the conceptual pathway. The framework (Figure 1) is based on the conceptual framework developed by the WHO Commission on Social Determinants of Health in which psychosocial factors and social cohesion are explicitly included as intermediaries in social determinants of health pathways. For this report the focus was on research literature that examined relationships between inequalities in social determinants (including early child experiences and conditions for early child development, education, employment, income levels/poverty, housing, neighbourhoods, built and natural environments, social environment), psychosocial factors (including stress, control, self-efficacy, resilience, social relationships, social cohesion, social capital), inequalities in health behaviours (including smoking, alcohol misuse, diet, physical activity), and inequalities in health and wellbeing outcomes. Since the focus of the report is on psychosocial pathways, we did not examine the literature about interactions between environmental factors, epigenetic factors and disease risk and health outcomes.

A consultation paper was developed and used as a basis for discussion among experts, including academics and practitioners, convened at a roundtable meeting in January 2016. In-depth discussion at that meeting, as well as additional comments from experts who were unable to attend, informed the development of the report and conceptual framework. A second

online consultation was held from December 2016 to January 2017 which included gathering practice examples. Practice examples were selected that represent innovative ways in which local areas are addressing psychosocial pathways. Further innovative practice examples in local areas, and suggestions for further reading to support local action were identified by PHE. A systematic collection and analysis of practice examples was outside the scope of this work.

Further research was carried out through a combination of desk-based research, including peer-reviewed literature identified from searches using PubMed and key terms, and 'grey' literature. The desk-based research focused on identifying relevant systematic reviews, as well as reports from longitudinal studies about psychosocial factors and outcomes relevant to health inequalities. While psychosocial pathways are highly relevant to treatment, the focus of the literature search was on prevention. The report draws on known and new sources and sources recommended by experts during the consultations. Relevant references in the bibliographies of papers and reports were followed up.

The conceptual model

"While psychosocial stress is not the only route through which disadvantage affects outcomes, it does appear to be pivotal." (p.iii)[8]

Health follows a social gradient. Higher social position, whether measured by education, income or occupational status, is associated with better health and longevity. A growing body of evidence shows that population health is determined to a great extent by social, environmental, economic, political and cultural factors (the social determinants of health).[5] A key way that social determinants affect health is via psychosocial pathways.[12, 13]
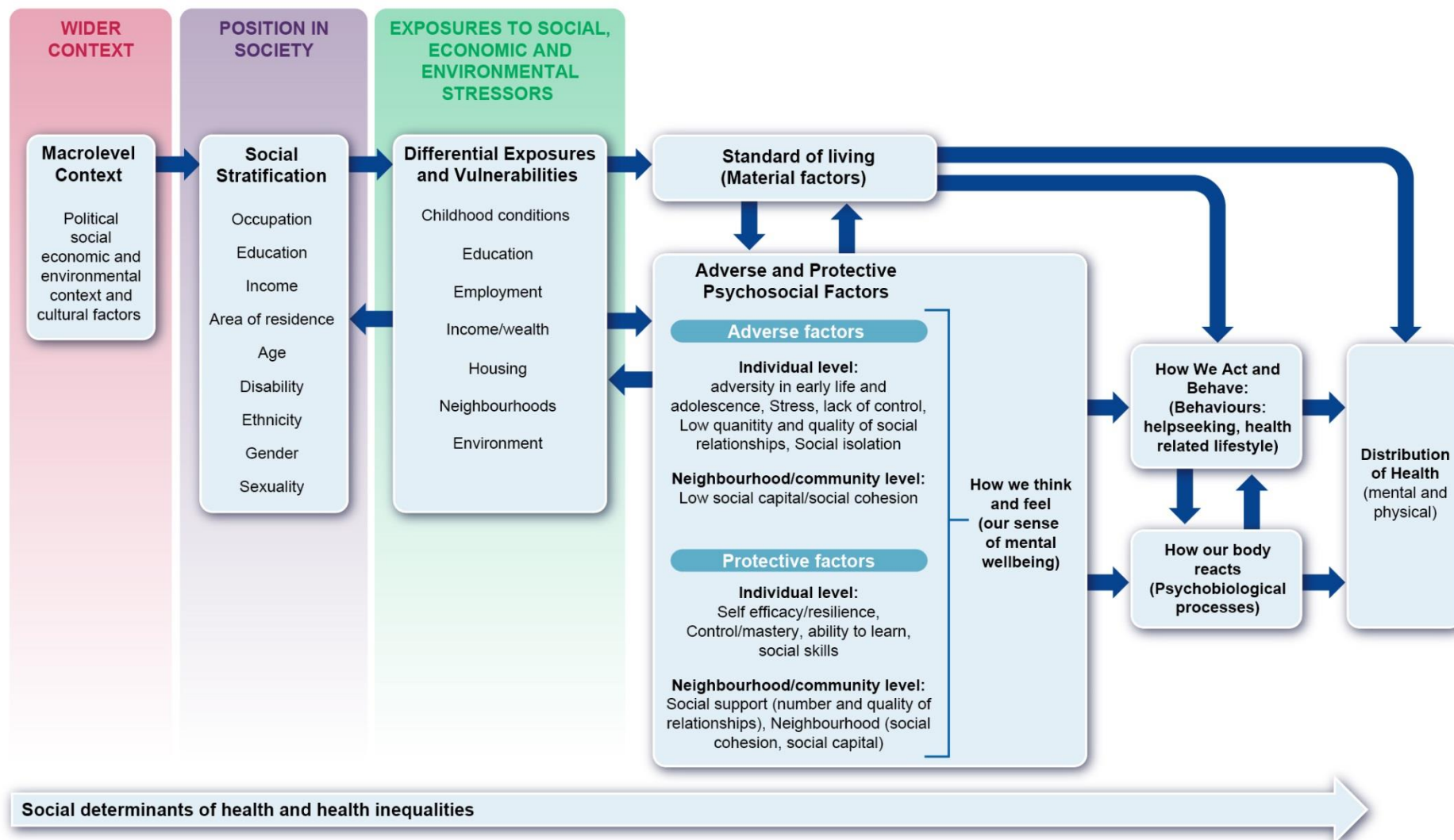
This report builds on the conceptual model developed by the WHO Commission on Social Determinants of Health (CSDH) to help increase understanding of the factors that cause the social gradient in health and to identify ways to level up the gradient. [13] Exposures and vulnerabilities arise from the material conditions in which people are born, grow, live, work and age, the extent of social cohesion in a society, psychosocial factors, health-related behaviours and biological factors.

Figure 1 presents links between social determinants, psychosocial factors, health-related behaviours, mental health and wellbeing and physical health. Associations between various factors in this conceptual framework are complex and comprise a field of active current research and debate among the scientific community.

The term 'psychosocial' connects the social environment to psychological states that constitute aspects of mental wellbeing. 'Psychosocial factors' are understood as encompassing the nexus between social conditions and experiences and psychological states. [1, 2]

Unequal distribution of the social determinants of health drives inequalities in physical and mental health [13],[14] while extensive evidence supports the role of psychosocial pathways in determining health status.[7] The seminal Whitehall II longitudinal study on work and health has provided substantial evidence for the psychosocial pathway to health. [7, 15] A systematic review of research on the relationship between psychosocial factors and cardiovascular diseases (CVD) and cancer found that psychosocial factors, in particular high demands from jobs, low autonomy, low control or high effort–reward imbalance, interpersonal conflicts and low social support or low trust, play an important role in explaining CVD and cancer outcomes, although the review reported that the evidence for a relationship between psychosocial factors and cancer was not as strong as for CVDs. [16]

Figure 1: Psychosocial pathways: linking social determinants with psychobiological processes, health behaviours and distribution of health outcomes

Explaining the conceptual model from left to right, the macro-level national, political, social, economic and environmental context, and cultural and social norms, shape the extent of social stratification within a country across a number of dimensions, including education, occupation, income/wealth, area of residence, age, disability, ethnicity, gender identity and sexuality.

Social stratification results in groups experiencing differential exposures and vulnerabilities to social determinants of health including conditions in childhood, education and employment as well as housing, neighbourhoods and the built and natural environment in which people live. Differential exposures and vulnerabilities arise from the different conditions in which people are born, grow, live, work and age. Their effects on mental and physical health are mediated by psychosocial factors, health-related behaviours and biological factors including genetic factors.

The framework has been simplified for the purpose of this report into a linear diagram. It is noteworthy that each of the factors included in Figure 1 are part of a complex, dynamic and interactive set of relationships, which are not all visualised in the diagram. In addition the relative contribution of intermediary factors to the distribution of health is not fully understood and is currently an active area of research.

Explanations of the causes of social inequalities in health focus on the different conditions in which people are born, grow, live, work and age and the effects these conditions have on individual development. [5, 13] The following subsections explain in more detail aspects of the social determinants of health causal pathway, with a focus on the psychosocial pathway presented in Figure 1. It describes pathways between factors associated with social, economic and environmental conditions, psychological and psychobiological processes, health behaviours and mental and physical health outcomes.

Psychosocial pathways and determinants of health

The wider context (macro level)

The macro-level context is influenced by global trends and events, notably global climate change and the financial crisis of 2008. More generally, there are concerns about globalisation, deindustrialisation, immigration and inequality. National and local responses to these macro-level influences affect the conditions in which people live and therefore influence health outcomes.

The global financial crisis of 2008 illustrates how the macro-level context and national responses to it can exert influence over population health outcomes. A recent systematic review found that the 2008 financial crisis in Europe was followed by mixed effects on health outcomes, with the most consistent evidence showing that the crisis was associated with an increase in suicides, especially among men, and with worsening mental health. [17] A study in England found that in the two-year period following the financial crisis (2008–2010) there were 846 more suicides among men than would have been expected from historical trends and 155 more suicides among women. [18] The study also found that the English regions with the largest increase in suicides among men also had the largest rise in unemployment. Separate evidence finds that insecure employment and unemployment are associated with a decrease in psychological wellbeing, [19], and health [20] Furthermore, analysis of a large data set from 26 European Union countries covering the period 1970–2007 showed that every 1% increase in unemployment was associated with a 0.79% rise in suicides in people under the age of 65. [21]

Macro-level events that affect employment rates create pressures that influence mental wellbeing. Therefore, as highlighted previously, this discussion is not just about psychosocial influences on individual behaviours: it is about wider factors outside the control of individuals that can have adverse or protective effects on people's lives and mental health and wellbeing via psychosocial pathways. Unemployment is bad for both mental health [22] and physical health [23] – but the effect on physical health may be longer term.

The life course approach involves examining the longer-term effects on people's lives and intergenerational effects of macro-level influences on social determinants and on health inequalities. Studies in the years to come will reveal the longer term effects of the 2008 financial crisis on health and health inequalities, and the policy responses to it.

Evidence is emerging of rising morbidity and mortality linked to growing levels of psychological distress driven by economic insecurity. A study by Case and Deaton in the

United States identifies an increase in morbidity and mortality in mid-life among the white non-Hispanic population. The increase in mortality from 1999 to 2013 followed years in which mortality for this group declined overall. [24] The rise in mortality is mostly accounted for by higher mortality rates from drug and alcohol poisonings, suicide and alcohol-related diseases (chronic liver diseases and cirrhosis) among the least educated. [24] Deprived areas in the UK, especially deprived parts of cities in Northern England and Glasgow, face post-industrialisation challenges of economic insecurity and associated psychological distress, similar to those in the United States.

The Foresight Mental Capital and Wellbeing report highlighted how changes in work, working conditions and conditions of employment exert influence on wellbeing and stress. [25] Recent estimates suggest that 35% of mostly low skill and low wage jobs in the UK could be replaced by automation and computerisation in the next 10–20 years. [26] [27] This raises many opportunities and challenges across policy areas that affect the social determinants of health inequalities in the UK. Appropriate policies and planning at national government level, including around education and life-long learning but also in other areas, are crucial in view of the enormity and speed of the predicted changes to employment and models of working.

Position in society (social stratification)

A person's position in society affects health outcomes in part by impacting on psychosocial factors. In the context of the social determinants of health, understanding social stratification goes beyond a traditional focus on social class, occupational status, educational attainment and level of income or wealth; it also includes social identities that may influence and interact with these, such as ethnicity and gender.[6] Social stratification implies different levels of power, prestige and access to resources between groups in society that in turn affect health outcomes.[13]

Income inequality in the UK, a key element of social stratification, is above average for OECD (Organisation for Economic Co-operation and Development) countries and has been so for the past three decades. [28] Taxes and benefits reduce income inequality in the UK by 25%, in line with the average reduction in OECD countries, but below the reduction achieved in France, Germany and the Nordic countries. [28]

The nature and extent of social stratification in a society and a person's position in society influences wellbeing and stress. Lower levels of individual socioeconomic position are associated with higher levels of the stress hormone cortisol. [29] Being in a low status position in a hierarchical society is associated with experience of subordination that causes stress, lower control, and low authority in decision-making. [7] Low status is also associated with anxieties created by social comparisons – a sense of not doing as well as others – which can have adverse effects on wellbeing. [30] This means that even people who are not the poorest in material terms experience stress associated with their position in the social hierarchy. [7]

Local neighbourhood factors also matter and exert influences on health through material and psychosocial pathways. [31] An area-based study in Stockton-on-Tees reported significant inequalities in mental health and wellbeing between people living in the most and the least deprived areas. [32] This gap was driven by material and psychosocial factors, while the contribution of behavioural factors was relatively minor. Other research in England using data from the Whitehall II longitudinal study provides evidence that living in a deprived neighbourhood is associated with poorer mental health, and the longer the exposure to such neighbourhood environments, the worse the effects. [33] Evidence from a study that linked individual survey data to area level characteristics in Amsterdam shows that neighbourhood-level psychosocial stressors, including nuisance from neighbours, drug misuse in the area, rubbish on the streets and local unemployment, are associated with fair to poor self-rated health. [34]

Studies in the United States on the long-term effects on low income families who had moved from very disadvantaged neighbourhoods to less disadvantaged neighbourhoods, as part of the Moving to Opportunity intervention, found that subjective wellbeing, mental and physical health improved, even though there were no consistent effects on adult economic or children's educational outcomes. [35] A study in Glasgow found that individuals who thought they lived in a neighbourhood where some people had higher incomes than others reported higher mental wellbeing than those with a negative viewpoint about their neighbourhood, controlling for their own income. [30] A possible explanation is that local comparisons and feeling part of a better-off neighbourhood override negative feelings associated with wider social comparisons.[30]

Discrimination on account of age, ethnicity, gender, sexuality and disability compounds disadvantage associated with low socioeconomic position and creates exclusionary processes that contribute to psychosocial stress and health inequalities. [36]

Extent of exposures and vulnerabilities

Social stratification creates social inequalities that create differential conditions throughout the life course from before birth, in early life, education, employment, level of income and wealth, housing, as well as neighbourhood and environmental conditions.[13] Differential exposures and vulnerabilities resulting from these conditions influence health outcomes. *The Marmot Review* provided evidence about social inequalities and how they influence health outcomes in England and made recommendations about how to tackle health inequalities. [5] Subsequent evidence reviews by IHE, commissioned by PHE, have provided additional evidence and examples of action (see IHE website).

Standard of living (material factors): direct and indirect effects on health

Explanations of the causes of health inequalities include material, psychosocial, behavioural and biological pathways from social conditions to health outcomes, and the links between them (see Figure 1 above). Material deprivation, where it translates into poor living standards [37], has a direct effect on physical health. For example, cold housing increases the frequency and severity of asthmatic symptoms among children. [38]

Material factors also act through the mind (the psychosocial pathway). In the example of cold housing, there is evidence that mental health is negatively affected by fuel poverty and cold homes for any age group, and that living in cold housing is associated with an increased risk of multiple mental health problems among adolescents. [38]

It is not only poverty that drives pathways to poor health: multiple adverse factors affecting child development, stress at work, social isolation and general control over one's life follow a socioeconomic gradient from the poorest to the best-off in society, contributing to health inequalities.[5] However, research on poverty and how it affects the mind is relevant to this discussion because of the large number of people who experience poverty and because changes in material circumstances can occur during life for a number of reasons. Hanshofer and Fehr [39] identified 25 studies, including both randomised control studies and natural experiments, which reported the effect of increases or decreases in poverty on psychological wellbeing. Overall, increases in poverty are found to be associated with negative emotional states and stress, while poverty alleviation leads to an increase in psychological wellbeing or reduction in stress. Haushofer and Fehr examined the additional question of whether anxiety and stress lead to decision-making behaviours that reinforce poverty. They found some evidence that stress and negative emotional states lead to risk aversion and time-discounting in economic decision-making; in other words, they may lead to a preference for short-term gratification over long-term gains. [39] The potential consequences of these behaviours are to perpetuate the status quo of poverty.

Mullainathan and Shaffir describe evidence for their hypothesis that scarcity – having too little of anything, for example money, food or time – affects mental processes, in effect narrowing the mental 'bandwidth', resulting in people making decisions that go against their long-term interests. [40] Applying this to poverty, Mullainathan and Shaffir argue that those experiencing economic adversity are less likely to adopt health-related behaviours, such as using preventive health care and adhering to treatment, than those who are better off, mainly because their whole attention is focused on coping in the short term rather than planning the future. In this way there is a link from poverty to worse health outcomes via the mind. This narrowing of the mental bandwidth because of poverty may even affect parenting skills and management of household finances. However, as Marmot reminds us, 'it's not just the poor versus the rest'. [41] There is a social gradient in health-related behaviours and in good parenting skills that contribute to the generation and perpetuation of health inequalities.

The accumulation of positive and negative effects of social, economic and environmental conditions on health and wellbeing throughout life is largely responsible for inequalities in health. [5]

Protective and adverse factors for health

As Figure 1 shows, psychosocial pathways in part mediate the effects of social determinants on health and may be protective or adverse.

Protective factors:

- These include factors that support or increase the development of individual level attributes such as coping abilities, self-efficacy and resilience, and the ability to learn and to develop social skills – all of which may encourage healthy behaviours and mental health and wellbeing.
- These attributes contribute to the ability to have control over one's life.
- Control is proposed as a mediator in the relationship between social position and health. [7, 42]
- Protective family and community level factors include social support and protective influences organised in schools, neighbourhoods, and work places.

Adverse factors:

- The effects of adverse factors can undermine the development of individual level attributes and reduce the capability to flourish.
- At the individual level, adverse factors include adversity in early life, weak or difficult relationships, adverse life events, financial worries or debt. Traumatic events, such as road accidents, violence/prolonged abuse, natural disasters and serious illnesses are experienced by one in three of the population and can have adverse effects on mental health. [43]
- Family/community-level adverse factors include poor housing, poor quality neighbourhood environment, low social capital, social isolation and working conditions that create stress.

Before birth, early life and adolescence

The early years of life are important in the development of responses to stressors. Brain development in the early years is highly sensitive to external influences. Indeed, the first thousand days of life from conception to age two have been shown to be critical for physical, social, emotional and cognitive development and for health across the life course.[44] Maternal nutrition, life style factors and mental health all impact on children's development outcomes.[45]

Even after this period, child development is responsive to the social environment. During the teenage years there is a second rapid phase of brain development, at which time adolescents may become vulnerable. [46] There is evidence that 75% of all adult mental disorders emerge before the age of 25, with the peak onset of many mental disorders during teenage years. [47]

Certain experiences in early childhood elicit physiological stress responses: increased levels of stress hormones, increases in heart rate and blood pressure. But these physiological responses to experiences and conditions in early childhood are not necessarily harmful to development; they can be described as positive, tolerable or toxic. [11, 48] Toxic stress refers to 'prolonged activation of the stress response (chronic stress) that is not buffered by supportive relationships and disrupts brain development'. [11] Toxic stress is experienced by children growing up in extreme poverty and those who suffer physical and emotional abuse, maternal depression, parental substance misuse and violence in the family. These adverse experiences lead to changes in the structure and connectivity of the developing brain that may create permanent changes to the physiological response to stress, to the ability to learn and to the ability to adapt to adversity in later life. [11] Thus exposure to adverse experiences in early childhood can lead to hyper-responsiveness of biological stress pathways throughout life. [49]

A systematic review of European studies on social inequalities in early childhood development and health found strong evidence that factors including neighbourhood deprivation, lower parental income/wealth, lower educational attainment, lower occupational social class, parental unemployment, higher parental job strain/heavy physical occupational demands, lack of housing tenure and material deprivation in the household are all independently associated with a wide range of adverse health and developmental outcomes in early childhood. [50]

Conditions and experiences in early life also affect later life chances, including educational outcomes and employment opportunities, as well as mental and physical health throughout life. [5] A range of evidence, including from longitudinal studies and retrospective epidemiological studies, shows associations between conditions in early life and mental health in later life. [51, 52]

Evidence from the UK's Millennium Birth Cohort longitudinal study, which follows the lives of large numbers of children from their earliest years, has found that gradients in verbal ability and social behaviour can be seen in children as young as three years old. [53] In England schools see a social gradient in readiness for school at age five, which, unless addressed, has implications for later educational attainment and subsequent life chances. [5, 53]

Empowerment and control

Empowerment and control are related concepts that have been identified as being crucial for health. They can be characteristics of individuals, and of communities.

Empowerment

Empowerment in the context of health means taking control of your choices and life. The WHO Commission on Social Determinants of Health (CSDH) [13] positioned empowerment as key to improving health outcomes. It described empowerment in three dimensions: material (having the resources necessary for health); psychosocial (having control over your life); and political (exerting an influence over decisions that affect your life). The CSDH argued that this conceptualisation of empowerment is applicable to individuals, communities and whole countries. Empowerment is related to 'control over destiny', as conceptualised by Whitehead and colleagues. [42] Individual and community control were identified by the Ottawa Charter in 1986 as key to improving health.[54]

Control

Having control over your life is a key factor for wellbeing and health. [7] Whitehead and colleagues describe the role of control and lack of control in creating socioeconomic inequalities in health as at three levels: individual (micro level); community (meso level) and at the societal level (macro level). [42] They make the important point that the three levels are inter-related, but that they are not often considered together in the health inequalities literature. Their discussion is relevant to this report, because Whitehead and colleagues also highlight the importance of making links across the whole of the causal framework, between macro-level factors operating at the level of the whole of society, meso-level (at the level of the communities in which we live) and at the individual level. Thus consideration of individual-level psychosocial factors, such as individual control, should be set in the context of community and wider society.

At the individual level, the notion of 'locus of control'[1] has long been important in discussions of behaviour and health, with internal control shown to be associated with positive health behaviours. [55] Research finds that locus of control is not necessarily a fixed trait but can vary on a daily basis and both influences and is influenced by daily behaviours and experiences. [55]

A conceptual distinction exists between objective control (being *able* to make and implement decisions that influence your surrounding environment and your life) and subjective control (having a *sense* of control). [56] Individuals differ in their perception of

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[1] Locus of control is the extent to which people believe they shape events in their own lives (internal) or that events in their lives are shaped by external forces or other people (external).

control even in a situation where their actual control is the same. [56] Overall, low control, whether assessed subjectively or objectively, is associated with poorer health outcomes. Researchers on the Whitehall II longitudinal study found a low correlation between objective assessments of job control and self-reported assessments of job control. However, having low control at work, whether assessed objectively or subjectively, predicted heart disease.[57]

Sense of control can be understood broadly as believing that you can influence and shape your own life and exert influence on your surrounding environment. [58] Having a sense of control buffers the effect of low educational attainment on mortality risk. In a longitudinal study researchers found that sense of control reduces mortality risk for those with low educational attainment, but not for those with high educational attainment. [58]

Perception of control varies across the life course: it increases in early adulthood, peaks in midlife and levels off with a subsequent decline in later life. However there is a great deal of variation between individuals in this pattern of perceived control over the life course. [56] Differences in control beliefs are found by income and education. In general, those in lower income groups have lower levels of control beliefs than higher income groups, and those with lower educational attainment have lower levels of perceived control than those with higher levels of education. [56] However, as discussed above, sense of control can buffer the effect of low educational attainment on health. Overall, lower sense of control is associated with greater levels of stress and anxiety and lower engagement in health-promoting behaviours. [56]

Self-efficacy and resilience

Self-efficacy and resilience are important related concepts used to understand how individuals cope with stressors. Self-efficacy was conceptualised by the psychologist Albert Bandura as the exercise of control: it is a belief in one's capability to accomplish a specific task, and enables individuals to persevere in the face of setbacks and work actively to overcome difficulties. [59] In this way, self-efficacy enables people to take action to further their own interests (personal agency) [60] and have control over their lives.

Again, self-efficacy needs to be considered in a wider context: it is dependent on having an environment that supports and enables self-efficacy. In the context of this discussion on the role of psychosocial pathways in creating health inequalities, there is a gradient in the social conditions that enable people to exercise control driven by factors outside individual control – at the macro and community levels. Good wellbeing supports belief in one's capabilities. Reducing anxiety and depression strengthens self-efficacy.

Resilience is a kind of self-efficacy, which according to Bandura is acquired through "experience in overcoming obstacles through perseverant effort." [59] Resilience at the level of the individual refers to the ability to endure difficulties and setbacks and to bounce back from them, and in so doing to become stronger and improve wellbeing.[59]

It is important to consider individual resilience in the context of the whole social determinants of health framework. [61] Individual characteristics, including self-efficacy and resilience, are seen as shaped by, and related to, inequities in power, money and resources and the conditions in which people are born, grow and live, and in which they will work and age. In addition, family and community resilience are highly significant and similarly shaped by wider social and economic factors. [61]

Social relationships

People are inherently social, and the quantity and quality of social relationships affect mental health, health behaviour, physical health and mortality risk. [62] Social relationships can impact health in several ways: social ties can influence health-related behaviours and social support can buffer stress. [63]

The foundations for the ability to form stable, loving relationships are laid in early childhood. Secure and trusting relationships with adults early in a child's life shape the development of the ability to form good quality social relationships in later life. [64]

Evidence from longitudinal studies shows a gradient in social and emotional development among children. In the Millennium Cohort Study, children from lower income families had a higher risk of socio-emotional difficulties than those from higher income families. [53] Socio-emotional difficulties are associated with difficulties in forming good quality relationships. [53]

Childhood social and emotional development has a long reach in terms of social relationships and health. A longitudinal study in New Zealand found that conduct disorder at age seven to nine, which is a measure of child social/emotional development, is associated with crime, substance dependence and mental ill health in adult life. [65] The most disturbed 5% at age seven to nine had higher rates of depression, anxiety, antisocial personality disorders and suicide attempts than the 50% least disturbed and had more problematic partner relationships. [65]

Research from Relate analysing data from the Understanding Society survey (with a sample size of more than 20,000 people), estimated that almost one in five (18%) of people are in relationships that would be characterised in clinical practice as 'distressed'. This translates into 2.87 million people across the UK, or 1.4 million families, living with distressed relationships. [66] The report highlighted that "such relationships can have damaging consequences for children, as well as being major risk factors for poor adult mental and physical health". Typically, pressures associated with jobs, finances and childcare are cited as being responsible for strains in close relationships. [66] These pressures follow the social gradient.

Community belonging

Community belonging captures the extent to which people feel connected with their community. [67] Kim and Kaplan [68] proposed four dimensions of community belonging. Broadly these are emotional attachment to place (community attachment); being in tune with the social and physical characteristics of a place (community identity); being involved with others in the community (social interaction); and walkability of the community environment (pedestrianism). [68] Studies in Canada have found that community belonging (assessed by asking people the extent to which they feel they belong to their community using a Likert scale) is positively associated with health [69] and with health behaviour change.[67]

Social capital and social cohesion

Social conditions in adolescent and adult life affect relationships and social networks. The associations between social conditions and relationships and health are examined through the concepts of social capital and social cohesion. These concepts overlap to a certain extent. Social capital, as first described by Bourdieu, refers to the resources available to an individual or group because of their belonging to a social network. [70] In this view, social capital may reproduce inequality in some circumstances, because membership of groups with better access to resources than other groups confers benefits on members of those groups with better access. We might recognise this in the phrase 'old boys' network'. Putnam developed the concept of social capital with a focus on the connections between individuals in a society and the levels of trust and mutual support within society. [71] From this perspective, living in a society with high social capital is seen as benefiting everyone, including individuals who are socially isolated.

Further refinement of the concept in the context of public health distinguishes three types of social capital: bonding (strong ties between people, for example within families or groups of friends); bridging (weaker ties, for example with work colleagues); and linking (connections between those with different levels of power). [72] Social capital has both structural as well as cognitive aspects. Structural social capital refers to activities such as participation in neighbourhood activities, membership of organised groups and voting in elections. Cognitive social capital is characterised by levels of perceived trust, social support and neighbourhood satisfaction in a community.[73]

Social cohesion, as the term implies, describes the forces or characteristics that bind a society together. These include aspects of cognitive social capital. Social cohesion refers to cognitive aspects such as trust, norms, attitudes and values as well as structural features of society. [74, 75] In some policy areas the term is used in the context of describing relationships between different communities of interest within the same geographical area. In such cases the term 'community cohesion' may also be used.

Explanatory theory about the causes of health inequalities includes the level of social cohesion in a society or community, and level of social capital that an individual or group has. [74, 76]

Participating in a community with high levels of trust between citizens or groups, extensive social engagement and social support is positively associated with good health. [7] The relationship between health and trust is complex, and there is evidence that it is circular: good health predicts trust, and trust engenders good health. [77]

A systematic review of studies on various aspects of social capital and health outcomes among adolescents by McPherson and colleagues finds mixed results depending on the measure of social capital and the health outcome. [78] It reviewed studies on both family and community social capital. Family-level social capital was commonly assessed by measures of family structure, quality of parent-child relations, adult's interest in child, parental monitoring and extended family exchange and support. [78] Community-level social capital included assessments of social support networks, civic engagement, trust and safety, degree of religiosity, quality of pre-school/school and quality of neighbourhoods. [78]

Key findings from the systematic review include that, at the level of the family, positive relationships between children/adolescents and their parent/s and other family members are associated with better child health and wellbeing, and that parental monitoring can help protect children and adolescents from risky health behaviours. At the community level, the findings include that being part of supportive social networks is associated with better mental health outcomes, fewer difficult behaviours and more healthy behaviours. However, in some circumstances, social networks increase the risk of engaging in risky health behaviours. Schools and neighbourhoods with high levels of trust and safety are associated with better health and wellbeing outcomes. Since most of the studies reviewed were cross-sectional, the direction of the reported associations could not be clearly determined. [78]

A body of evidence, including evidence described in the following section, shows that aspects of social capital are also important for health during adult life.

A meta-analysis of 148 studies found that having stronger social relationships is associated with a 50% increase in survival during a follow-up period of seven and a half years. [79] This is similar in size to the effect of giving up smoking. In addition, a meta-analysis of population-based observational cohort studies with a follow-up of more than five years reported that social participation and frequent contact with friends and family are associated with longer lives. [80] Evidence from Whitehall II studies and from the English Longitudinal Study of Ageing show that stronger relationships do follow the social gradient. Work done by Stafford and colleagues suggests that cognitive aspects of social capital follow the social gradient and can therefore contribute to health inequalities. [81]

A systematic review has examined the question of how social capital is associated with health inequalities. [73] The main findings of the systematic review are: first, that bonding and bridging social capital in the form of social support, social cohesion in a community and emotional support between relatives or within close communities can buffer the effects of stress and in this way contribute to health and wellbeing; and second, that disadvantaged groups or people are less able to access and benefit from social capital that requires economic resources, and

this may harm the health of those who are excluded. [73] The social gradient in access to and benefit from social capital is therefore another link to health inequalities.

However, the effects of social relations may not be beneficial in all circumstances as social relationships can drive the spread of infectious diseases and of unhealthy behaviours.[82]

Furthermore, aspects of social capital might only benefit those who have access to them, leaving some excluded from these benefits. For example, better-off families are able to use their economic and social resources to assist their children to do better in school and in the labour market, creating a 'glass floor' that protects middle class children from downward mobility.[83]

Social isolation and loneliness

Social isolation describes the state of having inadequate quantity and quality of social relationships. [84] Loneliness is an emotional perception that can be experienced by people regardless of the extent of their social network. Both have negative consequences for health and wellbeing. A meta-analysis of nine longitudinal studies found that social isolation and loneliness are associated with 50% excess risk of coronary heart disease, which is broadly similar to the excess risk associated with work-related stress. [85]

Psychosocial influences on social isolation accumulate throughout life. [86] For example, childhood social withdrawal serves as a risk factor for impairment of adolescent interpersonal interactions, which increases the risk of developing depressive symptoms and diagnoses of depression in young adulthood. Depression in turn increases risk of social isolation. [87]

Social isolation in young adulthood is in turn associated with cardiovascular risk factors (such as overweight and elevated blood pressure). [86] High and increasing levels of social engagement over the life course have the positive effects of lower levels of physical and cognitive limitations at older ages. [88]

Stress

Stress is a key concept in understanding psychosocial influences on health. Stress is generated by adverse experiences or situations perceived as adverse, and the ability of the individual to cope. Herbert and Cohen describe stress as arising: "when a person appraises a situation as threatening or otherwise demanding, perceives that it is important to respond, and does not have an appropriate coping response immediately available." [3]

Psychological stressors can take many forms, including difficult relationships, ill health, working and employment conditions, debt, neighbourhood environment and housing problems. Work stress is discussed in more detail below, as an area that has been extensively researched in the context of health.

Bodily reactions to repeated or chronic stress, described as allostatic load, links the experience of stress with physiological effects associated with adverse health outcomes, described below. [4, 89, 90]

Good individual coping abilities (resilience and self-efficacy) and social support can buffer psychological responses to stressors. However, individual coping mechanisms and social support themselves depend on social, economic and environmental conditions. Therefore it is vital to address the social determinants of health across the life course. [5]

Mental health and wellbeing

The accumulation of positive and negative effects of social determinants and the adverse and protective factors we experience at an individual and community level influence how we think, feel and act and shape mental health and wellbeing. [91]

Psychosocial factors exert influence on mental wellbeing. The terms mental health and mental wellbeing are often used interchangeably to mean good mental health. Mental health is a concept associated with a positive state of wellbeing; [92] the UK Department of Health conceptualises good or positive mental health as "more than the absence or management of mental health problems; it is the foundation for wellbeing and effective functioning both for individuals and for their communities." [93] The WHO describes good mental health as "a state in which every individual realises his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community". [92]

The UK Government Foresight report on mental capital and wellbeing describes mental wellbeing as "a dynamic state, in which the individual is able to develop their potential, work productively and creatively, build strong and positive relationships with others, and contribute to their community. It is enhanced when an individual is able to fulfil their personal and social goals and achieve a sense of purpose in society." [91] The dynamic state of wellbeing described in the Foresight report captures how external conditions and personal psychological resources influence people's feelings and functioning.

There is a considerable burden created by sub-optimal mental health that does not reach the threshold for diagnosis as a mental disorder but that influences how we function day to day and how our body functions. The Adult Psychiatric Morbidity Survey (APMS) in England surveys mental disorders, and in 2014 also mental wellbeing, in the general population. The APMS reveals the mental health of the nation, and raises important issues for further research, as well as highlighting health services delivery needs. The APMS 2014 found that mental disorders were more common among those in poor physical health and that even subthreshold levels of symptoms for common mental disorders were associated with higher rates of chronic physical health conditions.[94]

The APMS 2014 assessed mental wellbeing using the Warwick Edinburgh Mental Wellbeing Scale, and found an association between low mental wellbeing and presence of chronic physical disorder. However the association was weaker than that between mental disorders and physical health.[94]

Mental health is widely understood as integral to overall health. This is expressed, for example, in the WHO definition of health as "a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity".[95] Evidence shows that poor mental health can worsen physical health and hamper recovery from illness, and poor physical health can impact mental health.[96]

The contribution that different social and individual factors have on our mental health and wellbeing remains an area for further research. For example, emerging research has found that level of education does not consistently correlate with mental wellbeing.[97],[98] This is not surprising given research cited elsewhere in this report that protective factors such as social support can buffer the influence of low socioeconomic position on health more broadly.

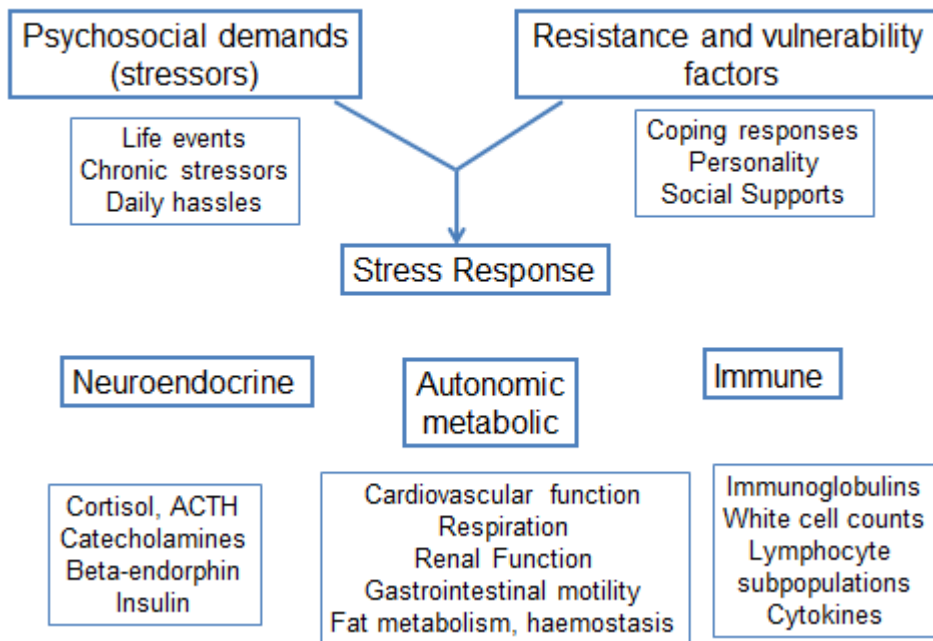## Bodily reactions to stress and other factors (psychobiological processes)

This subsection summarises the biological mechanisms whereby social, economic and environmental conditions that affect individual psychological responses affect biological processes.

Stress is an integral part of the psychosocial pathway because stress hormones released in response to stressors have biological effects that can contribute to ill health. Stress activates the hypothalamic-pituitary-adrenal (HPA) axis in the nervous system, which stimulates release of the stress hormone cortisol, which has a far-reaching role in regulating metabolism and the immune response.

Psychosocial factors can create stress that influences health through two pathways: directly, via physiological pathways (see below), and indirectly through influences on health behaviours (see page 31).

Psychological responses to stressors activate physiological stress responses that affect the nervous system, cardiovascular, metabolic and immune systems (see Figure 2 below). These physiological responses are designed to protect the body from stressors. Under normal conditions these responses return to base levels rapidly but acute physical and emotional stressors can trigger cardiovascular events. The concept of allostatic load – cumulative wear and tear – describes the physiological consequences of repeated or chronic stress. [4, 89, 90] Stressors experienced repeatedly or over a long period of time, including stressful living and working conditions, are associated with high blood pressure, development of diabetes and ischemic heart disease. [99]

Figure 2. Physiological responses to stress

Source: Based on Brunner and Marmot (2004) [100]

Stress at work

Stress at work and its effects on health have been extensively researched in terms of the psychosocial pathway mediated by stress. Two theoretical models of work stress have been developed: one characterised by job strain, that is high demand and low control, [101], [102] and the other by an imbalance between effort and reward. [103], [104] Organisational injustice is an additional concept that extends the concept of work stress. [105, 106]

In general, groups with lower education and lower occupational status have poorer health than those in higher employment positions. The Whitehall II Study of British civil servants has studied the relationship between occupational class and health outcomes over 30 years and shows a social gradient in health. Investigating the causes of the social gradient, the study found that work stress is higher among those in lower occupational grades, and this is a graded relationship across the social hierarchy. A social gradient in work stress has been consistently reported in research studies in 11 European countries. [106]

Chronic work stress is associated with increased risk of coronary heart disease, [107] mediated directly though activation of neuroendocrine stress responses and indirectly through health behaviours. [107]

Work stress is also associated with risk of common mental disorders. A meta-analysis of prospective longitudinal studies found that psychosocial stress at work, especially job strain and effort–reward imbalance, was consistently associated with higher risk of common mental disorders. [108] A further systematic review of research into work stress and risk of depression found 16 company or population-based studies covering 63,000 employees, with a consistent positive association between work stress and risk of subsequent depressive symptoms or major depressive symptoms. [109]

Personal actions and health behaviours

Taking a social determinants of health approach to tackling health inequalities requires avoiding 'lifestyle drift', that is "the tendency for policy to start off recognising the need for action on upstream social determinants of health inequalities only to drift downstream to focus largely on individual lifestyle factors." [110]

Of course, smoking tobacco, misuse of alcohol, unhealthy diet and lack of physical exercise are well-known risks to health. [111] But each of these behaviours has its own complex web of causation, incorporating individual, community and societal-level factors. These include psychosocial pathways. Indeed, any behaviour can be thought of as a psychosocial act, in that behaviours respond to the social environment mediated by individual motivations, capabilities and opportunities. [112]

Unhealthy behaviours such as smoking, drinking and eating foods high in sugar and fat create an immediate and short-term effect on psychological wellbeing: they give pleasure and relieve stress. However, they can become habits that lead to higher stress levels and can be difficult to change. This relates to the earlier discussion of control: the extent to which people control their behavioural choices is constrained or enabled by their capabilities, opportunities and motivation. [112]

Poor and disadvantaged groups are more likely than their better-off counterparts to be exposed to stressors over the life course. They are also more likely to have several unhealthy behaviours. There is some evidence that this clustering of unhealthy behaviours has intensified in recent years: people in the lowest educational group were three times as likely as those in the highest educational group to have all four risk behaviours in 2003, increasing to five times as likely in 2008. [113]

Smoking

Psychosocial processes are at play in the decision to start smoking, continuing to smoke and in quitting. People use tobacco smoking as a way of coping with life stressors, but the relationship between stress and smoking is complex. Reasons for starting to smoke differ from the reasons why people continue to smoke. [114] People who smoke usually start in adolescence, a phase of life when young people seek new sensations and are highly

susceptible to peer pressure. A study of survey data over the period 1994–2008 of children aged 11–15 found that children from more disadvantaged backgrounds were more likely to start smoking earlier and to escalate to daily smoking than children from families of higher socioeconomic status. [115] Therefore although tobacco control measures are associated with reduced uptake and more quitting in childhood, socioeconomic inequalities in childhood smoking remain. Nicotine is highly addictive, and evidence shows that nicotine ingested from smoking stimulates the production of dopamine, which temporarily reduces feelings of stress, but these negative feelings rise again once the effect has worn off. [116] As people become habituated to the effects of nicotine, they need to smoke more in order to have the same effect.

Smoking in England follows a social gradient and is more prevalent among low income groups and people living in more deprived areas. [117] In addition, unemployed people in Britain are nearly twice as likely to smoke (35%) as those in employment (19%). [118] The psychiatric morbidity survey in England found that smoking rates are higher among people with anxiety or depression (32%) than among people without these conditions (20%). [119] Evidence from population surveys in the US and Australia shows that mental distress is associated with both higher rates of smoking and higher levels of smoking. [120]

A study using Health Survey for England data found that overall smoking prevalence declined in England between 2001 and 2008 but that the decline was restricted to more affluent people, and was largely influenced by an increase in numbers of those who had never smoked, rather than an increase in quitting. [121]

Alcohol

Drinking alcohol is socially acceptable in England. Alcoholic drinks are cheaper relative to average household disposable income than they were in the 1980s, [122][2] although following the 2008 financial crisis alcohol prices rose above wages for several years. [123], [124] Within the environment of social acceptability, some people misuse alcohol and drink to excess.

The causes of misuse of alcohol are complex and involve interaction between genetic and psychosocial influences. [125] Having a parent who is an alcoholic is a risk for misuse of alcohol in their children as they grow up. There is a genetic component to this intergenerational transmission, but also psychosocial influences. Unravelling these psychosocial influences is challenging for researchers because parental alcohol and substance abuse co-occurs with a range of interrelated psychosocial and socioeconomic factors that can independently impact early child development. [125] Evidence shows that people exposed to four or more adverse childhood experiences (ACEs) are more likely

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[2]'By comparing the relative changes in the price of alcohol with changes in Real Household Disposable Income per adult over the same period (1980-2012) (with both allowing for inflation), alcoholic beverages were 61% more affordable per person in 2012 than in 1980.' 122.   Institute of Alcohol Studies, *Alcohol Pricing Factsheet*. 2014: http://www.ias.org.uk/uploads/pdf/Factsheets/Alcohol%20pricing%20factsheet%20April%202014.pdf.

than those with no ACEs to be heavy drinkers. [126] One theory is that where excess use of alcohol among parents impairs good parenting, children may be at increased risk of misusing alcohol during their lives, among other lifetime risks associated with poor parenting. This is because good parenting supports children in developing their potential across physical, social/emotional and cognitive domains. This includes development of children's abilities to moderate their behaviours, including consumption of alcohol and other health-related behaviours. Another pathway whereby children take on parental habitual behaviour such as heavy drinking is through socialisation and modelling of parental behaviour. However, not all children of adults who misuse alcohol will grow up to misuse alcohol. [127] [125]

Other pressures contribute to excess alcohol consumption. Individuals handle stress in different ways and a consistent theory is that some people use alcohol to 'self-medicate' feelings of stress, anxiety and depression. [128] Stressors that may be dealt with in this way include social issues such as personal debt, unemployment and homelessness. A systematic review and meta-analysis reported an association between personal unsecured debt and mental disorders, alcohol and drug dependency and suicide: unsecured debt was associated with a 2.7-fold increase in problem drinking. [129] A number of studies consistently report an association between unemployment and heavier alcohol use. [130] Alcohol abuse is particularly prevalent among homeless people: [130] a prevalence of 38% alcohol-dependency among homeless people has been estimated in western countries. [131] Understanding causality and the effect of mediators such as social support in these cases requires further research using longitudinal methodologies.

Community-level factors may also influence alcohol use. Evidence from a systematic review found inconclusive evidence for associations between alcohol use and deprivation, poverty, income, unemployment, social disorder and crime. [132] However, the review found that social capital, characterised by social support, community cohesion and social participation, may protect against alcohol use.

Excessive alcohol consumption is a risk to mental and physical health. Alcohol consumption does not follow the same social gradient as smoking. A population survey of drinking habits in Britain found that people on lower incomes were more likely to be teetotal and less likely to have drunk alcohol in the week before the survey than those on higher incomes. [133] Other variable factors including age, gender and neighbourhood are also important in the social distribution of alcohol consumption. However, alcohol-related harm, including alcohol-related mortality, is higher among lower socioeconomic groups in England. [134] A systematic review and meta-analysis of articles reporting alcohol-attributable mortality by socioeconomic status found that lower socioeconomic status leads to 1.5 to 2-fold higher mortality for alcohol-attributable causes than all-cause mortality. [135] Possible explanations include more harmful patterns of alcohol consumption among lower socioeconomic groups, under-reporting of

consumption and interaction between alcohol consumption and other unhealthy behaviours and factors associated with low socioeconomic position. [134]

Unhealthy diet

People in the most deprived income quintile in England are less likely to eat recommended levels of fruit and vegetables than those in the least deprived income quintile, [136] and to consume more energy-dense foods than people in higher socioeconomic groups.

Influences on dietary choices are many and varied. Diet is affected by the affordability, availability, accessibility and acceptability of different food and beverages. For people in low income and disadvantaged settings, adopting a healthy diet is more frequently unaffordable than for more affluent groups.

There is evidence that obesity can spread via social networks. [82] Psychosocial influences play a role in diet in at least three ways:

1. Social and cultural norms and family habits are a strong influence on taste preferences and dietary choices.
2. Food consumption is affected by emotional states: some people adopt patterns of 'emotional eating', also described as 'comfort eating', including over-consumption of energy-dense foods with low nutritional value. Others may lose their appetite and reduce their food consumption in response to stressful emotional states. [137]
3. A relatively new theory, referred to above, proposes that people living in poverty are less able to make decisions that favour long-term benefits: being poor imposes a mental load that crowds out reasoning ability. [138] People living in poverty already have difficult trade-offs to make about household expenditure, for example there is evidence that the poorest of older households are sometimes having to choose between eating and heating. [139] Making healthy food choices is more difficult for those living in such circumstances.

Physical activity

Regular physical activity benefits health and wellbeing by contributing to the prevention of several physical diseases, including cardiovascular diseases, diabetes, hypertension and osteoporosis, and by reducing stress, anxiety and depression. [140] Physical activity is also socially patterned. Men in the most deprived income quintile are less likely to take part in recommended levels of physical activity than men in other income groups, and women in the four lowest income quintiles are less likely to take part in recommended levels of physical activity than those in the highest income group. [141]

People's level and frequency of physical activity depend on the requirements of their occupation, their engagement with activities in the home such as housework, their use of active modes of transport and their participation in active recreation and sports. Clearly, aspects of the built and natural environment affect levels of physical activity, and so do psychosocial factors.

Understanding the psychosocial processes influencing uptake and maintenance of physical activity is an active field of research, much of it coming from behavioural psychology, examining the psychosocial mediators that influence physical activity behaviours. Self-efficacy [142] and autonomous motivation (which means enjoyment of the behaviour and expectation of valued outcomes linked with the behaviour), as well as social support from family and friends, have been shown to influence uptake of physical activity. A review of research on physical activity among people who had had a stroke found that self-efficacy, physical activity beliefs and social support were influential in uptake and maintenance of physical activity. [143] Research on factors influencing the uptake of an exercise referral scheme in Wales for people with depression, anxiety or heart disease risk found evidence for the mediating influence of autonomous motivation and social support, but not self-efficacy. [144]

The social determinants of health approach emphasises that behaviours cannot be separated from the social, economic and environmental contexts in which they take place. Further understanding is needed of the relative contributions of differing psychosocial constructs to socioeconomic differences in physical activity, and the influence of socioeconomic and environmental factors on these in relation to physical activity and other health behaviours.

Implications for action

"*Mental health is the key to understanding the impact of inequalities on health and other outcomes.*" (piii)[8]

In conclusion, psychosocial pathways are important to health inequalities and should be explicitly considered in efforts to reduce these inequalities. This includes the increased attention needed to address the social determinants of health, to intervene early in the life course and to take action across the whole pathway comprehensively, as outlined in Fig 1. Potential areas for action include:

Addressing wider determinants of health (the root causes of health inequalities); through
- Strategic and comprehensive approaches across the causal pathway
- Health in all policies

Addressing the effects of adverse factors and promoting protective factors among the whole population at a scale and intensity that is proportionate to need; within
- Interventions early in the life course
- Schools, workplaces and communities
- Prevention services

Building system capacity and capability; through
- workforce development
- knowledge and intelligence
- research and development

1.   Addressing the wider determinants of health

Strategic and comprehensive approaches

The Marmot Review, *Fair Society, Healthy Lives* (2010), laid out how to create the conditions in which people can have control over their lives within the UK context. [5] The review identifies six policy objectives across the social determinants of health:

1.   Give every child the best start in life
2.   Enable all children, young people and adults to maximise their capabilities and have control over their lives
3.   Create fair employment and good work for all
4.   Ensure a healthy standard of living for all
5.   Create and develop healthy and sustainable places and communities
6.   Strengthen the role and impact of ill-health prevention

The importance of the life course approach is emphasised; recognising how life experiences and previous generations shape health patterns and that past and present experiences are shaped by the wider social, economic and cultural context.[5, 6]

While these policy objectives remain highly influential in framing the national policy discourse as well as action to improve health and reduce health inequalities, an assessment of national policy initiatives across all these objectives is not currently available. The Marmot Indicators provide a way to monitor progress on indicators of the social determinants of health, health outcomes and social inequality that broadly correspond to the six policy objectives outlined above. [145, 146] Local areas can use these indicators to help identify areas where action is needed and to monitor progress. To support this PHE has released an intelligence tool of indicators on the wider determinants of health[147], a health profiles for England on inequality and social determinants[148] and a health equity report on ethnicity[149]
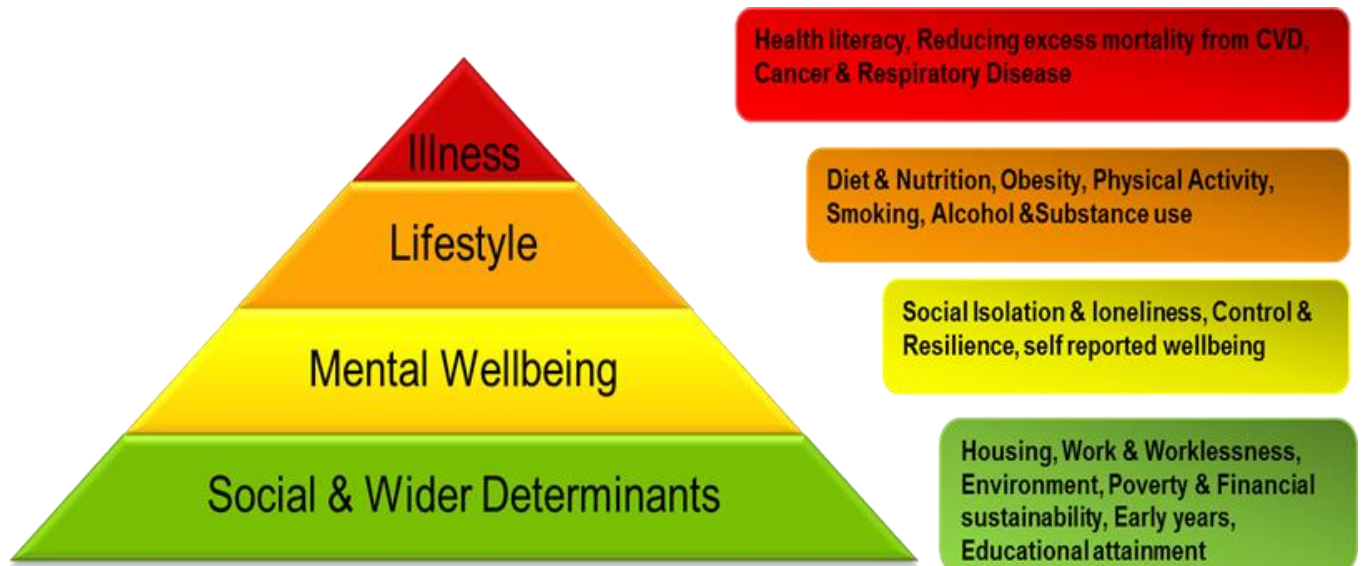
Actions across all of the six Marmot objectives are likely to impact on early life experiences. Therefore it is important to address all six of these objectives at national and local levels. Ensuring a healthy standard of living for all is key. A parent living in poverty, having to juggle expenditure to make ends meet on a weekly basis, perhaps going into debt, perhaps with difficult family relationships, perhaps with a low paid and insecure job, faces psychosocial stress.[5, 6]

The six Marmot objectives also have strategic influence at the local level. For example, Sandwell Council [150] and Coventry City Council [151, 152] in the West Midlands are two areas taking a strategic, social determinants of health approach (see below).

Local example: Sandwell model of reducing health inequalities

Sandwell has adopted a social determinants approach to reducing health inequalities that addresses psychosocial pathways, using a four-tier model that addresses social and wider determinants, mental wellbeing, lifestyle factors and illness (see Figure 3).

Figure 3. Sandwell model of reducing health inequalities

Source: Sandwell Council

The Sandwell model emphasises that: '*work at the upper levels will have the quickest impact on people's health and wellbeing. Work on the lower levels will take longer to influence people's health and wellbeing but this improvement will last for longer and will be more sustainable. It is therefore essential that there is a balance of work across all four levels and that local people, partners and providers of services are fully involved in planning and delivery'*. [150]

In this way the Sandwell model is designed to work across the whole of the social determinants framework, including psychosocial pathways. The local authority's health and wellbeing board agreed four priorities for the period 2016–20:

1) to help people stay healthier for longer;
2) to help people stay safe and support communities;
3) to work together to join up services; and
4) to work closely with local people, partners and providers of services.

Whilst it is too early to demonstrate outcomes, the work demonstrates a comprehensive approach in line with the conceptual framework.

What can local areas do?

Implementing and measuring progress using the six Marmot policy objectives:

Improving the conditions in which people live and work, especially the conditions experienced by the most disadvantaged groups, is a way to reduce the level of stressors faced by the population to improve population health, prevent illness and reduce health inequalities.

If not already doing so, local areas can apply the six Marmot principles in their strategic plans. This encourages stakeholders from different sectors to work together to ensure initiatives in one sector also support progress in others.

Where local authorities are applying the Marmot principles they can review progress periodically using relevant indicators and make policy adjustments accordingly.

Local areas can ensure a comprehensive approach across the causal pathway, addressing wider determinants and psychosocial factors to improve both physical and mental health and reduce health inequalities.

Further resources:

Public Health Outcomes Framework: Health Equity Report: Focus on Ethnicity [149]

UCL Institute of Health Equity Local action on health inequalities: evidence papers [153]

Wider determinants of health profiling tool [147]

Health profiles for England [148]

Health and health equity in all policies

Given the immediate impact that macro-level changes can have on mental health, and the distribution of mental health, it is important that psychosocial pathways and mental health impacts are incorporated into decision-making across sectors, policy and service areas. Health in all policy approaches can help achieve this, including health impact assessment and health equity assessments. To give a practical example, local authorities can assess potential social and health impacts of improvements in the built environment on different social groups and examine how to maximise social value, for example in terms of improving the environment in ways that enhance wellbeing.

PHE and the Local Government Association recognise that re-shaping people's economic, physical, social and service environments through health in all policy approaches can support wellbeing and healthy behaviours and boost local growth. [154]

A specific Mental Wellbeing Impact Assessment (MWIA) Tool assesses wider determinants, population characteristics and protective factors:

- A sense of **control** over one's life, including having choices and skills
- Communities that are capable and **resilient**
- Opportunities to **participate**, e.g. in making decisions, through work
- Being **included**: having friends, family, work colleagues [155]

MWIA was developed in the UK but it is in use globally including in the UK, Australia, Chile and Portugal.

The tool focuses on the psychosocial factors that are known to promote and protect health and addresses the whole of the causal pathway. It is a practical tool to support commissioning in local areas.[156] The tool can be used alone, or incorporated into other impact assessments or health in all policy approaches.

What can local areas do?

Health in all policies

Local areas can work with stakeholders to use health in all policy approaches to consider the impacts of policy and programmes on wider determinants, psychosocial factors and pathways to health and health equity, for example using frameworks such as the Mental Wellbeing Impact Assessment Toolkit.

Further resources:

Public Health England//Local Government Association, Local wellbeing, local growth. 2016 [154]

Implementing health in all policies at a local level: practical examples. 2016 [156]

EU Mental Health in All Policy report [157]

The Mental Health and Wellbeing Assessment Toolkit [158]

Health in All Policies: a manual for local government [159]

2. Addressing the effects of adverse factors and promoting protective factors among the whole population at a scale and intensity that is proportionate to need.

Protective factors help buffer the impact of adverse conditions on poor health and help to create good health. Attention should be paid to enhancing the protective (or promotive) factors for health, alongside reducing risk factors. This includes action at an individual, community and structural level. Factors for which evidence is strong include resilience, social networks, control and participation.

Interventions early in the life course

Evidence presented in the first part of this report and elsewhere emphasises the importance of improving experiences for children in their early years across the social gradient. [5]

Conditions for a good start in life are not available to all children. There are considerable inequalities in the conditions affecting early child development and these contribute to inequalities in health across the life course. [5] Interventions can be at two levels: to reduce child poverty and improve incomes for the 'just about managing' – 20th to 50th income centiles – and to improve services for families and young children.

Evidence about the importance of early life experiences for physical, cognitive and socio-emotional development, combined with evidence about the effect of conditions and exposures in adult life, emphasise the importance of identifying risks at every stage of life and developing and implementing interventions to reduce harmful exposures and mitigate risks across the life course.

Good parenting helps build resilience, which is an important trait that enables people to cope with life's difficulties. Family and school are key areas where resilience to stressors can be built or destroyed during childhood and adolescence. [61] [160]

Local example: Coventry Acting Early programme

Coventry provides an example of strategic action to improve childhood experiences with its Acting Early programme, which brings local people and organisations together to address Marmot policy objective 1: give every child the best start in life. The Acting Early programme has been designed to improve the capability of parents and enable them to effectively support the health and development of their children. [152] This has involved reconfiguring the delivery of community midwifery, health visiting and children's centre services into integrated teams. This new model has been co-designed with parents and health professionals and includes the voluntary sector, midwifery, health visiting, general practice, Sure Start children's centres and Coventry City Council's children's services teams. The programme addresses causes of adversity in early life, which are critical to addressing psychosocial pathways.

This is an example of innovation as part of Coventry's Marmot City programme. Action is taken across the psychosocial pathway and increases in breastfeeding rates and related outcomes are starting to be shown.[161]

At the programmatic level, interventions to support parents can deliver benefits to their mental health, support children's social and emotional development and reduce behavioural problems. In this way these interventions act at both levels: improving experiences in the early years, and helping parents to cope. One example is the Incredible Years Preschool Programme, a parenting group programme designed to help parents improve their child's behaviour. [162] The Early Intervention Foundation Guidebook describes further examples of effective programmes, including Triple P-Positive Parenting [163] and Family-Nurse Partnerships. [164]

Psychologically-informed interventions can support pregnant women who have previously had depression or anxiety and have symptoms of depression and anxiety that do not meet diagnostic criteria. A report by Barlow and colleagues found evidence that four to six sessions of inter-personal psychotherapy and cognitive behavioural therapy are effective. [165] Barlow also identified ways to support mothers in the post-natal period, such as group classes, peer support schemes for breastfeeding and skin-to-skin contact between mother and baby ('kangaroo care'), which supports mother–child attachment. [165]

Evidence shows that children and young people who are exposed to adverse childhood experiences (ACE) are more likely than those who are not to grow up to live in conditions that have a negative impact on their health, such as in poverty, or with low quality employment conditions, and are more likely to engage in health risk behaviours.

Local example: Lancashire REACh

In Lancashire, the Routine Enquiry about Adversity in Childhood (REACh) intervention appears to be acceptable and feasible, and enhances the potential for positive outcomes. Early findings from the evaluation of REACh show that the opportunity for early help and prevention with young and vulnerable parents has the potential to stop the intergenerational impact of ACEs and addresses their root causes.[166, 167] More work is needed to establish best practice in routine enquiries in other settings.

A trauma-informed care approach is also being trialled in the UK. This approach responds to the growing evidence of the association between trauma and mental health. [159] The approach is informed by the principles of safety; trustworthiness and transparency; peer support; collaboration and mutuality; empowerment, voice and choice; and cultural, historical, and gender issues.[168]

What can local areas do?

Early years:

Local action to improve early years experiences can address the causal pathways: reducing child poverty, creating health-enhancing school and family environments, enabling resilient family relationships and good parenting and providing psychologically-informed support services.

Effects of adverse childhood experiences

Local areas can invest in approaches that tackle the traumatic effects of ACEs head on, by enabling people to access support in a way that is acceptable to them. This approach can help improve mental health and wellbeing for those who have experienced trauma in childhood. By using tools such as REACh, local areas can help tackle the intergenerational effect of adverse childhood experiences. Local areas can also help to prevent adversity in early life, including through existing safeguarding systems.

Further resources:

UCL Institute of Health Equity, Evidence review: Good quality parenting programmes and the home to school transition, 2014 [160]

UCL Institute of Health Equity, Briefing 1a: Good quality parenting programmes, 2014[169]

UCL Institute of Health Equity, Briefing 1b: Improving the home to school transition, 2014 [170]

NICE guidance PH40 social and emotional wellbeing: early years [171]

Early Intervention Foundation Guidebook [172]

Schools

Protective influences organised at school, in families and in the community are important to support children and young people to cope with life's stresses.

Schools have a vital part to play in building a sense of belonging among children and young people. [173-175] There is mounting evidence that pupil engagement and caring leadership in schools also makes a difference to school performance and socio-emotional learning. [176] Improved educational outcomes help young people take control over their lives and improve their life chances and health outcomes.

Example: Schools as places of belonging

Kathryn Riley, Professor at University College London's Institute of Education, advocates that those involved in educating children and young people apply a mind-set that schools can and should be joyful places. Riley's research finds that this approach opens up a world of possibilities to young people, which is vital in our volatile and uncertain world.[173-175] The highly practical model she has developed through working with schools starts with children and young people describing their own lived reality in words and through art. The children and young people then move on to research issues that matter to them. Research questions come from the children themselves. For example, a research question from a group of children at a school in a disadvantaged area of London was 'how good is our school at welcoming new children?' The children discussed the issue and came up with practical solutions to help new children settle in and gain a sense of belonging. Importantly, the school then implemented the children's solutions. This is an approach that makes children feel valued, empowers them by giving them a sense of agency and improves their wellbeing. Caring leadership is about leading for place and belonging. It includes setting clear boundaries and expectations about young people's behaviour and how they treat others, which are seen as fair and connecting to families and communities. There is mounting evidence that caring leadership in schools, creating a sense of place and belonging, also makes a difference to school performance and socio-emotional learning.[156] Improved educational outcomes help young people take control over their lives and improve their life chances and health outcomes.

The example shows innovation at an organisational level in taking a whole-school approach to addressing a specific psychosocial factor that may contribute to improved health outcomes and determinants of health.

Children and young people need the right kind of support, at the right time. Services should be available to everyone, but more intensive efforts are required for children and young people with greater needs. Early intervention helps prevent situations getting worse. For example, in

school settings, Families and Schools Together (FAST) is an early intervention programme that aims to improve family relationships and helps build a supportive network and home environment. Benefits include reduced child emotional problems and improved child social behaviour. [177] [178]

Local authorities and city councils around the country recognise the importance of getting it right for children and young people. For example, in Bristol there are a range of interventions and sources of support for children and young people under the banner of 'Live Well'. [179] One of these is Kooth, an online counselling service that enables children and young people to talk anonymously with trained counsellors.[180] The service uses a counselling goals system, which is an interactive tool that allows young people to be in control of their goals and chart their own progress. [181] And in Somerset, an approach called Emotion Coaching is showing positive outcomes (see below).

Local example: Emotion Coaching in Somerset

In Somerset, a programme called Emotion Coaching helps children cope with upsetting situations. Emotion Coaching is based on the work of John Gottman in the United States, who described five essential aspects of this approach for parents in relation to their children:

- Be aware of your child's emotions
- Recognise your child's expression of emotion as a perfect moment for intimacy and teaching
- Listen with empathy and validate your child's feelings
- Help your child learn to label their emotions with words
- Set limits when you are helping your child to solve problems or deal with upsetting situations appropriately

Emotion Coaching can also be used by professionals working with children and young people. Bath Spa University is working with a social enterprise group to deliver a programme of Emotion Coaching training to the children and young people workforce across the five districts of Somerset. According to one public health expert in the area, the programme is having tangible outcomes in Somerset's schools, including reduced numbers of pupils excluded from school and improved performance.[182]

This example shows local innovation at an individual level to improve wellbeing – helping to boost the protective factors and resilience to adversity.

What can local areas do?

School

Local areas can work with schools and colleges to apply policies and programmes that address the psychosocial pathway by tackling adverse factors such as bullying, stress and

isolation, and promoting protective factors such as social networks, resilience, emotional wellbeing, social skills and social cohesion and sense of place and belonging.

Further resources:

UCL Institute of Health Equity Evidence review & Briefing: Building children and young people's resilience in schools [183]

PHE/ Children and Young People's Mental Health Coalition: Promoting children and young people's emotional health and wellbeing: a whole school and college approach [184]

Measuring and monitoring children and young people's mental wellbeing: a toolkit for schools and colleges [185]

PHE/ RCN Preventing bullying: lesbian, gay, bisexual and trans young people [186]

NICE guidance PH12: Social and emotional wellbeing in primary education [187]

NICE guidance PH20 social and emotional wellbeing in secondary education [188]

Early Intervention Foundation [189]

Workplaces

A report published by IHE in 2014, *Increasing Employment Opportunities and Improving Workplace Health*, describes a number of initiatives introduced by national government and local authorities that aim to encourage, incentivise and enforce good quality work. [190]

Measures to reduce stress at work include effective leadership and line management training, increasing employee control over their work and participation in decision-making, and working with local employers to encourage, incentivise and enforce good quality work. [190]

The Health and Safety Executive (HSE) stress management standards provide practical guidance to employers to reduce work-related stress among their employees. [191] They target six main working conditions that, if not properly managed, are associated with poor health and wellbeing, lower productivity and increased sickness absence. These are:

- demands – including issues such as workload, work patterns and work environment
- control – how much say the person has in the way they do their work
- support – including the encouragement, sponsorship and resources provided by the organisation, line management and colleagues

- relationships – including promoting positive working to avoid conflict and dealing with unacceptable behaviour
- role – whether people understand their role within the organisation and whether the organisation ensures that they do not have conflicting roles
- change – how organisational change (large or small) is managed and communicated in the organisation. [191]

While there is evidence of effectiveness of management practices in terms of improved business outcomes, such as better performance, less absenteeism, less turnover intention and/or less withdrawal behaviour, [192] a review of the evidence on workplace management practices to improve mental health was more nuanced, and the report highlighted the need for more research. [193]

Workplace health initiatives should address psychosocial factors of stress at work and consider outcomes across the social gradient.

PHE has published local evidence briefings on increasing employment opportunities and workplace interventions to improve health and wellbeing, including a mental health toolkit for employers.[194]

What can local areas do?

Workplace

Local areas and local employers can improve psychosocial working conditions through ensuring good quality of work and good employment conditions.

Public sector employers are encouraged to become exemplars in addressing health at work and in evaluating their approach.

Employers can support managers to improve psychosocial working conditions through training and development, safe and supportive policies and providing access to confidential advice and support from appropriate occupational health services.

Further resources:

UCL Institute of Health Equity, Evidence review 5: Increasing employment opportunities and workplace health [195] and Briefing 5a: workplace interventions to improve health and wellbeing.

Business in the Community, Mental health toolkit for employers [194]

NICE guidance PH22 Mental wellbeing at work [196]

Community

Many psychosocial factors are created at the community/ neighbourhood level as outlined in Fig 1 and this is a key setting in which local areas contribute to reducing health inequalities.

Local areas can create partnerships, plans, opportunities and interventions such as those that improve the built, natural and social environment, that are inclusive and encourage social cohesion, participation and a sense of belonging. Local areas can build empowerment, resilience and social capital through approaches that seek to increase control, voice, equity and connectedness as outlined in the PHE/ NHS England guide to community-centred approaches.[197] This guide includes a family of approaches, informed by evidence, containing four strands of intervention: strengthening communities, volunteer and peer roles, collaborations and partnerships between services and communities and interventions that increase access to community resources. Supporting a vibrant voluntary and community sector is also key, including the role of volunteers.

PHE's national conversation on health inequalities encouraged local authorities to have conversations about health inequalities with their communities. This includes examples and stories from practice, including community-centred approaches.[198] Another current example is the Big Local, introduced by the Local Trust and funded by the Big Lottery Fund, which supports 150 local areas in developing resident-led changes, helping to create empowered communities that work together to improve the areas where they live.[199]

Local powers can be used to create inclusive spaces, increase cohesion and empowerment and enhance social democracy, for example through planning and commissioning for social value.

Commissioning approaches can be supported by the National Institute for Health and Care Excellence (NICE) quality standards for commissioning community engagement. [200]

What can local areas do?

Community

Local areas can use their powers to improve the built, natural and social environment, that are inclusive and encourage empowerment, social cohesion, sense of belonging, social relationships and social capital.

Local areas can consider the needs of communities of identity and how best to support these within diverse and integrated place-based communities, particularly considering how to use local assets to reduce isolation, discrimination and violence.

Further resources:

PHE/ NHS England A guide to community-centred approaches [197]

NICE guidance NG44 community engagement [201]

NICE Quality standard community engagement [200]

National conversation with communities on health inequalities [198]

UCL Institute of Health Equity, Using the Social Value Act to reduce health inequalities [202]

Prevention and behaviour change services

The complexity of factors that affect our health and wellbeing suggests integrated approaches that address psychosocial influences should be included in the development of strategies to change behaviours (for example diet, physical activity, alcohol, and tobacco misuse), to reduce illness (such as CVD, diabetes and obesity) and to reduce health inequalities.

One example of addressing psychosocial influences in an integrated way is the approach taken by the Citizen's Advice Bureau networks (CAB). CABs provide advice across a range of social matters, such as benefits, work, debt and money, relationships, tax, healthcare and legal matters. Extensive evidence highlights links between this type of advice and physical and mental health [203]. Close working between agencies such as CABs and health and social care services can help professionals and patients address influences on health outcomes and could cut the costs of healthcare.[204] Further research is needed on this. An evaluation is currently being carried out to evaluate the effects of CAB services on health inequalities. [205]

Innovative work is examining the impacts on mental wellbeing and health related behaviour of situating legal advisors who offer free legal advice in primary care settings.[206] The rationale is that many General Practitioners see patients with complex social and legal problems, such as debt, housing and employment issues, which may be legal matters, but often people don't know where to turn for help.

Community-wide approaches have been developed with a focus on integrating services to help improve wellbeing. Winters and colleagues from the Liverpool Public Health Observatory prepared a comprehensive report on wellness services, bringing together the evidence base on interventions that take a holistic and biopsychosocial approach to health. [207] The aim is to focus on people in the context of their particular social, economic and environmental situations.

The integrated wellness service model can connect services across healthy lifestyle, mental wellbeing, self-care and independent living, family and early years, work, learning and skills, health protection and personal safety, community development, leisure, arts and culture and

welfare. [208] Integrated wellness services and social prescribing are gaining traction in many localities, with local case studies included in a recent Local Government Association report. [209]

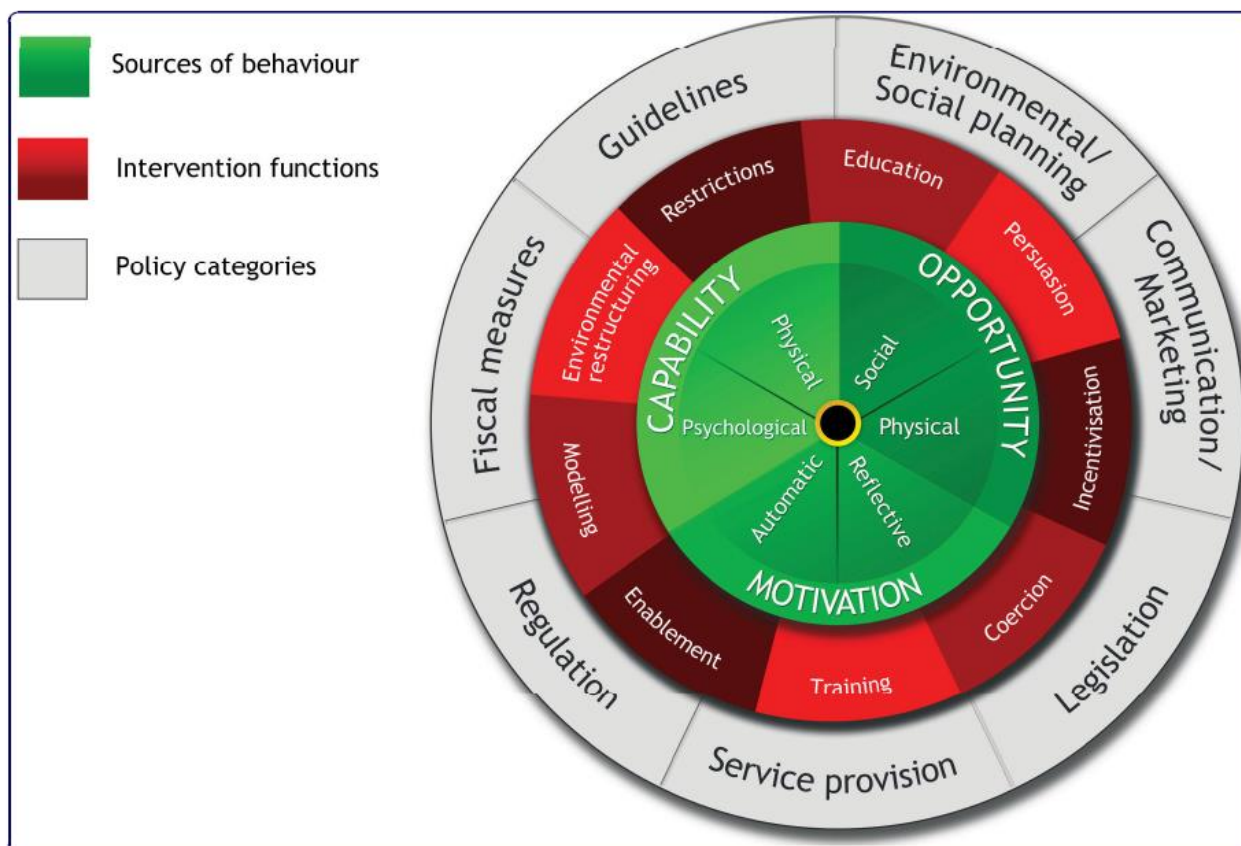***Local example: Sunderland Integrated Wellness Service***

The wellbeing service for the local community in Sunderland provides a holistic approach to improving health by integrating services and public involvement. [210] The Sunderland public health system has six components that aim to deliver wellness:

1) Healthy places, for example leisure centres, local parks, the seaside, cycle tracks and walking paths.
2) A central hub that coordinates access to opportunities in Sunderland where people can access advice and information, motivational support and be referred to services.
3) Health champions/personal information and advice – Sunderland Health Champions are volunteers in a range of organisations and communities who give brief advice and signposting to help people to make healthier choices e.g. in relation to money matters.
4) Outreach – direct delivery of health improvement opportunities to priority groups in the population. This includes sexual health promotion and alcohol education among high-risk groups, stop smoking services for young pregnant women and delivery of NHS health checks in disadvantaged neighbourhoods.
5) Support for healthy living – a team provides one-to-one motivation and support for people and groups most affected by health inequalities.
6) Further opportunities – these are wellness/healthy lifestyle services that are directly commissioned by the council or available in the wider community, for example NHS health checks, stop smoking services, substance misuse and sexual health services.

The example shows innovation of an integrated approach to prevention that supports people to address determinants of health across the causal pathway e.g. health behaviours, psychosocial factors and wider determinants.

The approach to understanding behaviour change developed by Michie and colleagues highlights the importance of locating behaviours in a wider set of influencing factors, including psychosocial. [112] In this model, three essential conditions for behaviour change, namely capability, opportunity, and motivation, form the hub of a wheel (see Figure 4 below). The model opens up a way of designing behaviour change interventions that take an integrated approach, addressing psychosocial pathways e.g. the social opportunities people have available to them and the psychological capabilities and motivation. It is important to point out that the most effective behaviour change interventions include regulations and fiscal measures operating at the policy level. In order to reduce inequalities, additional targeted measures are required at a proportionate scale and intensity.

Figure 4. The behaviour change wheel

Source: Michie et al (2011) [112]

Local prevention services can consider integrated approaches to behaviour change that enable people and communities to address factors across the social determinants pathways that influence their health. This includes addressing social determinants, psychosocial factors and lifestyle behaviours. Such approaches require evaluation. An intervention developed and evaluated by the Royal Free Hospital in London shows how this can work in practice (see below).

Local example: 'Well at the Free' in London

The London Royal Free Acute Hospital Trust delivered a four-week psychological intervention to address barriers to lifestyle behaviour change among hospital patients, especially multiple life risks. [211] The intervention reached deprived groups, and therefore helps to address health inequalities. The intervention was guided by the COM-B Behaviour Change Wheel and involved "detailed baseline assessment, personalised goal setting, psychological skills development, motivation support and referral to community services such as the Citizen Advice Bureau" to address the wider determinants of health including poor housing, debt and lack of social support. Positive outcomes were found across five assessed domains: "lifestyle behaviour change, health management, coping/ resilience, social and environment. Self-efficacy, perceived control and well-being" were also found to have increased.[211]

The example is an innovative service approach of applying the COM-B behaviour change model to practice, that has assessed, addressed and measured psychosocial influences on behaviour change and demonstrated positive results.

What can local areas do?

Prevention strategies

Public health strategies to prevent diseases such as CVD, cancer and diabetes can consider psychosocial factors and pathways as part of the overall causal pathway. Emphasis should be placed on addressing protective factors alongside risk factors.

Health promotion and prevention services

Those engaged in service delivery in local areas can help to orientate ill health prevention services towards addressing the social determinants of health and improving mental health and wellbeing. One approach is to work towards creating an integrated wellness system that aims to keep people well, helping people to address factors that cause stress that can contribute to unhealthy behaviours, as well promoting factors that create health and wellness. Local action to promote healthy lifestyle behaviours needs to recognise and address the different capabilities, opportunities and motivations for behaviour change among social groups in the local area, in order to develop relevant interventions at an appropriate scale and intensity to address them.

Further resources:

Local Government Association Public health working with the voluntary, community and social enterprise sector: new opportunities and sustainable change [209]

Kings Fund Population health systems: going beyond integrated care [212]

3.   Building system capacity and capability

Implications for workforce development

Consideration of psychosocial pathways has implications for public health workforce development. Building knowledge and understanding of the causal pathway between social determinants, psychosocial factors, health behaviours and health outcomes is fundamental to core learning and development for those working to improve health and wellbeing and reduce health inequalities. This means providing staff working in public health with the skills, tools and opportunities to support people and communities to address social determinants and psychosocial protective factors and adversities.

The Public Health Skills and Knowledge Framework includes addressing the wider determinants of health and health inequalities.[213] PHE's public mental health leadership and workforce development framework further states that "Addressing the wider determinants of health, alongside risk behaviours and physical illness, is therefore important in reducing the health inequalities in life expectancy of people with mental illness" and suggests a number of competencies to enable this in practice.[214]

Local example: Connect 5 Greater Manchester

Connect 5 is an accredited mental health promotion training programme that is designed to increase the confidence and skills of front line staff so that they can be more effective in having conversations with the people they work with about mental health and wellbeing. It includes understanding how environmental factors influence mental health and wellbeing and promotes a self-help philosophy of helping people to better understand, manage and improve their mental health. Connect 5 aligns with Making Every Contact Count as trains staff into three levels of brief intervention. It is relevant for a range of staff groups working on the frontline with people in need, e.g. justice and rehabilitation, social care, housing, employment, pastoral and higher education support services, social enterprise and the third sector and allied health professionals.

The programme was developed by Stockport, Manchester and Bolton public health services with the University of Manchester and has trained 2,500 workers. Health Education England has recently funded a national train the trainers pilot programme and in the North West of England it is training additional staff across health and care services.

For more information Connect 5 'Train the Trainer' Programme [215]

What can local areas do?

Workforce development

Local areas can consider the workforce development implications of the need for greater attention to the wider determinants of health, including psychosocial pathways and factors. This includes building the knowledge and skills of the public health and wider workforce to address the root causes of health and for frontline staff (especially those working with marginalised people facing multiple disadvantage) to support and enable the people they work with to address the factors affecting their health.

Key resources:

Public mental health leadership and workforce development framework [214]

Implications for knowledge and intelligence

More knowledge and intelligence are needed on the contribution of protective psychosocial factors to healthy life expectancy and the burden of disease. Measuring indicators and outcomes at a population and service level will help to increase understanding of what protects and promotes health and wellbeing and buffers disease, for example social connectedness and social capital measures, and wellness metrics.

Figure 1 might present a useful framework with which to identify indicators, so that measures of factors across the pathways from social determinants to health outcomes can be used to increase understanding of mediating factors and their contribution to overall health and health inequalities.

PHE has developed a number of tools to support this (listed below) and worked with the What Works Centre for Wellbeing to identify indicators, measures and gaps in wellbeing data, representing a range of psychosocial factors at the individual and community level.[216]

What can local areas do?

Knowledge and intelligence

Local areas can consider collecting and analysing data on psychosocial factors and pathways as part of understanding and reducing local health inequalities, for example the adverse and protective factors that are influencing health such as social isolation and social capital.

Key resources:

Wider determinants of health profiling tool [147]
https://fingertips.phe.org.uk/profile/wider-determinants

Health assets profile [217]
http://fingertips.phe.org.uk/profile/comm-assets

Understanding local needs for wellbeing data: measures and indicators [216]
https://whatworkswellbeing.org/

Implications for research and development

Throughout this report areas where more research is needed have been highlighted. Further work is required to understand how to apply evidence to practical interventions to improve wellbeing across the life course, as well as evaluation of interventions with regard to effects on wellbeing.

Further research is needed to advance understanding of causality:

- Research, using longitudinal methodologies, to further elucidate causality and the effect of mediators in the causal pathways

- Research that examines the associations and causal relationships between various factors in the conceptual framework (Figure 1)
- Research that examines the relative contribution of intermediary factors to the distribution of health
- Research that examines the contribution that different factors have on mental wellbeing
- Research that examines the contribution of psychosocial influences on health behaviours

Further research is needed to evaluate the effects of interventions across the social gradient.

Public Health England is working with the What works centre for wellbeing to improve evidence about what works in relation to work and learning, communities, culture and sport and cross cutting wellbeing capabilities – wellbeing definitions, measurements, determinants, effects, evaluation and life course models.

What can local areas do?

Research and development

Local areas can develop partnerships between researchers and practitioners to increase understanding of practice and impacts across the causal pathway.

Key resources:

Doing, supporting and using public health research [218]

Research in local government [219]

What works centre for wellbeing [216]

In summary

Evidence on the significance of psychosocial pathways to reducing health inequalities presents implications for both local and national action. Some suggestions and examples are included here for consideration. However, further work with national and local stakeholders could be beneficial to identify and develop specific actions and practice examples, translate the evidence and conceptual framework into accessible information and messages and to co-ordinate implementation and monitoring.

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