Parenting and health: a call for action

Neha Shah

Sarah Stewart-Brown

Abstract

Paediatricians and healthcare professionals working with children are well placed to observe parents and see a wide range of parenting from the exceptional to the abusive. Parenting has important short, medium and long term effects on child physical and mental health. Understanding these effects more fully helps paediatricians to comment on parenting, offer advice or refer to parenting programmes. This article outlines advances in neuroscience and attachment theory as well as contemporary issues that underpin the case for parenting intervention. It also discusses the rationale and evidence base for particular programmes, the UK policy context, and makes some suggestions on how paediatricians may wish to support better parenting.

Keywords advocacy; life course influences; mental health; parenting; physical health

Introduction

A lack of knowledge is a barrier to positive action

Healthcare professionals working with families see a wide range of parenting from the exceptional to the abusive. They commonly recognise the harms that accrue to child health and development from aspects of parenting like provision of unhealthy food, lack of exercise and lack of support for language development and education. Most offer advice and support with regard to the care of children and paediatricians, in particular, are required to investigate and report parenting that may be abusive or neglectful. Most paediatricians will also be aware of research relating childhood influences to health throughout the life course, which begins *in utero*. Many observational studies have shown that the lifestyles acquired in childhood and adolescence track through into adulthood and influence adult health and longevity. These may also impact on the health of the next generation as patterns of behaviour become trans-generationally ingrained.

Some will consider it their responsibility to promote or advocate for improvement in social conditions, by drawing attention to the impact poverty and deprivation have on child health and development. They campaign for improvements in school meals, taxation on high sugar foods and beverages, opportunities for safe physical activity and protection from harmful substances like tobacco and illegal drugs. It is, however, rare to find paediatricians asking for training on how they could support parenting in their day to day practice, or calling for support for parenting through social and political channels.

There is a wealth of transdisciplinary evidence from psychology, neuroscience, the social sciences, and public health describing the impact of the relational environment in the home on child and adult health which may not be well known to paediatricians or other healthcare professionals. A recent RCPCH survey looking at poverty and child health highlighted parental mental illness and limitations on family time due to long working hours, alongside food insecurity, overcrowded and damp housing, homelessness, stress and worry linked to poverty as important concerns to paediatricians. All of these issues merit advocacy, and wider social and structural change, however tackling them is complex and requires cross-disciplinary effort. Parenting interventions are well evidenced and can mitigate some of the impact of poor parenting. This article aims to provide an outline of what is currently known about parenting and its importance for child and adult health and point to possible ways that healthcare professionals might intervene in the hope that individuals will feel more empowered to take action on this key determinant of health.

Neuroscience

'Use it or lose it' — early life matters

Knowledge has been building over the last few decades regarding the plasticity of the infant brain and its great sensitivity to the environment, particularly the relational environment created by primary caregivers. Most cerebral neurons develop during pregnancy and the first two years of life. Simple neurological circuits supporting different skills develop and provide the scaffolding for more advanced circuits and dendritic connections over time. The process is one of 'use it or lose it'; pathways that are frequently activated grow and those that are not wither.

Also, 'neurons which fire together wire together' establishing links between feelings, settings and actions that do not involve higher brain circuits. This patterning, linked to emotional or relational experiences, sculpts the brain, determining dominant pathways and associations. Mirror neurons, which fire both when an action is performed and when an action is watched, provide insight into the mechanisms which could underpin the profound influence of the relational environment on learning.

Neural plasticity continues throughout life but at a slower rate. There is a second spurt during adolescence and this period represents an opportunity to enable change in some of the pathways developed in infancy. Plasticity is fostered by intention, attention and compassionate awareness. These skills are recognised by the great spiritual traditions as fundamental for human development and are now widely taught in the Western world under the label of mindfulness. A significant body of neuroscience now attests to the capacity of mindfulness to enable neural plasticity. So whilst what happens in the home in childhood is profoundly influential for health and wellbeing throughout the life-course, it is still possible to reverse some of the damage at any stage of life.

Stress response

A nurturing relationship can mitigate the stress response

A key biological system affected by the relational environment in early childhood is the hypothalamic-pituitary-axis (HPA).

Neha Shah *BMBS (Hons) BMedSci Msc Public Health is Public Health Registrar at Warwick Medical School, University of Warwick, UK. Conflict of interest: none declared.*

Sarah Stewart-Brown *BMBCh PhD FFPH FRCPCH is Professor of Public Health at Warwick Medical School, University of Warwick, UK. Conflict of interest: none declared.*

Please cite this article in press as: Shah N, Stewart-Brown S, Parenting and health: a call for action, Paediatrics and Child Health (2017), https://doi.org/10.1016/j.paed.2017.12.002

Secure, nurturing relationships enable the development of systems to regulate the HPA stress response from higher brain circuits. Lack of security embeds reactivity to stress and ultimately chronic activation of the HPA, leading to raised baseline cortisol and flattening of circadian rhythms; and chronic immune system activation leading to chronic inflammation and upregulation of acute immune responses that impair later resistance to chronic disease. In this way infant and fetal relational experiences also shape endocrine and immune systems influencing the biology of the child and adult's response to stress and thus their physical and mental resilience.

Stress also impacts on learning and memory. Cortisol is neurotoxic, particularly to the hippocampus, impairing cognitive functioning including working memory and the establishment of new memories. Children whose stress response is easily triggered and who lack the ability to self-regulate are disabled in the classroom, leading to educational underachievement with lifelong consequences for social mobility and earning. Seminal studies of resilient children — those who transcend emotionally and materially deprived circumstances — show that what makes this possible is a secure nurturing relationship with at least one adult, perhaps a teacher, social worker, older sibling, or grandparent.

Attachment security

Secure attachments promote resilience

Aligning with the neuroscience are numerous observational studies reported over the last century relating to attachment (the bond between child and caregiver) security. Based on observation of patterns of infant behaviour when separated and reunited with their caregiver (the 'strange situation' test), research has shown secure attachment promotes positive emotional and social development, with children being better able to cope with stress, having a higher perception of self-worth and being able to adjust better to adversity and change. The sensitive, attuned and caring parenting that enables attachment security, also enables infants to feel safe and develop the capacity to trust others. It enables the infant to develop self-regulation so that stressors can be experienced without prolonged biological consequences, building resilience. Parenting that is out of tune with infant needs, neglectful or abusive is stressful and this disrupts the neurochemistry and architecture of the developing brain, nervous system and the HPA. Insecure childhood attachment relationships predict depression, anxiety, self-harm and suicidal tendencies, anorexia, Post-Traumatic Stress Disorder and other mental health problems in adolescence and adulthood.

Complex PTSD

Chronic trauma has long term effects

Observation in psychotherapeutic settings has enabled the phenomenon of Complex PTSD to be recognised and studied. This is the legacy of the patterns of key relationships on emotional, mental and social functioning from childhood. Patterns may, for example, reflect development in a family which was safe as long as the child learnt to fit in which the needs of others and gave up trying to get their own met. Such adults often have problems displaying anger. Other families can feel safe as long as vulnerability is not expressed, particularly among boys. Child brain plasticity enables both positive development and the negative consequences of learned patterns of dysfunctional cognitions, emotional responses and behaviour that limit personal development and relationships throughout the life course. Because these behaviours are linked to the stress of attachment insecurity and exaggerated physiological responses to common stressors, these circumstances also influence physical health.

ACEs

Adverse experiences in childhood lead to physical and mental health problems in later life

The long term impact of these early experiences is now being illustrated in epidemiological studies of Adverse Childhood Experiences (ACEs). The latter are retrospectively reported experiences of childhood psychological, physical or sexual abuse, violence against mother, or living with household members who were substance abusers, mentally ill or incarcerated. These have been shown to greatly increase adult risk of alcoholism, drug abuse, depression, and suicide attempts; smoking, numerous sexual partners, and sexually transmitted disease; physical inactivity and severe obesity. Experience of four or more of these risk factors doubles the risk of severe chronic disease aged 60 years with a graded relationship between number of risk factors and disease outcomes (observed in about 10% of the population). These findings have been consistently repeated in different settings.

ACEs are usually but not necessarily attributable to parents or parenting. Even when not directly attributable they affect children because parents are not sufficiently sensitive or aware to be able to see their impact, or they are not able or willing to offer protection. Studies of ACEs have attracted great attention in highlighting the need for parenting support and proved important in persuading professionals and policy makers that action is necessary.

Reducing inequalities

Parenting has a social gradient

Reducing inequalities has been high on the public health and political agenda in recent years, and it is well established that early child development and health outcomes follow a socioeconomic gradient. Analysis from the UK Millennium Cohort Study indicates that the income gap for child socioemotional difficulties was largely explained by the psychosocial environment including home learning and family routines. Whilst these aspects of parenting show a social gradient they operate to some extent across the whole social spectrum. So tackling them would serve to reduce social inequalities and improve whole population health.

Perinatal influences

Early events are critical and maternal mental health has important consequences

Postnatal mental illness is well recognised as a profound interrupter of the relational environment that supports attachment security and enables infants to thrive. Maternal psychosis is the severe but rare manifestation, but most of the long term costs associated with postnatal depression are attributable to the much commoner (estimates vary from 10 to 20% of births) less severe problems. Programmes to identify and offer support to women

Please cite this article in press as: Shah N, Stewart-Brown S, Parenting and health: a call for action, Paediatrics and Child Health (2017), https://doi.org/10.1016/j.paed.2017.12.002