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Decision-making within a child's timeframe

An overview of current research evidence for family justice professionals concerning child development and the impact of maltreatment

Working Paper 16
Second Edition

childhood wellbeing RESEARCH CENTRE

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Childhood Wellbeing Research Centre

February 2013

The Childhood Wellbeing Research Centre is an independent research centre with funding from the Department for Education. It is a partnership between the Thomas Coram Research Unit (TCRU) and other centres at the Institute of Education, the Centre for Child and Family Research (CCFR) at Loughborough University and the Personal Social Services Research Unit (PSSRU) at the University of Kent.

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Acknowledgments

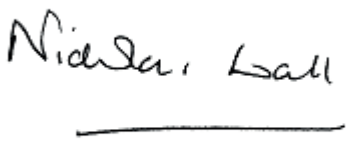
This Evidence Paper was funded by the Department for Education with support from the Family Justice Council. The project has greatly benefited from the advice of a steering group: Liz Gillett (Chair), Mark Andrews, Richard Clark, Martyn Cook, District Judge Nicholas Crichton, Jenny Gray, Helen Jones, Judge Lesley Newton, Heather Payne, Helen Pustam, Alison Russell, June Statham and Ranjit Uppal. The authors are grateful for their wise counsel and expertise and for the advice offered by our liaison officers: Lorna Howarth, Tony Haines, Julian Hancock, Jessica Dunn and Stephen Witt. The authors would also like to thank the following who offered expert advice and commented on all or parts of the manuscript: Jane Barlow, Hedy Cleaver, Bruce Perry, Phil Fisher, David Jones, Judith Masson, June Statham and staff at the Center on the Developing Child, Harvard University.

Foreword by the President of the Family Division

It is the responsibility of every professional within the family justice system to ensure that the welfare of the child is paramount, indeed this principle is the cornerstone of our legislative framework. As practitioners we deal with complex issues and we must always remember that at the heart of every family there is a child – a child who every day learns, changes, grows and ultimately adapts themselves to their environment – for better and for worse.

I am confident that this excellent research summary will prove invaluable as an aid to our understanding of the child's developmental journey, providing up to date material regarding the impact of adversity on child development, and the likely outcome for the child. I commend it.

I am very grateful to the skilled research team who integrated a very large number of academic papers into a coherent and readable document tailored to the needs of all family justice professionals. Thanks are due to all those who were involved in its production including the members of the Steering Group, the Family Justice Council, the Expert Advisors, and the officials who supported the Steering Group. The production of this overview is, of itself, a testament to the creativity and value of inter-disciplinary working and I hope this is the first of many such endeavours.



Sir Nicholas Wall
President of the Family Division

Chapter 1: Introduction and Methodology

Introduction

1.1 This overview of research evidence has been commissioned in response to the Family Justice Review recommendation for consistent training and development for family justice professionals, including a greater emphasis on child development. It aims to bring together key research evidence to facilitate understanding among professionals working in the family justice system in areas relating to:

- neuroscience perspectives on children's cognitive, social and emotional development;
- the implications of maltreatment on childhood and adulthood wellbeing;
- evidence concerning the outcomes of interventions by the courts and children's social care; and
- timeframes for intervening and why they are out of kilter with those for children.

1.2 This evidence paper is intended to assist decision-making by family justice professionals and facilitate a greater understanding of individual children's needs and appropriate timeframes.[1]

- **Chapter One** introduces the evidence and outlines the methodology. This chapter also includes sections on the critical evaluation of research evidence and the strengths and weaknesses of applied research in the areas covered.
- **Chapter Two** examines parental problems which can undermine healthy child development and the mitigating value of protective factors. This chapter also focuses on the importance for children of

[1] The term child maltreatment is used throughout this document to describe all forms of abuse and neglect. Where a specific type of abuse is being referred to this is indicated.

developing a secure attachment with their primary caregiver(s) and the implications of insecure attachments.

- **Chapter Three** presents an overview of healthy brain development, focussing on regions of the brain which are particularly vulnerable to the impact of childhood neglect and abuse. This chapter is also intended to equip family justice professionals with sufficient understanding of brain development to support further reading of evidential material in this constantly evolving area.
- **Chapter Four** explores the prevalence, definitions and impact of physical, sexual and emotional abuse and neglect. This chapter also examines the consequences of abuse and neglect *in utero* and during infancy, childhood and adolescence.
- **Chapter Five** brings together research findings discussed in the preceding chapters and places them in the context of evidence relating to timeframes for court proceedings and local authority pre and post proceedings work. This chapter also explores delays in decision-making and their consequences for children's development and long-term life chances.

Methodology

1.3 The methodology employed to produce this evidence paper includes both a literature search of peer reviewed research papers and collation of expert knowledge. The literature review covered searches of databases in the following disciplines: law, socio-legal issues, social policy, psychology and neuroscience. Search terms included the following key words: child development, psychological development, emotional development, psychosocial development, neurobiological development, attachment, maltreatment, neglect, emotional abuse, physical abuse and sexual abuse. Full lists of both the databases and the key words are included in Appendix One. The study criteria required that the evidence should be drawn only from papers which reported on, or which provided a methodologically sound review of, primary research. All papers which failed to meet these criteria were excluded; 482 papers were identified and examined. Each of them

covered at least one of the following topics:

- neuroscience perspectives on healthy child development;
- implications of maltreatment for social/behavioural, psychological/emotional, and cognitive development;
- implications of maltreatment for attachment;
- cumulative effects of maltreatment for child development; and
- developmental outcomes for children in residential care, foster care with strangers or relatives, and adopted children.

1.4 These papers were then complemented by scrutiny of a number of recent government funded research reports that focus on these topics but which would not have been included in the databases. Those included met the study criteria and, before publication, were subject to the same rigorous peer review process as academic journal articles. Experts in the fields of child development and socio-legal issues were then asked to advise on the content of draft sections of the evidence paper. An expert steering group was also consulted on the development of this paper and on its relevance for professionals working in the family justice system.

1.5 The authors have been mindful of the need to refer to papers that can be easily accessed by family justice professionals. Some of the major research institutions (for example the Center on the Developing Child at Harvard University) have produced summary papers that draw together findings from a wide body of their primary research. These are available from their websites and are cited in the text. Further details of the significant primary research, and the strengths and weaknesses of the data referred to in these secondary web-based papers, and in the academic papers, books and reports explored, are presented in paragraphs 1.14 to 1.18 of this chapter.

Evaluating research evidence: key issues for family justice professionals

1.6 Research in the areas covered by this evidence paper is undertaken to improve understanding of the causes of child maltreatment and its impact and to inform the development of policy and practice aimed at reducing

prevalence, preventing recurrence and mitigating its consequences. Few if any studies are specifically designed to inform legal arguments, and there are a number of key issues of which family justice professionals need to be aware in interpreting the research findings.

1.7 Firstly, judicial decisions about individual cases are determined in accordance with established legal principles enshrined in statute and case law and cannot be based solely on research findings. Nevertheless, they can be informed by them: for instance, research can inform further consideration of why a proposed course of action, such as repeated return to an abusive birth parent, should be taken when findings from a number of studies indicate that it is unlikely to benefit a child.

1.8 Secondly, applied research in this area can rarely give definitive answers. A rigorously designed and executed randomised controlled trial, for instance, may show that an intervention is *probably* effective, but absolute certainty in studies involving human subjects is almost impossible to achieve. There is always a possibility that an observed effect has been caused by an as yet unidentified extraneous factor. Statistically significant findings are those where there is only a minimal probability of something having happened by chance ($p<0.05$, indicating that this probability is less than five in a hundred is conventionally the lowest acceptable level at which findings are considered significant).

1.9 Quantitative research is more appropriate for answering questions about *what* is happening, whereas qualitative research can more readily explain *why*. Research studies that seek to answer complex questions therefore often use a mixed methods design. Sample size is particularly important in quantitative studies because statistical calculations are not reliable if they are based on insufficient numbers. Statistical calculations from a sample of less than 30 are generally considered unreliable, although sophisticated techniques are now available to overcome this problem. Findings in qualitative studies should give some quantitative information (e.g. the number of times a particular activity was observed; the number or proportion

of subjects who made a particular point) in order to demonstrate the weight that can be given to different arguments and to show that they are not simply based on anecdotal information.

1.10 Reputable British research in this area is subject both to rigorous research governance protocols such as, for instance, the *Research Governance Framework for Health and Social Care*[2] and the Data Protection Acts, 1998 and 2003. While the rights of vulnerable subjects are now well protected, access to them is increasingly difficult for researchers. The result is that sample sizes are often small, and sometimes skewed.[3] [4]

1.11 There is an established hierarchy of levels of evidence for studies which evaluate the impact of interventions. This ranges from the randomised controlled trial (RCT), where participants are randomly allocated to receive an intervention or 'treatment as usual', to qualitative case studies which can identify issues that will need to be explored in a subsequent, more rigorous evaluation.[5] While there are now a number of British RCTs of specific interventions in the area covered by this evidence paper (see for instance Biehal and colleagues' (2012) study on multi-dimensional treatment foster care)[6], and many from the USA, there are ethical reasons why these are often inappropriate. Randomly assigning children to interventions which will have a far-reaching impact on the rest of their lives, such as adoption or placement with parents, cannot be justified ethically unless we genuinely do not know which are likely to be beneficial not just for one child but for all participants in the study. Studies with less rigorous designs are often the

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[2] Department of Health (2005) *Research Governance Framework for Health and Social Care* (2nd Edition). London: Department of Health.
[3] Munro, E.R. (2008) 'Research governance, ethics and access: A case study illustrating the new challenges facing social researchers.' *International Journal of Social Research Methodology 11*, 5, 429-439.
[4] Ward, H., Brown, R. and Westlake, D. (2012) *Safeguarding Babies and Very Young Children from Abuse and Neglect*. London: Jessica Kingsley Publishers.
[5] For more detailed information, see Davies, C. and Ward, H. (2012) *Safeguarding Children Across Services: Messages from Research on Identifying and Responding to Child Maltreatment.* London: Jessica Kingsley Publishers, pp.95-99.
[6] Biehal, N., Dixon, J., Parry, E., Sinclair, I., Green, J., Roberts, C., Kay, C., Rothwell, J., Kapadia, D. and Roby, A. (2012) *The Care Placements Evaluation (CaPE) Evaluation of Multidimensional Treatment Foster Care for Adolescents (MTFC-A)*. Research Report DFE RR-194. London: Department for Education.

only practical options; those which include some measure of comparison, either between similar groups or within the same group over time are considered to produce the more valuable findings. In order to understand the strength of findings from a study that evaluates the impact of an intervention it is important to take account of the evidence level and size of the sample; however the drop-out rate should also be considered, as this is often high, and may skew the findings. One should also ask whether outcome measures have been applied before and after the intervention, and whether there has been any assessment of sustainability. Outcome measures such as psychometric scales should have been formally validated; researcher ratings that have been undertaken using a standardised coding schema and assessed for inter-rater reliability are more accurate than parent report scales.

1.12 Finally, reputable research studies are subject to quality control before publication. Articles in academic journals are peer reviewed, as are reports of studies commissioned by government departments[7], many of which, including those referred to in this evidence paper, are later published as books. Reviewers will consider the appropriateness of the study design and whether it included a comparison or control group, outcome measures used, strengths and weaknesses of the study including sample bias and whether these have been acknowledged by the researchers and taken into account in the presentation of findings.

1.13 The points raised above should be considered in deciding how much weight to give to research findings. However the reader should also be aware that few if any studies in this area are methodologically flawless, and that rigorously conducted studies that report on small, but hard to reach samples, and that have been subject to peer review before publication, are generally considered to produce valid data.

[7] Economic stringency has recently led to some government departments relying increasingly on internal rather than external review processes.

Strengths and weaknesses of the evidence base

1.14 Much of the research on the development of the brain has been carried out using animal subjects.[8] However, increasingly human subjects are being utilised, for example in studies which conduct post mortem examinations of children who have died unexpectedly.[9] For obvious reasons, however, there is a scarcity of human child brain specimens for post mortem analysis and this can make it difficult to draw definite conclusions.[10]

1.15 Developments in brain imaging methods, such as MRI studies, have allowed for a more detailed exploration of factors which influence brain development.[11] These can show, for example, cortical activity, but do not afford conclusive identification of specific sources underlying recorded activity.[12] These types of studies have, however, enabled evidence from neuroscience disciplines to be integrated with the social sciences, allowing for examination of the ways in which the brain changes with experience throughout the lifespan.[13] There is therefore emerging evidence which shows that experience does shape the developing brain in humans, and that adverse experiences do have a detrimental impact on brain functioning.

1.16 The influences of parenting, including abusive and neglectful parenting, on children's brain functioning and development is a growing body of knowledge, 'not even yet in its infancy; it would be more appropriate to conclude that it is still in the embryonic stage'.[14] Studies of the

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[8] Glaser, D. (2000) 'Child abuse and neglect and the brain – A review.' *Journal of Child Psychology and Psychiatry 41,* 1, 97-116.
[9] See Huttenlocher, P.R. and Dabholkar, A.S. (1997) 'Regional differences in synaptogenesis in human cerebral cortex.' *The Journal of Comparative Neurology 387,* 167-178.
[10] Paus, T., Castro-Alamancos, M. and Petrides, M. (2000) 'Cortico-cortical connectivity of the human mid-dorsolateral frontal cortex and its modulation by repetitive transcranial magnetic stimulation: a combined TMS/PET study.' *Neuroimage*, *11, 5*, S765.
[11] Tomalski, P. and Johnson, M.H. (2010) 'The effects of early adversity on the adult and developing brain.' *Current Opinion in Psychiatry 23,* 3, 233-238.
[12] Belsky, J. and de Haan, M. (2010) 'Annual research review: parenting and children's brain development: The end of the beginning.' *The Journal of Child Psychology and Psychiatry 52,* 4, 409-428.
[13] Twardosz, S. and Lutzker, J. (2010) 'Child maltreatment and the developing brain: A review of neuroscience perspectives.' *Aggression and Violent Behavior 15*, 59-68.
[14] Belsky and de Haan (2010) *op. cit*. p.410.

consequences of maltreatment on behaviour have tended to be retrospective and have relied on adults' own memories and this can lead to concerns about their accuracy for reporting the type and severity of their experiences. As a result, there may be difficulties in interpreting the cause and effect between experiences and later outcomes.

1.17 Research into the neurobiological consequences of abuse and neglect is therefore limited because it is very difficult to find large populations of humans where specific and controlled abusive or neglectful experiences have been well documented.[15] Very few studies have been able to examine directly how variations in parenting, including extreme circumstances such as maltreatment, affect brain function.[16] The majority of the evidence which does exist comes from samples of children who have been reared in institutions, such as the Romanian orphanages in the 1990s, where they experienced severe deprivation of social interaction and stimulation.[17] In general however, 'there will never be – and there never should be – the opportunity to study neglect in humans with the rigor that can be applied in animal models'.[18]

1.18 Primary research in the UK on the outcomes of interventions with very vulnerable populations such as looked after children or abusive or neglectful parents is currently hampered by misinterpretation of data protection legislation and research governance frameworks by a number of agencies, frequently leading to very restricted access and consequently small, often biased samples. This contentious issue has been the subject of recent enquiry.[19] Research in this area is frequently undertaken by academics rather than practitioners; accessing subjects for interview is therefore particularly problematic and studies frequently fall well below their target

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[15] Perry, B.D. (2002) 'Childhood experience and the expression of genetic potential: What childhood neglect tells us about nature and nurture.' *Brain and Mind 3,* 79-100.
[16] Belsky and de Haan (2010) *op. cit*.
[17] Chugani, H.T., Behen, M.E., Muzik, O., Juhász, C., Nagy, F. and Chugani, C. (2001) 'Local brain functional activity following early deprivation: A study of post institutionalized Romanian orphans.' *NeuroImage 14*, 1290-1301.
[18] Perry (2002) *op. cit.* p.89.
[19] Boddy, J. and Oliver, C. (2010) *Research Governance in Children's Services: Scoping to Inform the Development of Guidance. Final Report*. London: Department for Children, Schools and Families.

numbers.[20] [21] Studies can be heavily reliant on data collected from court documents or social work case files; these are compiled for a different purpose and there are often gaps in the relevant information. For instance social work case files rarely record information about access to external services that is sufficiently precise to be collated and analysed for research purposes.[22] [23] Moreover case files tend to reflect the views of the writer and these do not necessarily provide precise or objective evidence; the data need to be interpreted as well as collected.

1.19 While the issues covered in this chapter are intended to help the reader develop a critical approach to the understanding of research findings they should not detract from the value of the research itself. The following chapters consider robust findings from a number of well received research studies into parents' problems and the impact of abuse on early childhood development; family justice professionals need to be aware of this research, particularly because it points to the importance of making timely decisions when children are suffering, or likely to suffer, significant harm.

[20] See Farmer, E. and Lutman, E. (2012) *Effective Working with Neglected Children and their Families: Linking Interventions with Long-term Outcomes.* London: Jessica Kingsley Publishers.
[21] See Ward, Brown and Westlake (2012) *op. cit.*
[22] See Ward, H., Holmes, L. and Soper, J. (2008*) Costs and Consequences of Placing Children in Care*. London: Jessica Kinglsey Publishers.
[23] See Ward, Brown and Westlake (2012) *op. cit.*

Chapter 2: Parenting which undermines healthy child development and attachment

Summary points

- Children growing up with parents who experience problems such as mental illness, learning disability, substance misuse and domestic violence are at greater risk of being maltreated.
- Not all parents with these problems will abuse or neglect their children; however these factors interlock in complex combinations which substantially increase the likelihood of maltreatment.
- Protective factors such as the presence of a non-abusive partner and/or a supportive extended family, parents' ability to understand and overcome the consequences of their own experiences of childhood abuse, their recognition that their adverse behaviour patterns constitute a problem and their willingness to engage with services can substantially reduce the likelihood of maltreatment.
- Where insufficient protective factors are present, parents' problems can undermine their ability to meet the needs of their children and inhibit the child's capacity to form secure attachments.
- Healthy child development depends on the child's relationships, and particularly their attachment to the primary caregiver.
- The process of attachment formation begins at birth. The four basic attachment styles: secure, insecure ambivalent, insecure avoidant and disorganised illustrate different adaptive strategies in response to different types of caregiving.
- Up to 80% of children brought up in neglectful or abusive environments develop disorganised attachment styles. These children behave unpredictably and have difficulty regulating their emotions.
- Disorganised attachment is strongly associated with later psychopathology.

Introduction

2.1 There is an extensive body of research which shows conclusively that a range of problems can impair parents' capacity to meet the needs of their children. A wealth of evidence also exists attesting to the fundamental importance of a child having a secure attachment to their primary caregiver(s). This chapter aims to set out the evidence concerning those parenting issues that undermine healthy development, and consider their impact on outcomes for children. It then explores the importance of forming a secure attachment and the detrimental consequences of insecure attachment patterns. Sources include both primary data (collected and analysed by the authors) and secondary data (reviews and overviews of research findings, collected and brought together from a wide range of methodologically sound studies).

2.2 This chapter draws primarily on evidence from the following sources:

- Cleaver, H., Unell, I. and Aldgate, J. (2011) *Children's Needs – Parenting Capacity*: *Child Abuse: Parental Mental Illness, Learning Disability, Substance Misuse and Domestic Violence* (2nd Edition). London: The Stationery Office.
- Hindley, N., Ramchandani, P.G. and Jones, D.P.H. (2006) 'Risk factors for recurrence of maltreatment: A systematic review.' *Archives of Disease in Childhood 91*, 9, 744-752.
- Howe, D. (2005) *Child Abuse and Neglect: Attachment, Development and Intervention.* Basingstoke: Palgrave MacMillan.

Issues affecting parenting capacity

2.3 Problems which can impair parents' capacity to meet the needs of their children include, but are not restricted to, mental illness problem drug and alcohol use, learning disability and intimate partner violence.[24] Children

[24] See among others Cleaver, H., Nicholson, D., Tarr, S. and Cleaver, D. (2007) *Child Protection, Domestic Violence and Parental Substance Misuse: Family Experiences and Effective Practice*.

growing up with parents affected by these issues are at a greater risk of being maltreated[25] and the co-existence of two or more of these factors substantially increases the likelihood that their future life chances will be jeopardised.[26] [27]

2.4 Cleaver and colleagues[28] are careful to assert that not all parents who suffer from such problems present a danger to their children. However these factors interlock in complex combinations which substantially increase the likelihood that children will be harmed, and are particularly toxic for their long-term wellbeing. For instance, Woodcock and Sheppard[29] found that mothers who experienced depression after childbirth were 20% more likely to be also dependent on alcohol and the co-existence of depression with alcohol dependence was linked to poorer, inconsistent parenting.

2.5 Dixon and colleagues[30] conducted a study which explored parental risk factors in relation to the intergenerational cycle of child maltreatment. The sample comprised 4351 families, including 135 with at least one parent who had experienced physical or sexual abuse as a child. Data were collected by health visitors from each family at around the time of the birth of a baby. The study found that 13 months following the birth, 6.7% of families with a history of parental childhood abuse were referred for maltreating their own child

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London: Jessica Kingsley Publishers; Ward, H., Munro, E.R. and Dearden, C. (2006) *Babies and Young Children in Care: Life Pathways, Decision-Making and Practice.* London: Jessica Kingsley Publishers and Ward, Brown and Westlake (2012) *op. cit.*

[25] See among others Barnard, M. (2007) *Drug Addiction and Families*. London: Jessica Kinglsey Publishers; Cleaver, Nicholson, Tarr, and Cleaver (2007) *op. cit;* Kroll, B. and Taylor, B. (2003) *Parental Substance Misuse and Child Welfare.* London: Jessica Kingsley Publishers; Tunnard, J. (2002) *Parental Problem Drinking and its Impact on Children.* Dartington: Research in Practice and Ward, Brown and Westlake (2012) *op. cit*.

[26] Cleaver, H., Unell, I. and Aldgate, J. (2011) *Children's Needs – Parenting Capacity*: *Child Abuse: Parental Mental Illness, Learning Disability, Substance Misuse and Domestic Violence* (2nd Edition). London: The Stationery Office.

[27] Brandon, M., Bailey, S. and Belderson, P. (2010) *Building on the Learning from Serious Case Reviews: A Two-Year Analysis of Child Protection Database Notifications 2007-2009:* Research Brief. London: Department for Education.

[28] Cleaver, Unell and Aldgate (2011) *op. cit.*

[29] Woodcock, J. and Sheppard, M. (2002) 'Double trouble: Maternal depression and alcohol dependence as combined factors in child and family social work.' *Children and Society 6,* 232-45.

[30] Dixon, L., Browne, K.D. and Hamilton-Giacritsis, C. (2005) 'Risk factors of parents abused as children national analysis of the interagency continuity of child maltreatment (part 1).' *Journal of Psychology and Psychiatry 46,* 47-57.

compared with 0.4% of those without a history of childhood abuse. When three specific risk factors occurred together– being a parent under the age of 21, having a history of mental illness or depression and residing with a violent adult – parents with a history of childhood abuse were 17 times more likely to abuse their own child compared with parents without such a history. Furthermore, parents who were abused in their own childhood but did not go on to abuse their children had a lower prevalence of risk factors and a higher prevalence of protective factors compared with their abusing counterparts.

2.6 Hindley, Ramchandani and Jones[31] undertook a systematic review of cohort studies investigating factors associated with substantiated maltreatment recurrence in children. The review examined sixteen studies which were published prior to December 2002 and met strict inclusion criteria. More recently, White, Hindley and Jones[32] updated the original review to include cohort studies published between 2003 and 2009, and widened the original scope by including unsubstantiated as well as substantiated cases of child maltreatment. Fifteen studies met the rigorous inclusion criteria of the review, all of which were from the USA. Factors which increased the likelihood of recurrent maltreatment were identified from each study and those which met a significance level of $p<0.05$ were accepted (see paragraph 1.8 for information about significance levels).

2.7 Table 2.1 below sets out 'those factors which were found to be associated with an increased likelihood of future harm, contrasted with those where the likelihood is decreased following identification of significant harm to an index child'.[33] The table combines the results from both the reviews. Items in italics were most strongly associated with recurrent maltreatment; the other factors were identified by the studies in the reviews but were less strongly associated with recurrence.

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[31] Hindley, N., Ramchandani, P.G. and Jones, D.P.H. (2006) 'Risk factors for recurrence of maltreatment: A systematic review.' *Archives of Disease in Childhood 91*, 9, 744-752.
[32] White, O.G., Hindley, N. and Jones, D.P.H. (forthcoming) 'Risk factors for child maltreatment recurrence: An updated systematic review.' *Child Abuse and Neglect*.
[33] Jones, D., Hindley, N. and Ramchandani, P. (2006) 'Making Plans: Assessment, Intervention and Evaluating Outcomes.' In J. Aldgate, D. Jones and C. Jeffery (eds) *The Developing World of the Child*. London: Jessica Kingsley Publishers p.276.

2.8 Risk factors which were most strongly associated with the recurrence of maltreatment across both reviews included: maltreatment involving neglect; cases where the child had suffered more than one previous episode of maltreatment; and cases involving very young children and/or disabled children. Parental factors included: personality disorder; learning disabilities along with mental illness; mental illness; paranoid psychosis; and domestic violence. A wide range of family and environmental factors were also associated with greater rates of recurrence, these included; family stress; a lack of social and family support networks; and parent-child relationship difficulties.[34] [35]

2.9 Some factors were not found to be significant in terms of the recurrence of maltreatment. These included parental marital status, caregiver age, employment status and ethnicity. The risk of recurrence was reduced when medical and/or legal services were involved.[36]

[34] *Ibid.*
[35] White, Hindley and Jones (forthcoming) *op. cit.*
[36] *Ibid.*

Table 2.1: Factors associated with future harm[37] [38]

Factors	Future significant harm more likely	Future significant harm less likely
Abuse	Severe physical abuse including burns/scalds *Neglect* Severe growth failure Mixed abuse *Previous maltreatment* Sexual abuse with penetration of a long duration Fabricated/induced illness Sadistic abuse High continuing perpetrator access	Less severe forms of abuse If severe, yet compliance and lack of denial, success still possible
Child	Developmental delay with special needs Mental illness *Very young – requiring rapid parental change* Low child visibility	Healthy child Attributions (in sexual abuse) Later age of onset One good corrective relationship
Parent	*Personality disorder* (anti-social, sadistic, aggressive) Lack of compliance Denial of problem Learning disabilities *plus mental illness* *Parental mental health difficulties* *Substance misuse* *Paranoid psychosis* Abuse in childhood – not recognised as a problem Parental stress History of assaultive behaviour	Non-abusive partner Willingness to engage with services Recognition of problem Responsibility taken Mental disorder, responsive to treatment Adaption to childhood abuse

[37] Table adapted from: Jones, Hindley and Ramchandani (2006) *op. cit.* and White, Hindley and Jones (forthcoming) *op. cit.* Reproduced following discussion with David Jones (david.jones@psych.ox.ac.uk).
[38] Items in italics most strongly associated with recurrent maltreatment.

Factors	Future significant harm more likely	Future significant harm less likely
Parenting and parent/ child interaction	Disordered attachment Lack of empathy for child Own needs before child's *Impaired positive interaction between parents and children*	Normal attachment Empathy for child Competence in some areas
Family	*Inter-parental conflict and violence* *Family stress* Power problems: poor negotiation, autonomy and affect expression Large family size Poor home conditions Housing instability	Absence of domestic violence Non-abusive partner Capacity for change Supportive extended family
Professional	Lack of resources Ineptitude	Therapeutic relationship with child Outreach to family Partnership with parents
Social setting	Social isolation *Lack of social and family support networks and lone parenthood* Violent, unsupportive neighbourhood	Social support More local child care facilities Volunteer network Involvement of legal or medical services

The mitigating value of protective factors

2.10 There is substantial evidence that certain protective factors can interact positively with parental problems to mitigate their impact, thus reducing the likelihood of maltreatment and improving the chances of better long-term outcomes for children. Jones and colleagues[39] identified the following factors to be particularly pertinent: the presence of a non-abusive partner; the presence of a supportive extended family; parents' adaptation to their own experience of childhood abuse; parents' recognition that there is a problem and their willingness to take responsibility for it; and parents' willingness to engage with services.

[39] Jones, Hindley and Ramchandani (2006) *op. cit.*

The impact of parents' problems on their capacity to meet children's needs

2.11 Cleaver and colleagues[40] have provided a comprehensive analysis of the manner in which, where there are insufficient protective factors, parents' problems can impact on parenting capacity and trigger maltreatment and poor child outcomes. To summarise:

- Parental mental illness can seriously affect functioning. For example someone suffering from schizophrenia can experience delusions and hallucinations and be preoccupied with a private world. A person who is depressed can have feelings of gloom, worthlessness and hopelessness, which may mean that everyday activities are not carried out. Mental illness can blunt parents' emotions and feelings towards their children, cause them to be emotionally unavailable or behave unpredictably, or occasionally cause them to be violent.
- Learning disability can affect parents' capacity to learn and retain the new skills that are necessary to parent a child. Parents with a learning disability may also have had a negative experience of their own childhood which can leave them with low self-esteem and a poor sense of self-worth. Consequently, parents with learning disabilities and their children are vulnerable to financial and sexual exploitation, domestic violence, harassment and bullying.
- Parents who abuse drugs and/or alcohol can be subject to erratic mood swings, paranoia and hallucinations, or feelings of elation and calm, diminished concentration, memory impairment and a loss of consciousness. This can leave them unable to: meet the basic needs of their children, be emotionally available to them or at times keep them safe.
- Being the victim of domestic violence is likely to undermine parents' self-esteem and confidence in their parenting skills. Such parents may have their attention focussed on the necessity to placate the perpetrator rather than on their children's needs. They may not be

[40] Cleaver, Unell and Aldgate (2011) *op. cit.*

able to protect those of their children who get caught up in or witness an attack from physical abuse and emotional trauma. Perpetrators of domestic violence are likely to cause physical and emotional harm to their children as well as to their partners.

2.12 Behaviour patterns such as these undermine a parent's ability to meet their children's needs. They have a particularly damaging impact on the child's emerging capacity to form attachments.

The importance of a secure attachment base for healthy child development

> Young children experience their world as an environment of relationships, and these relationships affect virtually all aspects of their development – intellectual, social, emotional, physical, behavioural, and moral.[41]

2.13 Healthy child development depends on the establishment of these relationships. Early secure attachments contribute to the growth of a broad range of competencies, which can include: a love of learning; a comfortable sense of oneself; positive social skills; multiple successful relationships at later ages; and a sophisticated understanding of emotions, commitment, morality, and other aspects of human relationships.[42]

2.14 Howe[43] asserts that, biologically, attachment is a means of survival. It is defined as proximity seeking behaviour to an attachment figure, the primary caregiver, by a baby or child when he or she experiences discomfort such as pain, fear, cold or hunger.[44] This behaviour is instinctive and is based on the assumption that the primary caregiver will be able to reduce the discomfort.[45] The baby gradually constructs an internal working model of themselves and of their primary caregiver on the basis of their caregiver's responses to their attachment needs:

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[41] National Scientific Council on the Developing Child (2004) *Young Children Develop in an Environment of Relationships*. Working Paper No. 1. Available at http://www.developingchild.net
[42] National Scientific Council on the Developing Child (2004) Working Paper No. 1 *op. cit.*
[43] Howe, D. (2005) *Child Abuse and Neglect: Attachment, Development and Intervention.* Basingstoke: Palgrave MacMillan.
[44] Glaser (2000) *op. cit.*
[45] Bowlby, 1969 cited Glaser (2000) *op. cit.*

> These mental representations refer to the kind of memories, experiences, outcomes, feelings and knowledge about what tends to happen in relationships, particularly with attachment figures at times of need.[46]

2.15 Thus, the primary purpose of an internal working model is to help regulate the negative emotions of fear, distress and anxiety triggered when a child feels insecure.[47]

2.16 The process of attachment formation begins at birth. A newborn infant seeks care and protection through proximity to their attachment figures. Following birth, a baby is instantly alert to messages they receive about the world around them, such as those reflected in the face of their caregiver(s) and the way in which their urgent needs are met. From about the age of three months a baby is increasingly selective and begins to smile less readily for strangers, tending to target their attachment behaviours more accurately towards their significant carers. By the age of six to seven months, an infant can generally show a clear cut attachment to their primary caregiver(s), and will show distress and anxiety about being separated from them. For instance, infants of this age become less likely to tolerate being held by strangers. However, from this point onwards a securely attached infant is able to use their caregiver as a secure base for exploration.[48]

2.17 During toddler and pre-school years children learn to define themselves and others in increasingly sophisticated ways. They develop their locomotive skills, their cognitive capacity, their communicating and negotiating abilities, and increase their knowledge and understanding of the perspectives of others. A child's secure foundations from infancy help them to achieve these developments.[49]

2.18 Researchers have identified four basic attachment styles, each relating to

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[46] Howe (2005) *op. cit.* p.28.
[47] Howe (2005) *op. cit.*
[48] Schofield, G. and Beek, M. (2006) *Attachment Handbook for Foster Care and Adoption.* London: British Association for Adoption and Fostering.
[49] *Ibid*.

the type of caregiving received. These are: secure, insecure ambivalent, insecure avoidant and disorganised. Each of these styles of attachment illustrates different adaptive strategies in response to different types of caregiving, and are developed by children to enable them to 'stay close and connected to their attachment figures at times of intense negative arousal'.[50] Whilst these categories are very useful in facilitating understanding of different attachment styles, it should be noted that in real life they are not entirely discrete entities; whilst some children will fall exclusively into one category, many children will show a mixed pattern of attachment behaviours, with elements of several styles present.

2.19 Children who are *securely attached* to their caregiver(s) have a relationship that is characterised by sensitive, loving, responsive, attuned, consistent, available and accepting care.[51] Securely attached children have the ability to regulate their distress, either by themselves or by the knowledge that they can get help from their attachment figure should they need it.[52]

2.20 These children develop internal working models in which they see other people as positively available and themselves as loved and likeable, valued and socially effective.[53] Secure attachment styles are found in about 55% of a non-clinical population.[54]

2.21 Conversely*, insecurely attached* children experience anxiety about the location of their caregiver at times of need, as well as uncertainty about the type and sensitivity of the response they will receive.[55] There are three types of insecure attachment patterns, the avoidant, the ambivalent and the disorganised.

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[50] Howe (2005) *op. cit*. p.30.
[51] Howe (2005) *op. cit*.
[52] *Ibid*.
[53] Howe, D. (1998) *Patterns of Adoption: Nature, Nurture and Psychosocial Development.* Oxford*:* Blackwell Science, p.141.
[54] Van IJzendoorn, M.H., Goldberg, S., Kroonenberg, P.M. and Frenkel, O.J. (1992) 'The relative effects of maternal and child problems on the quality of attachment: a meta-analysis of attachment in clinical samples.' *Child Development 63*, 4, 840-858.
[55] Howe (2005) *op. cit.*

2.22 Children who develop an *insecure, ambivalent* pattern of attachment experience inconsistent caregiving. Their caregiver(s) tend to be preoccupied with their own emotional needs and uncertainties, and can be unreliable and emotionally neglectful. These children will exaggerate their attachment behaviour in an attempt to be noticed; in this they are not always successful, and their ambivalence reflects their simultaneous need for and anger with their attachment figures.[56] About 8% of children in a non-clinical population display insecure ambivalent attachments.[57]

2.23 About 23% of children develop *insecure, avoidant* attachment patterns.[58] These children tend to experience parenting that is hostile, rejecting and controlling. They come to see themselves as neither loved nor loveable. They adapt to their caregivers' rejection by over-regulating their emotions, and are anxious that any display of need, longing, vulnerability or emotion might drive their caregiver(s) away.[59]

2.24 Some caregivers cannot regulate their child's responses to stressful circumstances; as a result, their children experience feelings of danger and psychological abandonment.[60] Children who are cared for by people who are frightening, dangerous and/or frightened develop *disorganised attachments.*[61] These children may be fearful of approaching their caregivers because they cannot predict the response: sometimes they may be picked up and cuddled, but at other times they may be shouted at or smacked. As a result, these children are not able to 'organise' their own behaviour, and have difficulty regulating their emotions. Like their parents they may behave unpredictably. They develop highly negative and inconsistent internal working models in which they see other people as not to be trusted. Disorganised attachment is strongly associated with later psychopathology.[62]

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[56] Howe (1998) *op. cit*; Howe (2005) *op. cit.*
[57] Van IJzendoorn (1992) *op. cit.*
[58] *Ibid.*
[59] Howe (2005) *op. cit*.
[60] *Ibid.*
[61] *Ibid.*
[62] Green, J. and Goldwyn, R. (2002) 'Annotation: Attachment disorganisation and psychopathology: new findings in attachment research and their potential implications for developmental

There is consistent evidence that up to 80% of children brought up in neglectful or abusive environments develop disorganised attachments,[63] [64] although these are evident in only 15% of a non-clinical population.[65] The effects of maltreatment on attachment behaviour will be discussed further in Chapters Three and Four.

psychopathology in childhood.' *Journal of Child Psychology and Psychiatry and Allied Disciplines 43*, 7, 835-846.

[63] Van IJzendoorn, M.H., Schuengel, C. and Bakermans-Kranenburg, M.J. (1999) 'Disorganized attachment in early childhood: Meta-analysis of precursors, concomitants, and sequelae.' *Development and Psychopathology 11*, 225-249.

[64] See also Barlow, J. with Scott, J. (2010) *Safeguarding in the 21st Century: Where to Now?* London: Research in Practice.

[65] Van IJzendoorn (1992) *op. cit.*

Chapter 3: How the child's relationships shape the development of the brain and the stress response system

Summary points

- Much of the development of the brain and central nervous system takes place after a child is born, within the first three years of life.
- The child's environment of relationships – and in particular the relationship with the primary caregiver – plays a critical role in shaping the development of the overall brain architecture.
- Negative experiences, and in particular insufficient stimulation, adversely impact on the construction of neural connections which form the basis for cognitive and social development.
- By the time children are two, the foundations for their ability to speak and understand language, to reason and make plans have already been laid.
- Executive function skills, necessary for both learning and social interaction, begin to develop shortly after birth, with dramatic growth occurring between the ages of three and five years.
- There is a short window of opportunity for certain types of development. If the types of experience upon which they depend do not occur within a pre-determined timeframe, children will not move on to the next stage of development and their long-term wellbeing will be compromised.
- Early interactions between the primary caregiver and the baby play a significant role in establishing the normal range of emotional arousal and in setting the thermostat for later control of the stress response.
- Both very high and very low levels of cortisol are indicative of abnormal development of the stress response and can cause long-term physiological and psychological damage.

Introduction

3.1 Recent research shows how children's cognitive, socio-emotional and behavioural development is shaped by the interaction between genetic predisposition and environment, and how early experiences can have far-reaching consequences over the course of a lifetime.[66] This chapter focuses on the substantial and ever growing evidence base concerning the significance of experiences in the first three years of life on the development of the brain and central nervous system, and the impact this has on children's ability to negotiate key developmental tasks; it also identifies key points in children's developmental timeframes that might inform court decision-making.

3.2 This chapter draws on evidence from a range of sources. These include research reviews on neurobiological development published in peer reviewed journals and evidence from summary papers published by the National Scientific Council on the Developing Child, Harvard University and the Child Welfare Information Gateway, U.S. Department of Health and Human Sciences.

3.3 This chapter draws specifically on the following research reviews, the authors of which are all clinicians and researchers based in the UK:

- Belsky, J. and de Haan, M. (2010) 'Annual Research Review: Parenting and Children's Brain Development: the End of the Beginning.' *The Journal of Child Psychology and Psychiatry 52,* 4, 409-428.
- Glaser, D. (2000) 'Child Abuse and Neglect and the Brain – A Review.' *Journal of Child Psychology and Psychiatry 41,* 1, 97-116.

[66] National Scientific Council on the Developing Child (2004) *Children's Emotional Development is Built into the Architecture of their Brains: Working Paper No. 2.* Available at http://www.developingchild.net

- McCrory, E., De Brito, S.A. and Viding, E. (2010) 'Research Review: The Neurobiology and Genetics of Maltreatment and Adversity.' *The Journal of Child Psychology and Psychiatry 51,* 10, 1079-1095.

3.4 The National Scientific Council on the Developing Child is an initiative of the Center on the Developing Child at Harvard University. The council is committed to an evidence-based approach and aims to disseminate findings from primary research about early childhood development and its underlying neurobiology. The council has released a number of working papers which have been cited in this evidence paper and can be accessed via the weblinks in the references section. The Child Welfare Information Gateway is part of the U.S Government Department of Health and Human Sciences and aims to disseminate scientific evidence from a range of sources for front-line practitioners in the child welfare system.

The developing brain

3.5 Recent advances in neuroscience (the study of the brain and biological pathways) show how babies' brains develop and grow in interaction with their environment. Although the human brain begins to develop prenatally and has certain genetic predispositions, at birth it is an immature organ. Before it reaches full maturation the brain must continue to develop throughout childhood and into early adulthood (the mid-twenties). During this protracted period of development the brain requires input from its environment in order to allow each individual to adapt to their specific circumstances.[67]

3.6 A child's environment of relationships - particularly those with their caregivers - plays a critical role in shaping the development of their overall brain architecture. Very early experiences need to be rich in touch, face to face contact and stimulation through conversation (or reciprocating baby babble). These stimuli encourage a more richly networked brain, particularly

[67] Child Welfare Information Gateway (2009) 'Understanding the Effects of Maltreatment on Brain Development.' Available at http://www.childwelfare.gov

the regions which govern social aspects of life.[68]

3.7 Environment and experiences have the greatest impact during the first three years of a child's life, particularly during the first year, when the brain is developing most rapidly.[69] Because so much of this development takes place after birth, it is particularly shaped by the social environment, and because very young children are so dependent on adults for survival, the attachment formed with the primary caregiver (usually the mother) shapes the way in which the brain develops. As Chapter Four shows, research on Romanian orphans, who were left in their cots all day with virtually no opportunities to develop relationships with adult caregivers, shows that, without such relationships, parts of the brain fail to develop, potentially permanently.[70]

3.8 Most scientists no longer debate the importance of nature versus nurture, rather they focus on the effects of both. Brain development is not thought of as solely determined by either a child's genes or their environment, but through interaction between the two. The brain is genetically predisposed to develop in certain sequences; however this development requires triggers from the environment. Those parts of the brain which govern responses to stress, regulation of emotions, learning and memory require greater environmental input for healthy development and are therefore more susceptible to the detrimental effects of adverse experiences. Adverse experience during crucial periods of brain development can therefore shape the architecture of the developing brain and have a detrimental impact on an individual's overall, long-term wellbeing. Once the brain has adapted in response to its environment, the effects can be irreversible. For further discussion about epigenetics see the working papers produced by the

[68] For an overview see Gerhardt, S. (2004) *Why Love Matters: How Affection Shapes a Baby's Brain.* London: Routledge.
[69] Child Welfare Information Gateway (2009) *op. cit.*
[70] Chugani *et al*. (2001) *op. cit*.

National Scientific Council on the Developing Child.[71]

3.9 This chapter focuses on those areas of brain development which can be significantly affected by adverse parenting experiences. These include the development of neural processes and synapse generation; the development of the higher regions of the brain; and the hypothalamic-pituitary-adrenal (HPA) axis and stress response systems.

Neural processes and synapse generation

3.10 Neurons are the nerve cells which form the basic building blocks of the nervous system. They are specialised to transmit information throughout the body to and from the brain. The majority of neurons are formed prenatally and migrate to their genetically predisposed positions during embryonic and early postnatal life.[72] Babies are born with almost all of the neurons they will ever have present. However the human brain is not a finished organ at birth, structural maturation is still required for the development of individual brain regions and their connecting pathways.[73]

3.11 Neurons are connected by synapses which allow information to pass from one neuron to another. Synapses organise the brain by forming connections between the various parts which govern life, from eating and sleeping to thinking and feeling.[74] The newborn brain has very few synapses. Those which are present primarily govern bodily functions such as heart rate, breathing, eating and sleeping.[75] From birth onwards synapses develop at a rapid pace as a consequence of a child's environment, experiences and interactions with other people.[76] This maturation eventually provides for a smooth flow of neural impulses throughout the brain, allowing for information to be integrated across brain regions involved in cognitive, motor and

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[71] National Scientific Council on the Developing Child (2010) *Early Experiences Can Alter Gene Expression and Affect Long-Term Development: Working Paper No. 10*. Available at http://www.developingchild.net
[72] Glaser (2000) *op. cit.*
[73] Paus, Castro-Alamancos and Petrides (2000) *op. cit*.
[74] Child Welfare Information Gateway (2009) *op. cit.*
[75] *Ibid.*
[76] *Ibid.*

sensory functions.[77]

3.12 Huttenlocher and Dabholkar[78] studied brain development by conducting autopsies on the brains of children who had died unexpectedly. At birth a baby's brain has around 2,500 synapses per neuron present. This increases to around 18,000 six months later. These connections reach their highest level when a child is around the age of two years.

3.13 By the age of two a child's brain has developed many more synapses than they will ever need. From about this time onwards those synapses which are being used are strengthened, and those that are not are gradually discarded. This process continues until adolescence and allows the brain's circuits to become more efficient.[79] By the time children reach adolescence about half of their synapses will have been discarded; those which remain will be present for the rest of their lives.[80]

3.14 The process of creating and strengthening or discarding synapses is the brain's means of learning and the way in which a child responds to their environment. This process is often referred to as 'plasticity', a term that indicates the brain's ability to change in response to repeated stimulation.[81] These repeated adaptations are made in response to a combination of genetics and experience. The brain is genetically pre-programmed to expect certain experiences and forms certain neural pathways to respond to them; the more the child is exposed to these experiences, the stronger the pathways become. For example, a baby's brain is genetically pre-programmed to respond to voices. When a baby is spoken to the neural systems which are responsible for their speech and language receive the necessary stimulation to strengthen. If, however, they are not exposed to

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[77] Paus, Castro-Alamancos and Petrides (2000) *op. cit*.
[78] Huttenlocher and Dabholkar (1997) *op. cit.*
[79] National Scientific Council on the Developing Child (2011) *Building the Brain's 'Air Traffic Control' System: How Early Experiences Shape the Development of Executive Function*: Working Paper No. 11. Available at: http://www.developingchild.net
[80] Thomas, M.S.C. and Johnson, M.H. (2008) 'New advances in understanding sensitive periods in brain development.' *Current Directions in Psychological Science 17*.
[81] Child Welfare Information Gateway (2009) *op. cit.*

adequate stimulation through exposure to speech, the pathways which have been developed in anticipation of this exposure will be discarded:[82]

> All children need stimulation and nurturance for healthy development. If these are lacking – if a child's caretakers are indifferent or hostile – the child's brain development may be impaired. Because the brain adapts to its environment, it will adapt to a negative environment just as readily as it will adapt to a positive one.[83]

3.15 A child's experiences greatly shape the quality of the architecture of the developing brain. Positive experiences, particularly in the first year of life, produce more richly networked brains. More neuronal connections produce better performance and more ability to use particular areas of the brain.[84] [85] Conversely, as Chapter Four shows, negative experiences, and in particular insufficient stimulation, adversely affect the development of neural connections and have a negative impact on children's cognitive and social development, their speech development and their learning and memory.[86]

Sequencing of brain development

3.16 The sequence of neurodevelopment is genetically predetermined and not altered by environmental factors.[87] The brainstem and the midbrain, which govern bodily functions necessary for life, are the first areas to develop. At birth these areas of the brain are well developed and allow new born babies to breathe, eat, sleep, see, hear, smell, make noise, feel sensations and recognise the people close to them.[88] The development of the higher regions of the brain – the limbic and the cortex – takes place after birth, and follows the development of the lower regions – the brainstem and midbrain. These higher regions are involved with regulating emotions and the development of

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[82] Perry, B.D. (2006) 'Applying principles of neurodevelopment to clinical work with maltreated children: The neurosequential model of therapeutics.' In N.B. Webb (Ed) *Working with Traumatized Youth in Child Welfare*. New York: The Guildford Press.
[83] Child Welfare Information Gateway 2009 *op. cit.* p.4.
[84] For an overview see Barlow, J. and Underdown, A. (2008) 'Attachment and infant development.' In C. Jackson, K. Hill and P. Lavis (eds) *Child and Adolescent Mental Health Today: A Handbook*: Brighton: Pavilion Publishing/Mental Health Foundation.
[85] For an overview see Gerhardt (2004) *op. cit.*
[86] National Scientific Council on the Developing Child (2011) *op. cit*.
[87] Glaser (2000) *op. cit.*
[88] Child Welfare Information Gateway (2009) *op. cit.*

language and complex thought.[89] Development in the lower regions of the brain is less flexible and thus less susceptible to environmental factors than development in the higher regions. Thus plasticity occurs more in the higher regions than the lower regions. The figure below illustrates the sequence in which the brain develops.

Figure 3.1: Sequencing of brain development

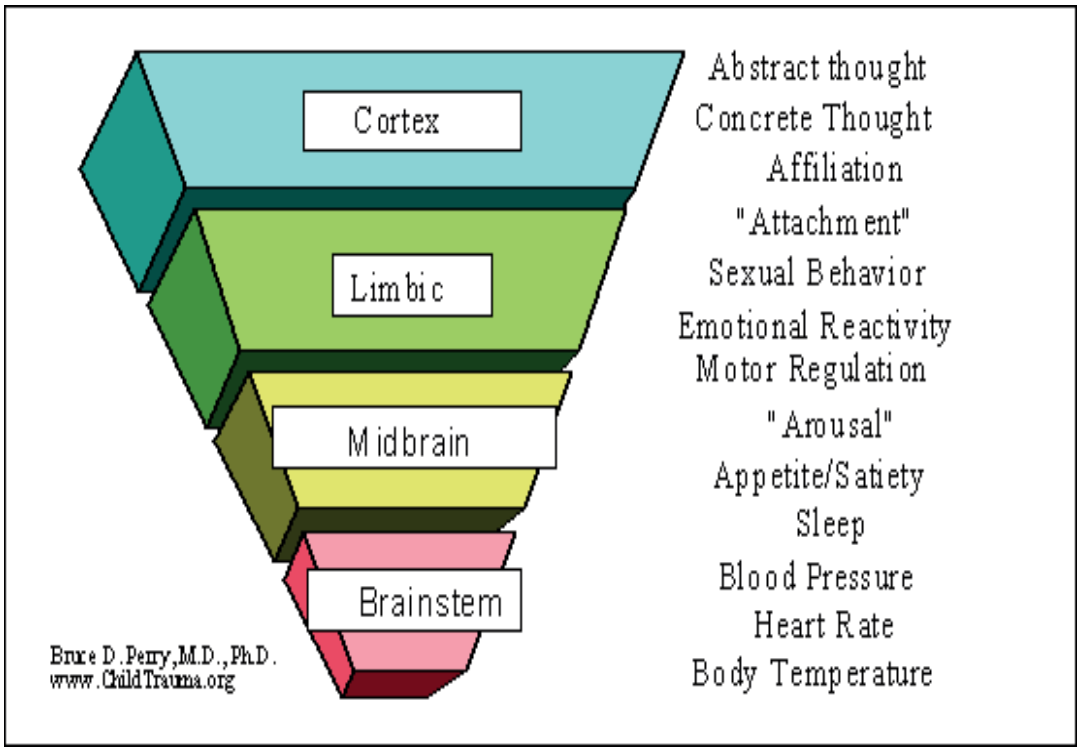


Illustration used by permission of Bruce D. Perry, M.D., PhD. Child Trauma Academy: www.childtrauma.org

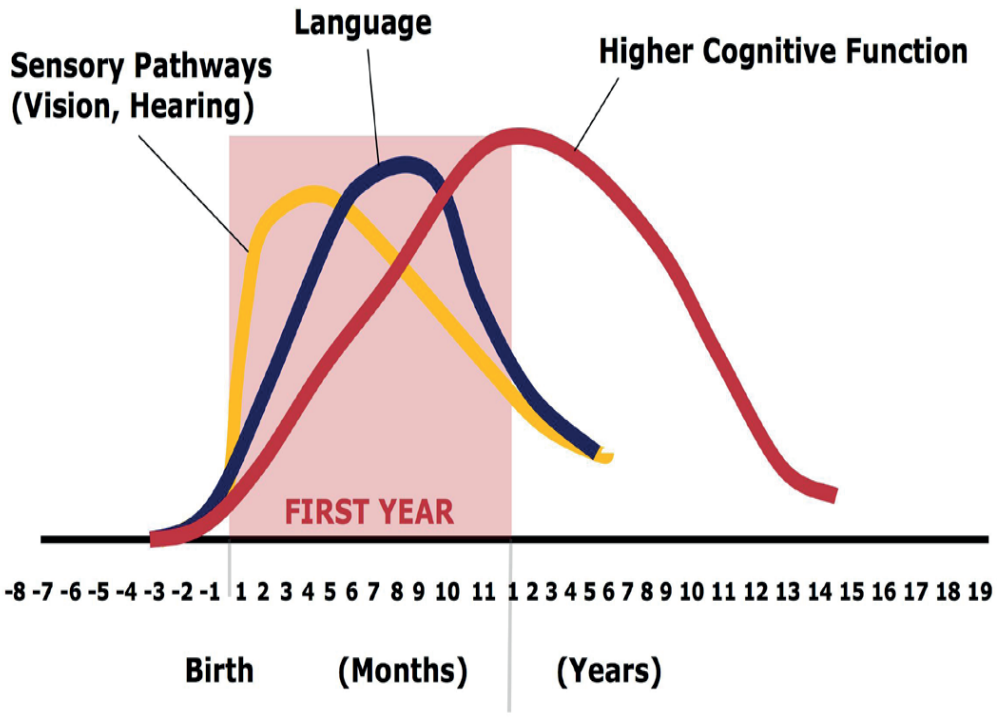
3.17 The human brain increases in volume more during the first year of life than at any other time.[90] However although the brain grows most rapidly during the first year, it continues to grow and develop into young adulthood (the mid-twenties). Just before puberty the brain experiences a further growth spurt which continues through adolescence. This growth occurs mainly in the frontal lobe (cortex and limbic) which governs planning, impulse control and reasoning. Prior to the growth of the frontal lobe, young people rely on their primitive limbic system to interpret and react to emotions. Adolescents are

[89] *Ibid.*
[90] Schore, A.N. (1994) *Affect Regulation and the Origin of the Self: The Neurobiology of Emotional Development*. Hillsdale, New Jersey: Erlbaum.

more likely to engage in potentially dangerous risk-taking behaviour as they lack the more mature cortex that can override the limbic response.[91]

3.18 The sequence of brain development follows a logical pattern. Development of the higher regions does not commence before the connections in the lower regions have been completed.[92] This is because the higher levels in the hierarchy depend on reliable information from the lower levels in order to accomplish their functions.[93] Impaired development in the lower regions of the brain will therefore have a negative impact on the development of the functions of the higher regions, such as language, empathy, regulation of emotions and reasoning.

Figure 3.2: Sequential development for different neural functions



Graphic used by permission of the Center on the Developing Child at Harvard University: www.developingchild.harvard.edu

[91] Chamberlain, L. B. (2009) 'The amazing teen brain: What every child advocate needs to know.' *Child Law Practice 28*, 2, 1-2, 22-24.
[92] Knudsen, E.I. (2004) 'Sensitive periods in the development of the brain and behavior.' *Journal of Cognitive Neuroscience 16,* 8, 1412-1425.
[93] *Ibid.*

Development of the prefrontal cortex

3.19 The prefrontal cortex is involved in governing various higher cognitive functions, such as planning, reasoning and language comprehension.[94] An adult cortex is highly complex, containing about 20 billion neurons each linked to approximately 1000 other neurons creating trillions of connections.[95] Development of the cortex begins prenatally. Between six to 24 weeks following conception neurons migrate to the correct position in the cortex, and then begin to differentiate and take on their mature characteristics. Although some maturation continues into adulthood, the majority is complete by the end of the second post natal year.[96] By the time they are two, therefore, the foundations for children's ability to speak and understand language, to reason and to make plans have already been laid.

3.20 A critical aspect of maturation in the prefrontal cortex is the development of executive function:

> Having executive function in the brain is like having an air traffic control system at a busy airport to manage the arrivals and departures of dozens of planes on multiple runways.[97]

3.21 There are three key dimensions to executive function: firstly, working memory, or the capacity to hold and manipulate information in the brain over short periods of time; secondly, inhibitory control, or the skill to master and filter out thoughts and impulses to resist temptations, distractions, and habits and to pause and think before action is taken; and lastly cognitive or mental flexibility, or the capacity to nimbly switch gears and adjust to changed demands, priorities, or perspectives.[98]

3.22 Executive function skills are considered to be necessary for both learning and social interaction, and are the biological foundation for school

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[94] Tsujimoto, S. (2008) 'The prefrontal cortex: Functional neural development during early childhood.' *The Neuroscientist 14,* 4, 345-358.
[95] Belsky and de Haan (2010) *op. cit.*
[96] *Ibid.*
[97] National Scientific Council on the Developing Child (2011) *op. cit*. p.1
[98] *Ibid.*

readiness.[99] They begin to develop shortly after birth. There is a window of opportunity for dramatic growth between the ages of three and five years, although development continues throughout adolescence and early adulthood. As with other areas of early childhood development, these skills are developed through the relationship with the primary carer; adverse parenting experiences will inhibit the development of executive function. If this has not sufficiently matured by the time the child enters formal education, there will be a long-term negative impact on school performance (see Chapter Four).

3.23 The regions of the brain and circuits associated with executive function also have extensive interconnections with the deeper brain structures that control the developing child's response to threat and stress. Extended exposure to threatening situations can compromise the development of executive function skills, whilst developed capacities of executive function can help children (and adults) effectively manage stress.[100] See Chapter Four paragraphs 4.39 to 4.44 for further information.

Sensitive periods in the development of the brain

3.24 There are specific periods when the development of a child's brain is more strongly affected by a certain type of experience than at other times. These periods are widely referred to as *sensitive periods*. At certain times the impact of experience on development can be irreversible: these are a special class of sensitive period known as *critical period*s.

3.25 Studies on cats, dogs, monkeys and geese as well as investigations of bird song and human language development have confirmed that critical and sensitive periods are a major phenomenon in brain and behavioural development.[101]

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[99] Blair. C. (2002) 'School readiness: Integrating cognition and emotion in a neurobiological conceptualization of children's functioning at school entry.' *American Psychologist 5*7, 2, 111-127.
[100] National Scientific Council on the Developing Child (2011) *op. cit.*
[101] Thomas and Johnson (2008) *op. cit.*

3.26 Critical and sensitive periods allow experience to instruct neural circuits to process information in a way that is adaptive for individual children.[102]

> Many aspects of perceptual, cognitive, and emotional capabilities are shaped powerfully by experiences we have during limited periods in life.[103]

3.27 Sensitive periods are generally reflected in behaviour; however they are controlled by neural circuits.[104] During a sensitive period, experience modifies the architecture of a neural circuit in fundamental ways. This causes certain patterns or connections to be preferred over others, leading to those preferred patterns becoming highly stable, and thus more reliable.[105]

3.28 Thomas and Johnson[106] propose that postnatal brain development during sensitive periods, particularly in the cortex region, involves a process of 'fine tuning'. For example, part of the cortical region is originally activated by a wide range of visual objects; however following a sensitive period of development, it confines its response to upright human faces. Once cortical regions have become finely tuned, these commitments are difficult to reverse.

3.29 Greenough and Black[107] propose that there are two types of sensitive period, the *experience-expectant* and the *experience-dependent*. The experience-expectant period does not occur until a particular type of stimulus is available. These periods are set in a genetically predetermined sequence, and are necessary for the orderly process of synaptic connections, each stage building on the previous one. For example, the region of the brain which is responsible for processing visual information, the visual cortex, is pre-programmed to expect exposure to this information with light in

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[102] Knudsen (2004) *op. cit.*
[103] *Ibid* p.1412.
[104] *Ibid.*
[105] *Ibid.*
[106] Thomas and Johnson (2008) *op. cit.*
[107] Greenough, W. and Black, J. (1992) 'Induction of brain structure by experience: substrate for cognitive development.' In M.R. Gunnar and C.A. Nelson (Eds) 'Minnesota symposia on child psychology 24.' *Developmental and Behavioural Neuroscience. Hillsdale, NJ: Lawrence Erlbaum.*

patterned sequences. It is programmed to utilise this information for normal development. If an infant is deprived of this expectant information within a predetermined timeframe, for instance, if they suffer from untreated or prolonged cataracts or auditory deficits, then their behavioural functioning relating to this development can be permanently compromised.[108]

3.30 The second type of sensitive period, the experience-dependent, is not genetically predetermined and the synapses are not anticipating any particular experience. During these sensitive periods the child's environment actively contributes to the developing brain structure and optimises individual children's adaptation to its specific and possibly unique features. Unlike experience-expectant development, where all brains depend on the same basic experiences to develop normally, in experience-dependent development, individual differences in brain development depend on the idiosyncratic experiences that are encountered by each child.[109] These experiences carry significant consequences for children's later emotional and behavioural development.[110]

3.31 An infant requires both the experience-expectant and experience-dependent stimuli to be presented in a way which is '...safe, nurturing, predictable, repetitive, gradual and attuned to the infant's or child's developmental stage' for their optimal development.[111]

3.32 The mechanisms which underlie sensitive periods are complex, and differ between neural circuits and between species. An example of an attempt to understand the complexities which shape the acquisition of higher cognitive abilities in humans is the study of how a second language is learned. Unless individuals acquire a second language before mid-childhood (or perhaps puberty), they will never reach native-like levels of proficiency in

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[108] Shonkoff, J.P. and Phillips, D.A. (2000) *From Neurons to Neighborhoods: The Science of Early Child Development*. Washington DC: National Academy Press. Available at: https://download.nap.edu/catalog.php?record_id=9824
[109] *Ibid.*
[110] Glaser (2000) *op. cit.*
[111] Perry, B.D. and Pollard, R. (1997) *Altered Brain Development following Global Neglect in Early Childhood*. Houston: The Child Trauma Academy.

pronunciation or grammatical knowledge.[112] Adults and children learn a second language in different ways: adults can learn the second language more quickly than children, however their final level of attainment is not as high as a child's would be.[113]

3.33 There is therefore a short window of opportunity for certain types of development such as acquisition of a second language and refinement in the processing of visual information. If the types of experience upon which they depend do not occur within a predetermined timeframe, then children will not move on to the next stage of development and their long-term wellbeing will be compromised. See the Figure 3.2 for further information.

Stress response systems and the importance of the environment of relationships

3.34 Everyday life involves responding and reacting to varying degrees of stress. When an individual experiences stressful events, their body responds physiologically to restore a condition of equilibrium, or homeostasis.[114] The body's stress response activates several interlocking biological systems designed to prepare an individual for events that may threaten their wellbeing.[115] The hypothalamus, which is located in the centre of the brain, is involved in maintaining homeostasis, including responding to stressful events which upset regulatory rhythms. The amygdala reacts to social situations that generate uncertainty or fear by releasing chemical messages in various directions. The hypothalamus is activated by these messages, and in turn triggers the hypothalamus-pituitary-adrenal (HPA) axis: the core stress response system.[116]

3.35 The stress response involves activation of the pituitary, which in turn triggers

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[112] Thomas and Johnson (2008) *op. cit.*
[113] Birdsong 2006 cited Thomas and Johnson (2010) *op. cit.*
[114] Tarullo, A.R. and Gunnar, M.R. (2006) 'Child Maltreatment and the Developing HPA Axis: Hormones and Behavior.' *Science Direct 50,* 632-639.
[115] McCrory, E., De Brito, S.A. and Viding, E. (2010) 'Research review: The neurobiology and genetics of maltreatment and adversity.' *The Journal of Child Psychology and Psychiatry 51,* 10, 1079-1095.
[116] *Ibid.*

the adrenal glands to produce extra cortisol. This allows the body to generate extra energy to focus on the stress and to put other bodily systems 'on hold' while this is being dealt with.[117]

3.36 Chronically high levels of cortisol have detrimental effects on health.[118] Therefore feedback loops are present to modulate the responsiveness of the HPA axis which returns the system to homeostasis. This feedback loop is mediated by receptors located, in the main, in the hippocampus. The purpose of this regulation is to produce adaptive responses to social and psychological stressors. These prepare the body to anticipate and respond optimally to threat but return efficiently to a homeostatic balance once the body is no longer challenged.[119]

3.37 The stress response system is not fully mature at birth. It requires an extended period of development whereby experience plays a crucial role.[120] An important component of this development is a baby's attachment to their caregivers.[121] When babies express feelings of distress or discomfort, they are dependent on their caregivers to notice these signals and to respond by providing the type of care which maintains their equilibrium, such as sensitive touch, feeding and rocking.[122] A baby's stress response system is unstable and reactive; it will produce high levels of cortisol if the baby's needs are not being met, or if the baby is in an environment which is aggressive or hostile. Persistent and unrelieved chronic stress in infancy results in the baby's brain being flooded by cortisol for prolonged periods. This can have a toxic effect on the developing brain, with detrimental consequences for future health and behaviour. Please see Chapter Four paragraphs 4.38 to 4.44 for further discussion relating to the toxic

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[117] Tarullo and Gunnar (2006) *op. cit.*
[118] See for instance Lupien, S.J., DeLeon, M., DeSanti, S., Convit, A., Tarshish, C., Nair, N.P.V., Thakur, M., McEwen, B.S., Hauger, R.L and Meaney, M.J. (1998) 'Longitudinal increase in cortisol during human aging predicts hippocampal atrophy and memory deficits.' *Nature Neurosci. 1*, 69–73.
[119] McCrory, De Brito and Viding (2010) *op. cit.*
[120] Tarullo and Gunnar (2006) *op. cit.*
[121] Glaser (2000) *op. cit.*
[122] Hofer, M. A. (1995) 'Hidden regulators: Implications for a new understanding of attachment, separation, and loss.' In: *Attachment theory: Social, developmental, and clinical perspectives*, ed. S. Goldberg, R. Muir & J. Kerr. Analytic.

consequences of chronic stress.

3.38 In some children, however, prolonged exposure to stress may be linked to abnormally *low* levels of cortisol. This is particularly evident in those who have experienced low-grade, frequent emotional (and sometimes physical) abuse and neglect in very early childhood and is associated with early indications of anti-social behaviour in boys.[123]

3.39 Both very high and very low levels of cortisol are indicative of abnormal development of the stress response, and cause long-term physiological and psychological damage.[124]

3.40 A normal adult pattern of cortisol production is highest in the morning, and then gradually declines through the day to be at its lowest in the evening.[125] Babies who have secure attachments to their caregiver(s) will begin to form this pattern between three to six months old; however it takes until about the age of four years before it is fully established.[126] Early interactions between primary caregiver and baby therefore play a significant role in how a child develops the capacity to respond appropriately to stressful circumstances and the ability to regulate their own negative emotions if and when these occur, such as following an immunisation injection, an injury, or on the first day at school.[127]

3.41 This chapter has shown how the brain and stress response systems develop in early childhood and are shaped by the relationship with the primary caregiver. There are indications that when the caregiver does not respond appropriately to the child's needs, development can be impaired. These issues are explored further in Chapter Four.

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[123] McBurnett, K., Lahey, B.B., Rathouz, P.J. and Loeber, R. (2000) 'Low salivary cortisol and persistent aggression in boys referred for disruptive behavior.' *Archives of General Psychiatry 57*, 38-43.
[124] Tarullo and Gunnar (2006) *op. cit.*
[125] *Ibid.*
[126] *Ibid.*
[127] *Ibid.*

Figure 3.3: Summary of key timeframes for child development

Age of child	Key developmental tasks
Birth	The brain is an immature organ at birth. Newborn babies require stimuli from their environment allowing them to adapt to their specific circumstances. Interactions with caregiver(s) are a crucial part of brain development. Babies require experiences rich in touch, face to face contact and stimulation through conversation (or reciprocating baby babble). These stimuli encourage a more richly networked brain (the production of synaptic connections between neurons). A newborn baby also cannot regulate their own emotions; they rely on their caregiver(s) to respond to their cries for food, warmth, comfort and protection. Babies learn how to regulate their emotions through their attachment to their caregiver(s). The process of attachment begins at birth at the latest.
6 months	At around the age of six months an infant can generally show a clear attachment to their caregiver. Providing they have formed a secure attachment they begin to form a normal pattern of cortisol level. Cortisol is a hormone which is released when the stress response system is activated. Persistent high levels of cortisol have a detrimental impact on health and wellbeing. An infant can experience high levels of cortisol if their basic needs are not met and/or if they experience aggressive or hostile parenting.
1 year	The human brain increases in volume more during the first year of life than at any other time.
2 years	By the age of two a child's brain has developed rapidly. It has formed many more synapses than it will ever need. Throughout the past two years the child's brain has adapted to its environment and will adapt just as readily to a negative environment as to a positive one. The foundations for higher cognitive abilities, such as language comprehension, reasoning and impulse control have been developed. These will continue to develop throughout childhood and into early adulthood.
2 years through adolescence	From about the age of two years onwards the connections within the brain which have been developed are either strengthened if they are being used or discarded if they are not. This allows the brain to become more efficient and finely tuned. Experience continues to be a crucial factor in determining which synapses are strengthened and which are lost. This is often referred to as 'use it or lose it'.

3 years	Between the ages of three and five years there is a window of opportunity for dramatic development of executive function, which includes; working memory, inhibitory control, and cognitive and mental flexibility. Executive function skills are crucial for school readiness. Without development in this area school performance, both academically and socially, will be impaired. The foundations for the development of executive function begin to develop from birth, and continue through childhood and adolescence.
4 years	At about the age of four, and providing a child's needs for a secure attachment have been met, a normal pattern of cortisol level is established (it has taken since about the age of four to six months for this pattern to regulate).
Adolescence	Around the time of puberty the brain has a growth spurt in the higher regions which govern planning, impulse control, reasoning and the regulation and reaction to emotions. Prior to this growth spurt young people are more prone to engage in dangerous risk taking behaviour and are not sufficiently able to interpret emotions, particularly if there is no secure attachment figure available to help them negotiate these tasks. This is because they rely on their more primitive limbic response and lack the more mature cortex which can override it. Capabilities in these areas may always be inhibited if young people have experienced aggressive/hostile or neglectful parenting in childhood.

Chapter 4: The impact of abuse on child development

Summary points

- Exposure to domestic violence and/or parental substance misuse *in utero* can have a long-term negative impact on the unborn child.
- High quality care can determine the extent to which children who are genetically predisposed to mental illness or learning disability, or who are exposed to abusive or neglectful parental behaviours, are affected.
- Chronic exposure to trauma through aggressive, hostile or neglectful parenting can lead to stress system deregulation. Exposure to toxic stress in early childhood can cause permanent damage to the brain and have severe and long-term consequences for all aspects of future learning, behaviour and health.
- Neglected children may experience chronic exposure to toxic stress as their needs fail to be met. This is compounded by a lack of stimulation and social deprivation.
- Severe global neglect (i.e. severe neglect in more than one domain) during the first three years of life stunts the growth of the brain.
- Adults who have been physically abused in childhood show poorer physical and intellectual development, more difficult and aggressive behaviour, poorer social relationships and are more frequently arrested for violent crimes than their peers.
- Children who have been sexually abused may experience sleep problems, bedwetting or soiling, problems with school work or missing school, and risk-taking behaviour in adolescence including multiple sexual relationships.
- Adolescents who have experienced abusive or neglectful parenting in childhood are more likely to engage in risk-taking behaviours such as substance misuse and criminal activity.

Introduction

4.1 Chapter Two has set out the types of parental problems which are likely to undermine healthy child development and attachment. Issues affecting parenting capacity, such as mental illness, intimate partner violence, problem drug and/or alcohol use and learning disabilities are particularly severe when they persist in complex combinations and when no protective factors are present. In such circumstances the chances of child maltreatment substantially increase.[128] [129] [130] Exposure to maltreatment is likely to undermine children's healthy development and capacity to form secure attachments and can have detrimental consequences for their health and wellbeing over the course of a lifetime.

4.2 Chapter Three has examined the developmental course of a baby's brain and its vulnerability to adverse parenting. A new born baby's brain is an immature organ that adapts to its environment; the most significant part of this environment is the relationship with the primary caregiver(s). The immature brain will adapt just as readily to negative experiences such as hostile, aggressive and/or neglectful parenting as to more positive experiences. Brain development will be geared towards coping in a negative environment, but this will be to the detriment of development in other areas, such as learning and memory; the emergence of executive function skills including problem solving and reasoning; the ability to understand and respond to emotions; and the ability to form positive relationships and to respond in a nurturing environment. Skewed and immature development will have implications for all aspects of life and will persist well into adulthood.[131]

4.3 This chapter builds on the framework set out in Chapters Two and Three and

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[128] Cleaver, Unell and Aldgate (2011) *op. cit.*
[129] Jones, D., Hindley, N. and Ramchandani, P. (2006) 'Making plans: Assessment, intervention and evaluating outcomes.' In J. Aldgate, D. Jones and C. Jeffery (eds) *The Developing World of the Child*. London: Jessica Kingsley Publishers.
[130] Ward, Brown and Westlake (2012) *op. cit.*
[131] Shonkoff, J.P. and Garner, A.S. and The Committee on Psychosocial Aspects of Child and Family Health, Committee on Early Childhood, Adoption, and Dependent Care, and Section on Developmental and Behavioral Pediatrics (2012) 'The lifelong effects of early childhood adversity and toxic stress.' *American Academy of Pediatrics 129,* e232-e246.

draws on evidence from experts in the field of neuroscience, psychology and psychiatry, including Jack Shonkoff and Bruce Perry from the USA and Hedy Cleaver and Danya Glaser from the UK. Sources include both primary data (collected and analysed by the authors) and secondary data (reviews and overviews of research findings, collected and brought together from a wide range of methodologically sound studies). The sources from which the majority of the evidence is drawn include:

- Cleaver, H., Unell, I. and Aldgate, J. (2011) *Children's Needs – Parenting Capacity*: *Child Abuse: Parental Mental Illness, Learning Disability, Substance Misuse and Domestic Violence* (2nd Edition). London: The Stationery Office.
- Shonkoff, J.P. and Garner, A.S. and The Committee on Psychosocial Aspects of Child and Family Health, Committee on Early Childhood, Adoption and Dependent Care, and Section on Developmental and Behavioral Pediatrics (2012) 'The lifelong effects of early childhood adversity and toxic stress.' *American Academy of Pediatrics 129,* e232-e246.
- Perry, B.D. (2002) 'Childhood experience and the expression of genetic potential: What childhood neglect tells us about nature and nurture.' *Brain and Mind 3,* 79-100.
- Chugani, H.T., Behen, M.E., Muzik, O., Juhász, C., Nagy, F. and Chugani, C. (2001) 'Local brain functional activity following early deprivation: A study of post institutionalized Romanian orphans.' *NeuroImage 14*, 1290-1301.

Child maltreatment: prevalence and definitions

4.4 Estimates of the numbers of children who have experienced maltreatment vary substantially according to the sources of information, the time-span over

which data are collected and the ways in which maltreatment is defined.[132]

4.5 The most recent government statistics show that, in England in the year ending 31st March 2011, 111,700 children and young people aged under 18 became the subjects of a Section 47 enquiry, but less than half that number (49,000: 44%) were made the subjects of child protection plans.[133] Children under the age of one are particularly vulnerable. They are nearly three times as likely to be the subjects of child protection plans due to physical abuse and over twice as likely to be the subjects of child protection plans for neglect. Almost half (45%) of all serious case reviews in England involve a child under one, and they face around eight times the average risk of child homicide.[134]

4.6 However, national statistics show the numbers of children who come to the attention of services. The numbers who are thought to be maltreated each year are much larger, for many are not referred to children's social care.[135]

4.7 The NSPCC has conducted the most recent British prevalence study of child abuse and neglect.[136] This study aimed to provide, 'up to date information on the prevalence and impact of child maltreatment in a nationally representative sample of children and young people living in the UK'.[137] The study examined children's and young adults' experiences of childhood maltreatment at home, in school and in the community. Household interviews were conducted with: 2,160 parents or guardians of children and young people under 11 years of age; 2,275 young people between the ages

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[132] Much of the information in this section is taken from: Davies, C. and Ward, H. (2012) *Safeguarding Children Across Services: Messages from Research on Identifying and Responding to Child Maltreatment.* London: Jessica Kingsley Publishers.
[133] Department for Education (2011a) Characteristics of Children in Need in England, Final. http://www.education.gov.uk/rsgateway/DB/STR/d001041/index.shtml
[134] Cuthbert, C., Rayns, G. and Stanley, K. (2011) *All Babies Count: Prevention and Protection for Vulnerable Babies.* London: NSPCC.
[135] See Gilbert, R.E., Widom, C., Browne, K., Fergusson, D., Webb, E. and Janson, S. (2009) 'Child maltreatment 1: Burden and consequence of child maltreatment in high income countries.' *The Lancet 373,* 68-81.
[136] Radford, L., Corral, S., Bradley, C., Fisher, H., Bassett. C., Howat, N. and Collinsaw, S. (2011) *Child Abuse and Neglect in the UK Today.* London: NSPCC. Available from: http://www.nspcc.org.uk/Inform/research/findings/child_abuse_neglect_research_PDF_wdf84181.pdf
[137] *Ibid*. p.6

of 11 and 17, with additional information provided by their parents or guardians; and 1,761 young adults between the ages of 18 and 24. The data were collected during 2009.

4.8 The study found that 2.5% of children aged under 11 and 6% of young people aged 11–17 had experienced some form of maltreatment from a caregiver within the previous year. Experience of maltreatment over a longer timespan was obviously higher: the same study found that 5% of children aged under 11, 13.5% of young people aged 11–17 and 14.5% of young adults aged 18–24 had experienced serious maltreatment by a parent or caregiver at some time during their childhood. Evidence from this study suggests, however, that since 1997 there has been a significant drop in self-reported experiences of harsh emotional and physical treatment and in experiences of physical and sexual violence.[138] Such a trend may well be an artefact, relating to the manner in which data were collected rather than reflecting any true changes; however, it has been replicated in studies from the US.[139]

4.9 One reason why it is not easy to calculate the prevalence of abuse and neglect is that definitions vary. For instance, witnessing intimate partner violence has only relatively recently been recognised as a cause for concern. The parameters have changed as the impact on children's welfare has become better understood. In some cultures both the physical abuse of children and intimate partner violence are still regarded as normative adult behaviours, with the result that identifying maltreatment and developing an appropriate response becomes a complex issue in a multi-cultural society.[140] Nevertheless, it is possible to make too much of cultural differences: abuse is often defined as a failure to meet the child's developmental needs, and there is a very significant cross-cultural consensus about the basic needs for

[138] Radford *et al.* (2011) *op. cit.*
[139] See Finkelhor, D. (2008) *Childhood victimization: Violence, Crime, and Abuse in the Lives of Young People.* Oxford: Oxford University Press.
[140] See Davies and Ward (2012) *op. cit*. pp17-18.

healthy child development.[141]

4.10 Government guidance provides descriptions of four different types of maltreatment; sexual abuse, physical abuse, emotional abuse and neglect.[142] These descriptions are presented under the headings below.

Physical abuse

4.11 Physical abuse is described as:

> Hitting, shaking, throwing, poisoning, burning or scalding, drowning, suffocating, or otherwise causing physical harm to a child. Physical harm may also be caused when a parent or carer fabricates the symptoms of, or deliberately induces, illness in a child.[143]

4.12 The total number of violent and maltreatment-related deaths of children (0-17 years) is estimated at around 74 per year in England; approximately 50-55 are directly caused by violence, abuse or neglect, and maltreatment contributes to a further 20-25 but is not the primary cause of death.[144] Many other children are disabled following physical abuse. For example, there is extensive evidence that shaking a baby can cause severe damage to their brain, and this includes destroying brain tissue and tearing blood vessels. This damage can lead to seizures, loss of consciousness and sometimes death. In the longer term it can also lead to the development of a range of sensory impairments, as well as cognitive, learning and behavioural disabilities.[145] Non-accidental head injury is the most common cause of infant death or long-term disability following maltreatment.[146]

4.13 Physical abuse may cause mental ill health and behavioural problems in

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[141] Stevenson, O. (2007) *Neglected Children and their Families (Second Edition*). Oxford: Blackwell Publishing.
[142] HM Government (2010) *Working Together to Safeguard Children. A Guide to Inter-Agency Working to Safeguard and Promote the Welfare of Children*. London: Department for Education.
[143] *Ibid.* p.38.
[144] Sidebotham, P., Brandon, M., Bailey, S., Belderson, P. and Hawley, C. (2011) *Serious and Fatal Child Maltreatment: Setting Serious Case Review Data in Context with other Data on Violent and Maltreatment-Related Deaths in 2009-10.* London: Department for Education.
[145] National Center on Shaken Baby Syndrome. (2009). *Physical Consequences of Shaking. Available at* www.dontshake.org/sbs.php?topNavID=3&subNavID=23.
[146] See also Cuthbert, Rayns and Stanley (2011) *op. cit.* p.14.

children, such as depression and anxiety; aggression and violence; problems with relationships and socialising; trying to hide injuries under clothing; running away from home; and being distant and withdrawn. Physical abuse during childhood can have an impact later in adult life by, for example, causing conditions such as post-traumatic stress disorder.[147]

4.14 Follow-up studies of physically abused children have shown poorer physical and intellectual development, more difficult and aggressive behaviour, poorer relations with peers and more arrests for juvenile and adult violent crimes than their non-abused peers.[148]

Sexual abuse

4.15 Sexual abuse is described as:

> Forcing or enticing a child or young person to take part in sexual activities, not necessarily involving a high level of violence, whether or not the child is aware of what is happening. The activities may involve physical contact, including assault by penetration (for example, rape or oral sex) or non-penetrative acts such as masturbation, kissing, rubbing and touching outside of clothing. They may also include non-contact activities, such as involving children in looking at, or in the production of, sexual images, watching sexual activities, encouraging children to behave in sexually inappropriate ways, or grooming a child in preparation for abuse (including via the internet). Sexual abuse is not solely perpetrated by adult males. Women can also commit acts of sexual abuse, as can other children.[149]

4.16 Children who have been sexually abused may be affected in a variety of ways. Aside from the direct physical harm caused by sexual abuse, children may also experience sleep problems, bed-wetting or soiling; problems with school work or missing school; risk taking behaviour during adolescence including multiple sexual relationships; and becoming sexually active at a young age. For many children the effects can last into adulthood and cause a long list of problems, including in particular, mental ill health and drug or

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[147] Creighton, S. (2002) *Physical Abuse*. London: NSPCC. Available from: http://www.nspcc.org.uk/Inform/research/briefings/physicalabuse_wda48220.html
[148] See Gibbons, J., Gallagher, B., Bell, C. and Gordon, D. (1995) *Development after physical abuse in early childhood*. London: HMSO.
[149] HM Government (2010) *op. cit*. p.38.

alcohol misuse.[150]

Emotional abuse and neglect

4.17 Emotional abuse is described as:

> The persistent emotional maltreatment of a child such as to cause severe and persistent adverse effects on the child's emotional development. It may involve conveying to children that they are worthless or unloved, inadequate, or valued only insofar as they meet the needs of another person. It may include not giving the child opportunities to express their views, deliberately silencing them or making fun of what they say or how they communicate. It may feature age or developmentally inappropriate expectations being imposed on children. These may include interactions that are beyond the child's developmental capability, as well as overprotection and limitation of exploration and learning, or preventing the child participating in normal social interaction. It may involve seeing or hearing the ill-treatment of another. It may involve serious bullying (including cyber-bullying), causing children frequently to feel frightened or in danger, or the exploitation or corruption of children. Some level of emotional abuse is involved in all types of maltreatment of a child, though it may occur alone.[151]

4.18 Emotional abuse is often considered to be the most damaging of all forms of maltreatment in early childhood because the perpetrator is almost always the primary caregiver, and their abusive behaviour represents a direct negation of the child's 'need for safety, love, belonging and self esteem'.[152]

4.19 Neglect is described as:

> The persistent failure to meet a child's basic physical and/or psychological needs, likely to result in the serious impairment of the child's health or development. Neglect may occur during pregnancy as a result of maternal substance abuse. Once a child is born, neglect may involve a parent or carer failing to:
>
> - provide adequate food, clothing or shelter (including exclusion from home or abandonment)
> - protect a child from physical and emotional harm or danger

[150] www.NSPCC.org.uk
[151] HM Government (2010) *op. cit*. p38.
[152] See Barlow, J. and Schrader McMillan, A. (2010) *Safeguarding Children from Emotional Maltreatment: What Works?* London: Jessica Kingsley Publishers.

- ensure adequate supervision (including the use of inadequate caregivers)
- ensure access to appropriate medical care or treatment.

It may also include neglect of, or unresponsiveness to, a child's basic emotional needs.[153]

4.20 Findings from the studies in the *Safeguarding Research Initiative*[154] showed that practitioners found it difficult to identify emotional abuse and neglect and to decide when a threshold for action had been reached. These difficulties arose for a number of reasons:

- Both types of maltreatment are heterogeneous classifications that cover a wide range of issues.
- Both emotional abuse and neglect are chronic conditions that can persist over months and years. Professionals can become accustomed to their manifestations and accepting of the lack of positive change.
- Both types of maltreatment can persist for many years without leading to the type of crisis that demands immediate, authoritative action. Without such a crisis it can be difficult to argue that a threshold for a child protection plan or court action has been reached.
- Both types of maltreatment are also closer to normative parental behaviour patterns than physical or sexual abuse, in that most parents will, on occasion, neglect or emotionally maltreat their children to a greater or lesser degree. It is the persistence, the frequency, the enormity and the pervasiveness of these behaviours that make them abusive.

4.21 Two systematic reviews of literature[155] [156] that explored the evidence in relation to neglect and emotional abuse concluded that these types of abuse are associated with the most damaging long-term consequences, yet they

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[153] HM Government (2010) *op. cit*. p39.
[154] See Davies and Ward (2012) *op. cit.*
[155] Daniel, B. Taylor, J. and Scott, J. (2011) *Recognizing and Helping the Neglected child: Evidence-Based Practise*. London: Jessica Kingsley Publishers.
[156] Rees, G., Stein, M., Hicks, L. and Gorin, S. (2011) *Adolescent Neglect: Research, Policy and Practise*. London: Jessica Kingsley Publishers.

are also the most difficult to identify. Furthermore, relative to physically abused children, neglected children have more severe cognitive and academic deficits, social withdrawal and limited peer interactions, and internalising (as opposed to externalising) problems.[157]

4.22 Child maltreatment is a public health issue, in that its prevalence has a negative impact not only on the individuals concerned, but also on the welfare of society as a whole. The consequences of child maltreatment can last over the course of a life time and negatively affect parenting capacity, with detrimental consequences for the next generation. The following sections explore the impact of child maltreatment *in utero*, during the early years, and during later childhood and adolescence.

Impact of maltreatment *in utero*

4.23 Foetal development is influenced both by genetics and by experience. The unborn child requires nourishment and a safe environment in order to develop healthily.[158] Adverse maternal behaviour patterns during pregnancy can expose unborn babies to harm.[159] Most women want to do the best for their unborn child and will adapt their lifestyles accordingly; pregnancy is a time when many women stop smoking and drinking excessively and change to a healthier diet.[160]

4.24 If parental difficulties persist however, the consequences for the unborn child are far reaching. For instance, there is extensive evidence that excessive maternal alcohol and/or drug use during pregnancy has negative consequences for the unborn child. The foetus is most vulnerable to structural brain damage caused by such abuse during the first three months of gestation. However, in the second and third trimester it is also vulnerable

[157] Hildyard, K.L. and Wolfe, D.A. (2002) 'Child neglect: developmental issues and outcomes.' *Child Abuse and Neglect 26,* 679-695.
[158] Cleaver, Unell and Aldgate (2011) *op. cit.*
[159] Twardosz and Lutzker, (2010) *op. cit*.
[160] *Ibid.*

to stunted growth and neonatal addiction.[161] The evidence shows that the larger the amount of maternal drug and/or alcohol intake, the greater the impact on the child.[162]

4.25 The general consequences of maternal drug use during pregnancy, irrespective of the substance, include: low birth weight, premature delivery, perinatal mortality and cot death.[163] Excessive alcohol use during pregnancy can increase the likelihood of miscarriage and cause Foetal Alcohol Spectrum Disorder (FASD). FASD describes a pattern of physical, behavioural and intellectual characteristics that children can display when exposed to alcohol prenatally.[164] These symptoms include: deficiencies in growth for height and weight, a distinct pattern of facial features and physical characteristics, and central nervous system dysfunction.[165]

4.26 Exposure to intimate partner violence can also negatively affect the unborn child through inherited traits (e.g. parental personality disorder), physical damage to the foetus and the impact of maternal stress.[166] Women in violent relationships may experience an increase in both severity and frequency of abuse when they become pregnant; moreover 40-60% of pregnant women exposed to intimate partner violence during pregnancy experience punches or kicks to the abdomen. Such assaults can result in an increased rate of miscarriage, stillbirth, premature birth, foetal brain injury and fractures, placental separation, and rupture of the mother's spleen, liver or uterus.[167] [168] Exposure to maternal stress *in utero* can affect a child's ability to cope in stressful circumstances later in life. Shonkoff and colleagues[169]

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[161] Julien, R.M. (1995) *A Primer of Drug Adiction: A Concise, Non-Technical Guide to the Actions, Uses and Side Effects of Psychoactive Drugs, 7th Edition.* New York: W.H. Freeman and Co.
[162] Cleaver, Unell and Aldgate (2011) *op. cit.*
[163] Standing Conference on Drug Misuse (SCODA) (1997) *Working with Children and Families Affected by Parental Substance Misuse.* London: Local Government Association Publications.
[164] Cleaver, Unell and Aldgate (2011) *op. cit.*
[165] *Ibid.*
[166] *Ibid.*
[167] Bewley, S., Friend, J. and Mezey, G. (1997) *Violence Against Women.* London: Royal College of Obstetricians and Gynaecologists Press.
[168] Mezey, G. and Bewley, S. (1997) 'Domestic violence and pregnancy.' *British Journal of Obstetrics and Gynaecology 104*, 528-531.
[169] Shonkoff *et al.* (2012) *op. cit.*

argue that modifications of DNA during prenatal periods are likely to play a part, however the precise biological mechanisms that explain this have yet to be elucidated, and further investigation is needed.

4.27 Additionally, when parents suffer from mental illnesses, such as schizophrenia or major affective disorder, a complex relationship between genetic transmission and environment determines how the unborn child will be affected. Children can be genetically predisposed to mental illnesses; however the risk of developing symptoms can be mediated through good quality care.[170] Postnatal exposure to high levels of stress and anxiety can increase the likelihood that a child born with a genetic predisposition to a mental illness will develop symptoms at a young age.[171]

4.28 Similarly, a complex interaction between genetics and environment determines how far children will be affected if their parents have learning disabilities. These children are themselves at an increased risk of inheriting learning disabilities and related psychological and physical disorders.[172] [173] However environmental factors are also important: children with learning disabilities who are brought up in warm and stimulating environments will have better outcomes than those who are not.[174]

4.29 It is clear from the evidence that children who experience maltreatment *in utero,* such as neglectful and abusive behaviours related to parental mental illness, learning disability, alcohol/drug use and intimate partner violence, are likely to be born with a disadvantage. Good quality care following birth can mediate the consequences. However many children who are born with such disadvantages continue to experience maltreatment following birth, and their future life chances are further jeopardised.

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[170] Cleaver, Unell and Aldgate (2011) *op. cit.*
[171] Rutter, M., Moffitt, T. and Caspi, A. (2006) 'Gene-environment interplay and psychopathology: multiple varieties but real effects.' *Journal of Child Psychology and Psychiatry 47*, 3-4, 226-261.
[172] Rende, R. and Plomin, R. (1993) 'Families at risk for psychopathology: Who becomes affected and why?' *Development and Psychopathology 5,* 529-540.
[173] McGaw, S. and Newman, T. (2005) *What Works for Parents with Learning Disabilities?* Essex: Barnardo's.
[174] Cleaver, Unell and Aldgate (2011) *op. cit.*

4.30 Ward and colleagues[175] studied the life pathways of 43 infants who had been identified as likely to suffer significant harm before their first birthdays; two thirds of them had been identified before birth. This study found that those parents who were able to overcome issues affecting parenting capacity, such as substance misuse and domestic violence, had begun to address these during the pregnancy. This was often as a result of a revelatory moment when they realised they needed to make substantial changes to their lifestyles in order to protect their unborn child, and indeed to prevent the local authority from removing the baby from their care immediately following the birth. Those parents who were able to address all of their difficulties before their child was six months old were able to maintain these changes in the longer term – up to at least their child's third birthday. Parents who were interviewed as part of the evaluation of the Family Drug and Alcohol Court pilot also identified the birth of a child as a catalyst for overcoming adverse behaviour patterns.[176] The findings from these studies suggest that there is a window of opportunity for social work and legal interventions during pregnancy and in the first few months following birth when parents may be more open to address adverse behaviour patterns.

Impact of maltreatment during the early years

Early parenting and its influence on parent-child interaction

4.31 The brain develops most rapidly during the first two years of postnatal life, as it adapts to its environment. The most significant part of this environment is the infant's relationship to their primary caregiver(s). A good parent-child relationship can provide a child with emotional security and social skills that enable them to cope with life in a resilient way and to promote their wellbeing.[177] During infancy, sensitive and responsive parenting lays the foundations for a secure attachment.

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[175] Ward, Brown and Westlake (2012) *op. cit.*
[176] Harwin, J., Ryan, M. and Tunnard, J. with Pokhrel, S. Alrouh, B. Matias, C. and Momenian-Schneider, S. (May 2011) *The Family Drug and Alcohol Court (FDAC) Evaluation Project Final Report*. Brunel University, p.104.
[177] For an overview see: Scott, S. (2010) National dissemination of effective parenting programmes to improve child outcomes. *The British Journal of Psychiatry 196*, 1-3, 1-7.

4.32 Chapter Two introduced the evidence that demonstrates how important it is for healthy development for an infant to have a secure attachment to their caregiver. It discussed the implications of the four different attachment styles: secure, insecure ambivalent, insecure avoidant and disorganised (see paragraphs 2.13 to 2.24). It is widely recognised that infants are highly dependent on their primary caregivers to help them regulate their internal states, one of the key developmental tasks in infancy. The capacity for regulating emotions and behaviour is a function of the parent-child interaction and is mediated via the attachment relationship.[178]

4.33 Research on early childhood development has identified a number of features of parent-child interactions that lay down the foundations for attachments. These include:

- *sensitivity/attunement* (the use of eye contact, voice-tone, pitch and rhythm, facial expression and touch to convey synchronicity with the infant);
- *mind-mindedness/reflective function/mentalisation* (a parent's capacity to experience their baby as an intentional being with their own personality traits, strengths and sensitivities);
- *marked mirroring* (when a parent shows a contingent response to an infant such as looking sad when the baby is crying);
- *containment* (when parent uses touch, gesture, and speech to take on an infant's powerful feelings and make them more manageable);
- *reciprocity* (turn-taking); and
- *continuity of care* (providing infants with sufficient continuous caretaking from a small number of carers to enable them to become securely attached).[179]

4.34 These components of positive interactions with babies and very young children lay down the foundations for secure attachments. However parents

[178] For a summary see Tronick, E.Z. (2007) *The Neurobehavioral and Social-Emotional Development of Infants and Children.* London: WW Norton and Company.
[179] Barlow, J. with Scott, J. (2010) *op. cit*. p.35; for an overview see Tronick (2007) *op. cit*.

differ in their ability to provide them.

4.35 Chapter Two has presented the evidence which indicates that inadequate or damaging parent-infant interaction is associated with a number of parental problems including mental illness, drug/alcohol misuse, intimate partner violence and learning disabilities, particularly when they occur in combination[180] (see paragraphs 2.3 to 2.9).

4.36 Certain aspects of parent-infant interaction have been identified as playing a significant role in impeding child development, particularly in terms of an infant's attachment organisation. Parent-infant interaction which is both frightened and frightening can have particularly toxic consequences. Such parental behaviours can be subtle, for example periods of being dazed and unresponsive, or more overt, including deliberately frightening a child.[181]

4.37 Frightened or frightening parental behaviour is related to unresolved trauma and losses on the part of the parent. This suggests that parent-infant interaction may play a significant role in the intergenerational transmission of abuse and trauma.[182] A meta-analysis of 12 studies found a strong association between these types of atypical parent-infant interactions at 12-18 months and disorganised attachment.[183] Disorganised attachment is strongly associated with a wide range of psychopathology in childhood and adulthood.[184] [185]

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[180] Cleaver, Unell and Aldgate (2011) *op. cit*.
[181] Main, M. and Hesse, E. (1990) Parents' unresolved traumatic experiences are related to infant disorganized attachment status: Is frightened and/or frightening parental behavior the linking mechanism? In: M. Greenberg, D. Cicchetti, E.M. Cummings (eds). *Attachment in the Preschool Years: Theory, Research and Intervention.* Chicago: Chicago University Press.
[182] Jacobvitz, D., Hazen, N.L. and Riggs, S. (1997) Disorganized mental processes in mothers, frightened/frightening behavior in caregivers, and disoriented, disorganized behavior in infancy. Paper presented at the biennial meeting of the Society for Research in Child Development, Washington, DC.
[183] Madigan, S., Bakermans-Kranenburg, M.J., Van IJzendoorn, M.H., Moran, G., Pederson, D.R. and Benoit, D. (2006) 'Unresolved states of mind, anomalous parenting behaviour, and disorganized attachment: a review and meta-analysis of a transmission gap.' *Attachment and Human Development 8*, 89-111.
[184] Green and Goldwyn (2002) *op. cit.*
[185] Borelli, J.L., David, D.H., Crowley, M.J. and Mayes, L.C. (2010) 'Links between disorganised attachment classification and clinical symptoms in school-aged children.' *Journal of Child and Family Studies 19,* 3, 243-256.

Toxic stress

4.38 In addition, if inadequate or damaging parent-infant interactions persist, a child's stress response system can be activated over prolonged periods, producing chronically high levels of the stress hormone cortisol. Brief periods of moderate, predictable stress are not problematic. In fact, they are protective and essential for survival. However excessively high levels of stress and prolonged exposure to raised cortisol levels are harmful and have toxic consequences for the developing child's brain.[186] A child's stress response system can be activated over prolonged periods if they continually feel threatened by aggressive or hostile parenting, including witnessing or hearing violence between caregivers, or if, as a result of neglectful parenting, their basic needs for food, warmth, nurture, care and affection are not met.[187] The stress response system starts to self-regulate at around six months, and persistent maltreatment may lead to poor emotional regulation and a maladaptive response to stress.

> Toxic stress can result from strong, frequent, or prolonged activation of the body's stress response systems in the absence of the buffering protection of a supportive adult relationship.[188]

4.39 Brain development can be altered by this type of stress, resulting in negative consequences for children's physical, cognitive, emotional, and social growth.[189] The ability of a child's brain to adapt to its environment, particularly during the first three years of life (and especially during the first year) makes it particularly sensitive to chemical changes. Therefore, persistently high levels of stress hormones, such as cortisol, can disrupt its developing architecture.[190] Because the brain develops in certain set sequences (see paragraphs 3.16 to 3.18) early development impacts upon later brain development. Therefore stress exposure early in life has the highest potential for long-term dysfunction in neurobehavioral systems that

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[186] Tarullo and Gunnar (2006) *op. cit.*
[187] Gerhardt (2004) *op. cit.*
[188] Shonkoff *et al.* (2012) *op. cit.* p. 236.
[189] Child Welfare Information Gateway (2009) *op. cit.*
[190] Shonkoff *et al.* (2012) *op. cit.*

mediate emotional responses, abstract thinking, and social interaction.[191]

4.40 As Chapter Three has shown, the amygdala, hippocampus and prefrontal cortex regions of the brain are particularly sensitive to chronic stress (see paragraphs 3.34 to 3.41). This is because they contain an abundance of stress hormone receptors.[192] Exposure to high levels of cortisol can cause cell damage which is reversible when exposure is brief, however when exposure is prolonged it can lead to cell death. Therefore permanent damage can be caused to these areas of the brain when a child is exposed to toxic stress.

4.41 Damage to the hippocampus can lead to impairments in memory and mood related functions, and limit the ability of the hippocampus to promote contextual learning, 'making it more difficult to discriminate conditions for which there may be danger versus safety, as is common in post-traumatic stress disorder'.[193] It can also lead to problems in the development of linguistic, cognitive and social-emotional skills.[194]

4.42 Chronic stress is also associated with over activity in the amygdala which then activates the stress response system. This can result in an increase in the potential for fear and anxiety. One task of the prefrontal cortex is to suppress amygdala activity, allowing for more adaptive responses to threatening or stressful experiences. However exposure to chronically elevated cortisol levels can damage the neural pathways between the prefrontal cortex and amygdala, limiting the ability of the prefrontal cortex to inhibit amygdala activity. As a result, children may appear, 'to be both more reactive to even mildly adverse experiences and less capable of effectively coping with future stress'.[195]

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[191] Mead, H.K., Beauchaine, T.P. and Shannon, K.E. (2010) 'Neurobiological adaptations to violence across development.' *Development and Psychopathology 22*, 1-22.
[192] *Ibid.*
[193] Shonkoff *et al.* (2012) *op. cit.* p.236.
[194] Shonkoff *et al.* (2012) *op. cit.*
[195] Shonkoff *et al.* (2012) *op. cit.* p.237.

4.43 The prefrontal cortex is also involved with higher cognitive abilities including executive function skills, for example decision-making, working memory, behavioural self-regulation and mood and impulse control (see Chapter Three, paragraphs 3.19 to 3.23). Damage caused by toxic stress to the prefrontal cortex can impede the development of such skills.

4.44 Toxic stress in early childhood can have severe consequences for all aspects of future learning, behaviour and health and these may persist well into adulthood.[196] It may impede a child's progress in school, impair their ability to cope or to respond appropriately under stressful circumstances, increase risk taking behaviour (particularly during adolescence), and inhibit children and young people's ability to form positive relationships.[197] Exposure to toxic stress can also impair a child's ability to respond to loving and nurturing environments, because their stress response system has adapted to survive in a negative environment.[198] This can jeopardise the stability of a foster or adoption placement and increase the likelihood of disruption.

Lack of stimulation and social deprivation in early life

4.45 Chapter Three presents evidence relating to the development of the brain, and discusses why it requires stimulation from the environment and an abundance of face to face interaction from primary caregivers for healthy development. A lack of stimulation and social deprivation during early childhood can cause a variety of developmental problems which include language delay, fine and gross motor delays, impulsivity, disorganised attachment, dysphoria,[199] attention difficulties and hyperactivity.[200] Poor cognitive development and language delay as a consequence of neglect will hamper a child's progress at school,[201] and the lack of an opportunity to form

[196] Shonkoff *et al.* (2012) *op. cit.*
[197] Mead, Beauchaine and Shannon (2010) *op. cit.*
[198] *Ibid.*
[199] Dysphoria is an emotional state characterised by intense feelings of depression, anxiety and discontent.
[200] Perry (2002) *op. cit.*
[201] Hildyard and Wolfe (2002) *op. cit.*

an attachment during infancy will result in children always having difficulties in forming meaningful relationships.[202]

4.46 The term global neglect is often used when children experience deprivation in more than one domain.[203] This was the experience of the children in the Romanian orphanages, where the ratio of caregivers to children was 1:10 for those under three years and 1:20 for those who were older. These children spent up to 20 hours a day in their cots unattended and had very little interaction with adults.[204]

4.47 Studies of these children following their removal from the orphanages and adoption by families in the US or UK revealed the presence of cognitive, social, and physical deficits.[205] Chugani and colleagues[206] carried out a study of ten Romanian orphans, in which they examined factors in the development of the brain that may have caused these problems. When compared with normal adults and children with epilepsy, the Romanian orphans were significantly more likely to show brain dysfunction resulting from their early global deprivation and leading to long-term cognitive and behavioural difficulties.

4.48 Similarly, Perry[207] studied the neuroimages of 122 children who had been referred for specialist clinical evaluation following severe abuse or neglect. Where neglect was the issue, only those children whose experience was extreme were included such as, for instance, one child who had been raised in a cage in a dark room. The findings from this study showed that those children who had been globally neglected (n=40) during the first three years of life had stunted brain growth. The authors concluded that the lack of experiences (sound, smell, touch) associated with the severe neglect was

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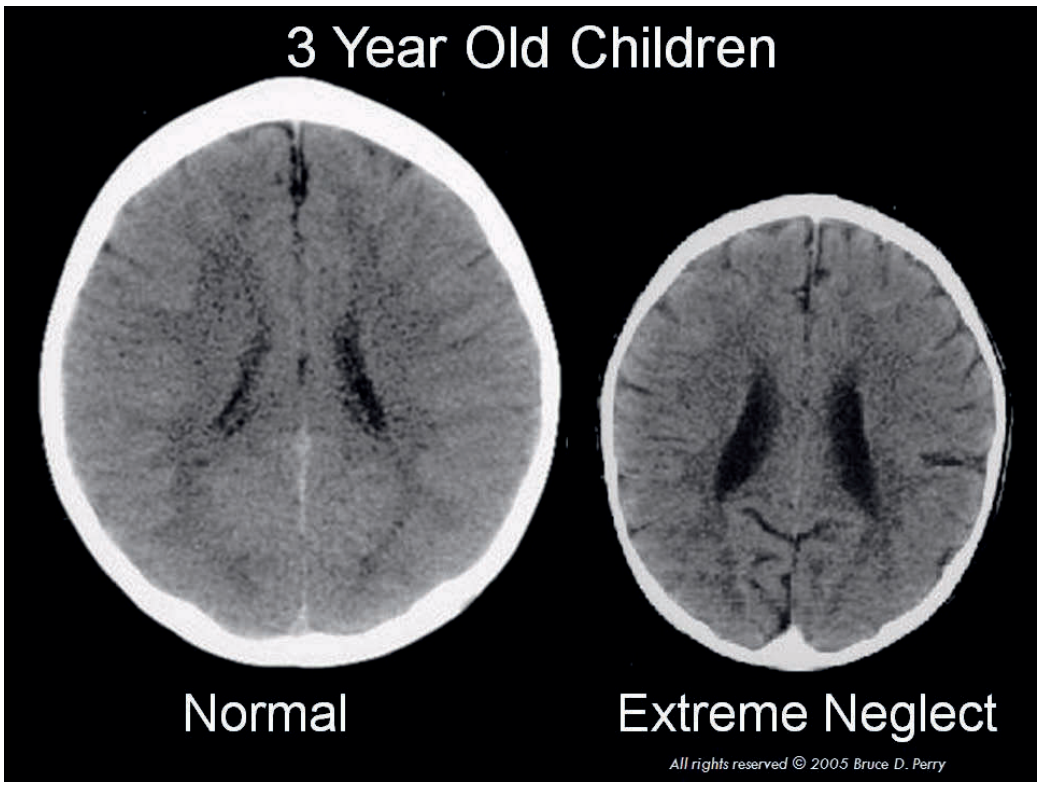
[202] Perry (2002) *op. cit.*
[203] Child Welfare Information Gateway (2009) *op. cit.*
[204] McMullan and Fisher 1992 cited Chugani, Behen, Muzik, Juhász, Nagy and Chugani (2001) *op. cit*.
[205] Rutter, M. for the English and Romanian Adoptees Study Group (1998) 'Developmental catch-up and deficit, following adoption after severe global early privation.' *Journal of Child Psychology and Psychiatry 39,* 465-476.
[206] Chugani *et al.* (2001) *op. cit.*
[207] Perry (2002) *op. cit*

likely to have played a major role in their inhibited brain development. The image below is one example of the negative impact of neglect on the developing brain found in this study. The image on the left is from a healthy three year old with an average head size (50th percentile). The image on the right is from a three year old child suffering from severe sensory-deprivation neglect. This child's brain is significantly smaller than average and has abnormal development of the cortex (cortical atrophy) and other abnormalities suggesting abnormal development of the brain.[208]

Figure 4.1: Images of three year old children's brains comparing a healthy child to a child who had experienced severe neglect



From studies conducted by researchers from The Child Trauma Academy led by Bruce D. Perry, M.D., Ph.D.: www.childtrauma.org. Reproduced with permission.

4.49 Abuse and neglect in infancy and early childhood will have a significant impact on the child's neurobiological development and on their capacity to form attachments. Unless effective action is taken, such experiences can have a long-term, negative impact on all areas of physiological, cognitive,

[208] Perry (2002) *op. cit.*

social, behavioural and emotional development. One reason for such negative outcomes is that when abuse or neglect occurs in early childhood, infants miss out on the high quality experiences that might otherwise help them build up sufficient resilience to cope with later adversity:

> The impact of not receiving adequate caregiving for a child should be seen against a backdrop of their developmental needs. From a developmental perspective deficits in early life would be expected to be more pervasive and severe in their effects than later parenting problems. The reason for this is because, from this perspective, developmental competencies build up over time, each one dependent and reliant upon successful negotiation of previous stages.[209]

Impact of maltreatment in later childhood and adolescence

4.50 Child abuse and neglect typically begin early in childhood; however the damage these experiences cause to all areas of development can have a cumulative effect on subsequent behaviour and health in later childhood and adolescence. Unsurprisingly, socially, emotionally and behaviourally impeded development attributed to abuse and neglect in the early years continues into middle and later childhood. Maltreated children may experience difficulties in coping with the social and academic demands of school and neglected children in particular may fall behind in their language and reading skills.[210] Because subsequent development builds on previous milestones, abused and neglected children can continue to be challenged by normal developmental tasks.[211]

4.51 During middle to late childhood caregiver(s) need to be good role-models and actively encourage sociable behaviour alongside firm and calm limit-setting to promote good adjustment.[212] Parenting which is harsh, rejecting or

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[209] Jones, D. (2009) 'Assessment of parenting.' In J. Howarth (ed) The Child's World: The Comprehensive Guide to Assessing Children in Need (2nd Edition). London: Jessica Kingsley Publishers, p.289.
[210] Hildyard and Wolfe (2002) *op. cit.*
[211] *Ibid.*
[212] *Ibid.*

inconsistent is associated with poorer outcomes.[213]

4.52 Adolescence is a period of preparation for adulthood, when several key developmental tasks are encountered. These include physical and sexual maturation; movement towards social and economic independence; the development of identity; the acquisition of skills needed to carry out adult relationships and roles; and the capacity for abstract reasoning.[214] Adolescence can be a time of tremendous emotional, social and physical growth and potential, however for young people who have experienced abuse and neglect either in their past or present, this is a time of particular vulnerability.

4.53 The neglect of adolescents is a major issue that frequently goes unnoticed.[215] Adolescents can be neglected by services as well as by their families. It is clear that neglect is age-related, and as children grow older it is defined not only by parental behaviours but also by the way in which young people experience them. Davies and Ward[216] argue that some fundamental questions have barely been considered. For instance, there is little public debate or consensus as to what constitutes an acceptable level of supervision as children grow older. Furthermore, teenagers are the second most likely group of children to be the subject of a serious case review.[217]

4.54 As children grow and develop into young adults, the cumulative effects of child abuse and neglect can have detrimental consequences for their health and welfare. Growth in the frontal lobe of the brain may be under developed in young people who have experienced abusive or neglectful parenting during their childhood. This may mean that they are more likely to engage in risk taking behaviour and live a generally unhealthy life style (see paragraph

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[213] *Ibid.*
[214] World Health Organisation. http://www.who.int/maternal_child_adolescent/topics/adolescence/dev/en/index.html Accessed 2 August 2012.
[215] Stein, M., Ward, H. and Courtney, M. (eds) (2011) Special Issue on Young People's Transitions from Care to Adulthood. *Children and Youth Services Review 33*, 12, 2409-2540.
[216] Davies and Ward (2012) *op. cit.*
[217] Brandon, M., Bailey, S. and Belderson, P. (2010) *op. cit.*

3.17). For instance, abused and neglected adolescents are more likely to start drinking alcohol at a younger age and more likely to use alcohol as a way of coping with stress than for other social reasons.[218] Exposure to maltreatment during childhood is also associated with tobacco use, illicit drug use, obesity and promiscuity in adolescence.[219]

4.55 Young people who have been maltreated in childhood are also more likely to have trouble maintaining supportive social networks and are at a higher risk of school failure, gang membership, unemployment, poverty, homelessness, violent crime, incarceration, and becoming single parents.[220] Additionally, if they become parents themselves, they are less likely to be able to provide a stable and supportive environment for their children. This creates an intergenerational cycle of adversity.[221]

4.56 There may also be physiological disruptions in later life as a consequence of abuse and neglect during childhood. For example, the manifestations of toxic stress can cause alterations to the body's immune system and increases in inflammatory markers which are known to be linked to poor health outcomes.[222] [223] [224] [225] [226] These include cardiovascular disease; viral hepatitis; liver cancer; asthma; chronic obstructive pulmonary disease; autoimmune disease; poor dental health; and depression.[227]

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[218] Rothman *et al.* 2008 cited Shonkoff *et al.* (2012) *op. cit.*
[219] Anda *et al.* 1999; 2006 cited Shonkoff *et al.* (2012) *op. cit.*
[220] Shonkoff *et al.* (2012) *op. cit.*
[221] *Ibid.*
[222] Bierhaus. A., Wolf. J., Andrassy. M., Rohleder, N., Humpert, P.M., Petrov, D., Ferstl, R., von Eynatten, M., Wendt, Th., Rudofsky, G. and Nawroth, P.P. (2003) 'A mechanism converting psychosocial stress into mononuclear cell activation.' *Proc. Natl. Acad. Sci. USA 100,* 1920-1925.
[223] Araújo, J.P., Lourenço, P., Azevedo, A. *et al*. (2009) 'Prognostic value of high-sensitivity Creactive protein in heart failure: a systematic review.' *J Card Fail 15*, 3, 256-266.
[224] Galkina, E. and Ley, K. (2009) 'Immune and inflammatory mechanisms of atherosclerosis.' *Annu Rev Immunol 27*, 165–197.
[225] Miller, G. E. and Chen, E. (2010) 'Harsh family climate in early life presages the emergence of a proinflammatory phenotype in adolescence.' *Psychological Science, 21,* 6, 848-856.
[226] Poulton *et al.* 2002; cited Shonkoff *et al.* (2012) *op. cit.*
[227] Shonkoff *et al.* (2012) *op. cit.*

Conclusion

4.57 Child abuse and neglect can occur at any stage during the prenatal period and throughout childhood and adolescence. During infancy, chronic exposure to aggressive, hostile or neglectful parenting has particularly detrimental consequences for brain development, and these can continue throughout the life course and result in long-term cognitive, behavioural, emotional, social, and physiologically impeded development.[228] The most important part of an infant's development is their relationship with their primary caregiver. If this relationship is lacking and the child is not receiving adequate care and stimulation, all domains of their development will be compromised. Maltreatment during infancy has particularly severe consequences for child development. However the impact of maltreatment also reverberates throughout the life cycle. The cumulative effects of maltreatment for young people make their teenage years particularly risky. For instance, young people who have experienced abuse and neglect are more likely to engage in behaviour such as criminal activity, entering violent relationships and substance misuse.

4.58 Evidence of the damaging impact of childhood neglect and abuse throughout adolescence and into adulthood provides a compelling case for taking early decisive action to prevent its occurrence and recurrence and to mitigate its consequences.

[228] Perry (2002) *op. cit.*

Chapter 5: Bringing the research evidence together: decision-making within a child's timeframe

Summary points

- One of the most important issues to confront in promoting better outcomes for abused and neglected children is a mismatch between three timeframes: those of the developing child; those of the courts and those of the local authority.
- The birth of a baby is often a catalyst for change. Children who remain with parents who have not made substantial progress in overcoming adverse behaviour patterns and providing a nurturing home within a few months of their birth may continue to experience maltreatment for lengthy periods.
- Social work decisions concerning permanence are made after lengthy and meticulous deliberations. There is a tendency for delays to occur once a temporary solution has been found and the pressure to resolve a crisis has been relaxed.
- The Children Act 1989 embodies the principle enshrined in human rights legislation and policy that children are best brought up by their own families. Identifying the very few children whose parents will not be able to meet their needs within an appropriate timeframe requires professionals to set aside much of the culture of their training and practice.
- On average, care proceedings take a year to complete; data collected between 2008 and 2011 indicate that courts in only eleven local authority areas meet the previous target of 40 weeks.
- Factors that contribute to delays in completing care proceedings include: resource issues; waiting for parenting assessments and the results of attempted placements with parents; resolution of disputes and changes of plan.
- Repeated assessments of birth parents are a major source of delay, as are

sequential assessments of different groups of relatives. These are sometimes undertaken in spite of obvious contraindications. There is a stark contrast between the frequency of parenting assessments and the paucity of paediatric assessments to ascertain the impact of abuse and neglect on children's development.

- The more complex the case, the greater the proliferation of expert assessments and the longer the delay.
- Professionals encounter numerous difficulties in trying to retain a focus on the best interests of the child: attempts to ensure that parents' rights and needs are respected can conflict with those of their children.
- Most children placed for adoption are aged two or older before they reach their adoptive families. This timeframe is at odds with research evidence that indicates that babies who are placed early for adoption are most likely to form secure attachments with new carers.
- Delayed decisions mean that children experience the cumulative jeopardy of lengthy exposure to abuse and neglect; disruption of attachments with temporary carers; unstable placements at home or in care; and prolonged uncertainty about their future.
- There is a relatively short window of opportunity in which decisive actions should be taken to ensure that children at risk of future harm are adequately safeguarded. Delays close off those opportunities.

Introduction

5.1 Previous chapters have shown how parental problems such as mental ill health, domestic violence, substance misuse and learning disabilities increase the likelihood of child maltreatment, particularly when they occur in combination, and how experience of abuse and neglect has a long-term, negative impact on children's physical, cognitive, social, emotional and behavioural development that can last into adulthood. A wide range of services are provided by statutory, voluntary and private agencies both to

prevent the occurrence of abuse and to mitigate its consequences. Statutory interventions by children's social care and the courts can be complemented by intensive, evidence-based programmes such as Parents Under Pressure (PUP) for substance misusing mothers, or Multi-Systemic Therapy (MST) for families with young people on the verge of custody or care, delivered by specially trained professionals. A number of these programmes are now being piloted in the UK.[229]

5.2 There is not sufficient space in this paper to set out the research evidence concerning the effectiveness of such interventions. Briefly however, in families where children are abused or neglected, social work interventions can be effective if they are decisive and proactive and if they fit in with children's developmental timescales.[230] Actions reinforced by court orders can be more effective than those that are less intrusive, particularly where parents are reluctant to engage with support services or social workers have competing priorities.[231] Where parents do not have the capacity to overcome entrenched, adverse behaviour patterns that damage their children's welfare, placement in the care of the local authority is generally more beneficial for children than remaining at home (or returning there),[232] and adoption is likely to lead to the best outcomes for very young children.[233] A number of intensive, evidence-based interventions have been shown to be effective in other countries and the results of some UK pilots look promising.[234] However one of the key messages from this wide body of research is that the longer that children experience abuse and neglect without sufficient action being taken, the less effective are even the most intensive and intrusive interventions in promoting their long-term wellbeing.

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[229] See Davies, C. and Ward, H. (2012) *op. cit.* Chapter Five.
[230] See Wade, J., Biehal, N., Farrelly, N. and Sinclair, I. (2011) *Caring for Abused and Neglected Children: Making the Right Decisions for Reunification or Long-Term Care.* London: Jessica Kingsley Publishers; Farmer and Lutman (2012) *op. cit;* Ward, Brown and Westlake (2012) *op. cit.*
[231] *Ibid.*
[232] See Wade, Biehal, Farrelly and Sinclair (2011) *op. cit*; Farmer and Lutman (2012) *op. cit*; Forrester, D., Goodman, K., Cocker, C., Binnie, C. and Jensch, G. (2009) 'What is the impact of public care on children's welfare? A review of research findings from England and Wales and their policy implications.*' Journal of Social Policy 38*, 3, 439-456.
[233] See Biehal *et al.* (2012) *op. cit.*
[234] See Davies and Ward (2012) *op. cit.*

5.3 One of the most important issues to confront in developing more effective interventions and promoting better outcomes for abused and neglected children is a mismatch between three timeframes: those of the developing child; those of the courts; and those of the local authority. This chapter explores the findings from research studies in relation to timeframes for decision-making when children are identified as suffering, or likely to suffer, significant harm and applications are made to the courts to instigate care and/or adoption proceedings. It covers local authority pre-proceedings work, court timeframes, and local authority post-proceedings work. The chapter ends by mapping these against what is known about early childhood development (see Chapters Two to Four above) to illustrate where the anomalies lie, and some indication as to how these might be addressed.

5.4 This chapter draws largely on evidence from the following research studies, all of which explored primary data collected in England.

- Masson, J., Pearce, J., Bader, K., Joyner, O., Marsden, J. and Westlake, D. (2008) *Care Profiling Study: Research Series 4/08.* London: Ministry of Justice.
- Ofsted (2012) *Right on Time: Exploring Delays in Adoption*. Manchester: OFSTED.
- Pearce J., Masson, J. and Bader, K. (2011) *Just following instructions? The Representation of Parents in Care Proceedings.* Bristol: School of Law, University of Bristol.
- Selwyn, J., Sturgess, W., Quinton, D. and Baxter, C. (2006) *Costs and Outcomes of Non-infant Adoptions.* London, BAAF.

Timeframes: local authority pre-proceedings work

5.5 Most children who come to the attention of the courts are already well known to social workers; the majority will have been the subject of a lengthy decision-making process both before referral to children's social care, and

before the local authority decides to instigate court proceedings.[235] Masson and colleagues[236] studied the files of 386 children who were the subject of care proceedings between 2004 and 2007. The majority (91%) were already known to children's social care pre-proceedings: 81% for at least one year and 45% for at least five years.

5.6 Ward and colleagues[237] studied the decision-making process that influenced the life pathways and developmental progress of a sample of infants for whom safeguarding concerns had been raised before their first birthdays. The key issue that professionals had to resolve was whether these children could safely remain with birth parents who were known to have abused or neglected them (or been unable to protect them from abuse by others), or whether they should be removed and placed permanently away from home. There was no evidence to support common criticisms that decisions made by professionals are arbitrary or taken without careful thought. However, social work practitioners frequently postponed taking decisive action pending further assessments of parenting capacity and parental progress. As a result, early decisions were almost always temporary, made with the proviso that parents might be able to overcome their difficulties; it took on average 14 months for a more definitive decision, that might lead to permanence to be made, and a further six months for it to be activated; longer if the decision was to place for adoption. Two thirds (32/43:65%) of the children in this study were identified before birth either because the mother was abusing substances or involved in domestic violence during the pregnancy, and/or because the family were already known to children's social care because of concerns about the maltreatment of older siblings. Nevertheless even in this study, where only about a third of cases involved an additional timeframe in which professionals in other services or members of the public decided to refer a baby to children's social care, half of the children in this sample were over a year old before definitive and viable decisions were made about their

[235] Ward, Brown and Westlake (2012) *op. cit.*
[236] Masson, J., Pearce, J., Bader, K., Joyner, O., Marsden, J. and Westlake, D. (2008) *Care Profiling Study: Research Series 4/08.* London: Ministry of Justice.
[237] Ward, Brown and Westlake (2012) *op. cit.*

future. During this period some of these very young children were exposed to ongoing maltreatment, with long-term negative consequences for their life chances. Such a timescale is at odds with the child development research, presented in Chapter Four, that demonstrates the extensive impact of exposure to abuse and neglect in the first two to three years of life.

5.7 The prospective study of infants suffering significant harm also showed that 93% (13/14) of the parents who were able to overcome adverse behaviour patterns sufficiently to provide a nurturing home did so within the first six months of the birth. Where children remained with birth parents who had not made substantial progress within this timeframe (12 cases), concerns about maltreatment persisted and were still evident at the child's third birthday.[238] This finding has obvious implications for timescales for decision-making and for intensive interventions. However it is drawn from the experiences of a very small number of children in what is already a relatively small study. It needs testing out with a larger sample. Nevertheless, these children are now aged between six and seven and some of their life trajectories are beginning to show patterns of experience that mirror those of a sample of 130 children who had been approved for adoption between 1991 and 1996, when they were between the ages of three and eleven (i.e. after they had ceased to be infants) and studied by Selwyn and colleagues[239] when they were aged between 7 and 21. By the time of follow up 80 (62%) were still in adoptive families (83% of those actually placed); 34 (26%) had been in long-term foster care or other permanent placements, and 16 (12%) children had had very unstable care careers, with numerous disruptions of foster placements and many moves between educational, residential, therapeutic and secure environments.

5.8 The children in the study by Selwyn and colleagues had remained at home for an average of 2.7 years from the date of the first social work intervention until becoming looked after. In 68% of these cases there was evidence of

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[238] *Ibid.*
[239] Selwyn, J., Sturgess, W., Quinton, D. and Baxter, C. (2006) *Costs and Outcomes of Non-infant Adoptions.* London: BAAF.

delayed decision-making, defined as 'a lack of planning or reassessment of the approach being used where there had been no sign of any improvements in the family circumstances after 12 months of social services intervention',[240] 41% of these children had waited on average for more than two years before a permanency plan was in place. Where delay was identified, children were usually living in families where they were continuing to be abused and neglected; however this study found that frequently it was not until a child started to speak or started nursery or school that action to remove them from their birth parents began.

Pre proceedings: Reasons for delays

5.9 Poor planning as defined by Selwyn and colleagues (above) and reactive rather than proactive case management have been identified by a number of studies as reasons for delayed decisions to instigate care proceedings. Social services activity is often extremely intensive, particularly if there is an urgent need to safeguard a child following a crisis. However once a temporary solution has been found and the pressure is relaxed there can be delays in moving towards making and implementing more permanent arrangements. For instance, McKeigue and Beckett[241] explored the cases of fifty children who were the subjects of care proceedings in one local authority during 2004 and 2005 and found such delays were evident after a decision had been reached to initiate care proceedings, following which several months could elapse before it was activated. They also found that similar delays occurred after a child had been accommodated under s. 20 Children Act 1989: 37% of their sample had already spent on average 14 weeks in foster care at the outset of proceedings. Extended periods spent being accommodated by the local authority added to the length of time these children were living with uncertainty about their present and future care without long-term plans being made. An Ofsted study[242] which examined 89 adoption cases across nine local authorities between November 2011 and

[240] *Ibid.* p.36.
[241] McKeigue, B. and Beckett, C. (2010) 'Squeezing the toothpaste tube: Will tackling court delay result in pre-court delay in its place?' *British Journal of Social Work 40*, 154-169.
[242] Ofsted (2012) *Right on Time: Exploring Delays in Adoption*. Manchester: OFSTED.

January 2012 also found an over-reliance on accommodation under s. 20. This was largely considered to be indicative of a reactive case management approach to crises in families. Reactive case management is inevitably more likely when there are staff shortages and cases remain unallocated, without a social worker to drive decisions forward.[243]

5.10 Reactive case management and poor planning are by no means the only reason for delays in decision-making before proceedings, though these problems are likely to increase as resources become more constrained and pressures on children's social care increase. A number of studies have found that local authority legal departments can delay decisions to instigate proceedings, particularly in cases of neglect and emotional abuse where evidence of the corrosive impact on children's welfare can be difficult to collate and present convincingly.[244] [245]

5.11 The Children Act 1989 embodies the principle enshrined in human rights legislation and policy that children are best brought up by their own families. Ward and colleagues[246] found that the task of identifying the very few children whose parents will not be able to overcome damaging behaviour patterns and meet their children's needs within an appropriate timeframe requires professionals from all backgrounds, including social services and the courts, to set aside much of the culture of their training and practice, and this has led to such conclusions only being reached after lengthy, and sometimes excessively time-consuming, deliberations.

Timeframes: during proceedings

5.12 Masson and colleagues[247] found that just over half (52%) of the 386 cases they followed through care proceedings were not completed within 40 weeks. The Public Law Outline (PLO) was introduced in 2008 (and revised in

[243] McKeigue and Beckett (2010) *op. cit.*
[244] See Selwyn *et al.* (2006) *op. cit.*
[245] Ward, Brown and Westlake (2012) *op. cit.*
[246] *Ibid.*
[247] Masson *et al.* (2008) *op. cit*.

2010) with the intention of ensuring that: care and supervision proceedings were only used where there was no alternative; applications were better prepared, the courts enabled to make decisions more quickly and resources used more cost effectively; and that parents were engaged in the process from the start.[248] A qualitative study that tracked 16 cases as they proceeded through the court system after the PLO had been introduced found that on average cases lasted 17 weeks longer than the 40 week target and involved a greater number of hearings (average 7.25) than the four envisaged by the PLO structure.[249] Their findings indicated that the structure for handling care proceedings provided by the PLO had failed to reduce the length of cases or numbers of hearings, or to impact on the underlying culture of care proceedings. There is, however, considerable variation between the ability of courts to complete care proceedings within 40 weeks, Beckett and McKeigue[250] found that in the one local authority of their study only 14% of cases failed to meet this target. More recent data from national statistics show that between 2008 and 2011, the average length of care proceedings was 52 weeks, and that only eleven local authority areas met the 40 week target. Once again there was considerable variation, with average length of proceedings ranging from 31 to 75 weeks.[251]

Causes of delay: courts

5.13 Masson and colleagues[252] identified 18 factors that contributed to delays in completing care proceedings. These included resource issues, such as listing difficulties, delays in ordering and completion of reports, appointment of guardians and the failure of the local authority to keep to the court timetable. Other, more complex factors covered issues such as waiting for residential assessments, the results of attempted placements with parents,

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[248] See Ministry of Justice (2008, 2010) *The Public Law Outline: Guide to Case Management in Public Law Proceedings.* London: Ministry of Justice; Pearce and Masson (2011) *op. cit.*
[249] Pearce and Masson (2011) *op. cit.*
[250] Beckett, C. and McKeigue, B. (2010) 'Objects of concern: caring for children during care proceedings.' *British Journal of Social Work 40, 2*086-2101.
[251] Department for Education (2012) *Adoption Scorecard Underlying Data, 2008-2011,* http://www.education.gov.uk/childrenandyoungpeople/families/adoption/a00208817/adoption-scorecards.
[252] Masson *et al.* (2008) *op. cit*.

resolution of disputes and changes of plan.[253] The most common causes of delay were late ordering and completion of reports and time taken waiting for results of assessments.

5.14 A study carried out by Ofsted,[254] which explored the effectiveness of arrangements to avoid delayed adoption, examined 89 cases across nine local authority areas and found that the most common reason for delay was the length of time taken for care proceedings to be concluded before an adoption plan could be confirmed. There were several reasons for these delays which included:

- Repeat assessments of birth parents;
- Additional assessments of relatives, often commenced late in proceedings;
- Additional expert assessments, sometimes by independent social workers;
- A general lack of social worker confidence and assertiveness within the court arena, which sometimes led to a lack of challenge to changes in plans and additional assessments; and
- Insufficient capacity of local courts to meet demand, resulting in timetabling difficulties.

5.15 A number of other studies have also identified similar issues concerning a proliferation of expert assessments. Ward and colleagues[255] found repeated assessments of parenting capacity to be a major cause of delayed decisions. In two thirds of cases where infants had been born either during or within months of court proceedings to remove older siblings, further psychological or parenting assessments were undertaken in respect of the new baby. While this study found repeated assessments of parents, there was no evidence of paediatric assessments to ascertain the impact of alleged maltreatment on children's health and development.

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[253] For a full list see Masson *et al.* (2008) *op. cit*. p.112.
[254] Ofsted (2012) *op. cit.*
[255] Ward, Brown and Westlake (2012) *op. cit.*

5.16 This study also corroborates Ofsted's finding that assessments of relatives were a further source of delay. As with birth parents, professionals made extensive efforts to assess relatives, sometimes in the face of strong contraindications of their ability to care for a child. Assessments of relatives can be a significant cause of delay because they are usually undertaken consecutively, with a new assessment only beginning after other relatives have been assessed and found unsuitable.

5.17 Masson and colleagues[256] found that the more complex the case, the greater the proliferation of expert assessments. Six or more experts were instructed in 61 (15.8%) of the cases they studied. The greater the number of experts instructed, the longer the delay: 2.1% of cases with five or more experts were completed within six months, and 46% took over six months to reach a conclusion; where no experts were appointed these figures were almost reversed (31.9% and 2.6% respectively).[257]

5.18 Repeated or numerous expert assessments cause delays, partly because they can take several months to complete, but also because there is often a waiting list before they can begin. However assessments by independent social workers are often undertaken not so much to provide an additional expert opinion or to identify whether there is any new evidence of parental capacity to change, but to supplement the local authority assessment, which may contain inadequate information, or be regarded by the courts as insufficiently reliable. For instance, Brophy and colleagues[258] found that in 43% of cases an independent social worker was instructed to assess a parent because a previous assessment by a local authority had not included this parent or a new partner.[259] They argue that these assessments can contribute important information that has previously been inaccessible, and 'may reduce the likelihood of a contested hearing, and so [they] may enable

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[256] Masson *et al.* (2008) *op. cit*.
[257] *Ibid.* p101.
[258] Brophy, J., Owen, C., Sidaway, J. and Johal, J.J. (2012) *The Contribution of Experts in Care Proceedings: Evaluation of Independent Social Work Reports in Care Proceedings.* Oxford: Department of Social Policy and Intervention, University of Oxford.
[259] *Ibid.* p.24.

courts to meet increasingly tight timetabling targets and assist in the early resolution of a case'.[260]

5.19 Masson and colleagues[261] point out that the proliferation of expert assessments has its roots in the same principle of law that children are best brought up by their own families identified above:

> Care cases are recognised by everyone working with them to be potentially very stressful – the court's powers are 'draconian' and the parents' circumstances dire. Decisions to grant care orders and approve adoption plans can be difficult to make without the clearest evidence…. In this context, commissioning additional assessments and examining the widest range of possible alternatives is not just a contribution to delay but a means of being satisfied that there has been no rush to judgment.[262]

5.20 The difficulty is that attempts to ensure that parents' rights and needs are properly respected can conflict with those of their children. Many of the studies cited[263] identify the difficulties that professionals face in trying to retain a focus on the best interests of the child.

Timeframes: local authority post-proceedings work

5.21 Once a decision regarding a child's future has been reached, the local authority must complete and implement their permanency plan. The average length of a care episode for children who are made the subjects of care orders is 1756 days (about four years nine months), about four times the length of time that children are placed in accommodation under the Children Act 1989, Section 20. However children who are the subject of a care order may be relatively quickly returned home under placement with parents regulations: the average length of these placements is 427 days (24% of the average care episode). The average length of all care episodes has increased by about a month over the last five years; however this increase is

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[260] *Ibid.* p.38
[261] Masson *et al.* (2008) *op. cit*.
[262] Ibid. p.64.
[263] For example Ward, Brown and Westlake (2012) *op. cit*; Masson *et al.* (2008) *op. cit.;* Wade *et al*. (2011) *op. cit;* Farmer and Lutman (2012) *op. cit.*

substantially greater (3.5 months on average) when only children who are the subject of care orders are included in calculations.[264] In view of research evidence which indicates that children on care orders tend to be better protected and receive a more intensive service than those looked after under voluntary arrangements,[265] this is by no means necessarily a negative finding.

Timeframes for adoption

5.22 The most recent national statistics on adoption show that the average time (for all ages) between the child becoming looked after and the decision to pursue adoption is 11 months. It then takes an average of 10 months (again for all ages) before a child is matched and placed with an adoptive family. Therefore there is an average period of 21 months between a child initially being removed from home and reaching permanency via adoption (and a further ten months before this is finalised by an Adoption Order).[266] Given that in most cases it will also have taken several months to make the decision to refer to children's social care and then to decide that a child cannot be looked after by their birth family, it is not surprising that most children placed for adoption are aged two or older before they reach their adoptive families. This timeframe is at odds with the research evidence which indicates that babies who are placed early for adoption are most likely to form secure attachments to new carers: Van den Dries and colleagues[267] undertook a series of meta-analyses of studies that explored adopted children's attachment relationships with their adoptive parents. They found that children who were adopted before 12 months of age were as securely attached as their non-adopted peers, whereas children adopted after their first birthdays showed less attachment security (i.e. more evidence of

[264] Figures calculated from Department for Education (2011c) Children Looked After by Local Authorities at 31 March 2011 (including Adoption and Care leavers), updated November 2011, Tables D4 and D5.
[265] See Wade *et al.* (2011) *op. cit*.
[266] Department for Education (2011c) *op. cit.*
[267] Van den Dries, L., Juffer, F., Van IJzendoorn, M.H. and Bakermans-Kranenburg, M.J. (2009) 'Fostering security? A meta-analysis of attachment in adopted children.' *Children and Youth Services Review 31*, 410-421.

attachment disorders) than non-adopted children.

Causes of delay: adoption

5.23 Farmer and Dance[268] carried out a study which examined family finding and matching in 149 adoption cases. They found that a number of those factors that related to delays in matching children with adoptive families were similar to those related to delays in instigating proceedings (above). These involved poor planning and inadequate case management and included: a lack of proactive work by the social worker or family finder (41%); delays in exploring inter-agency options (30%); slowness in assessing potential adoptive families (18%) and rigidity in adoptive family search requirements (14%).

5.24 Children's characteristics such as age, ethnicity and health and developmental difficulties are significantly related to delays in matching them with adoptive parents.[269] Delays in the pathway to permanence for Black, Asian and mixed ethnicity children are further compounded by difficulties in finding a family of similar ethnicity, and professional disagreement about placing children in 'trans-racial' placements.[270] Selwyn and colleagues[271] found that the likelihood of adoption for both Black and Asian children was low, although statistical analysis showed that mixed ethnicity children were four times more likely to be adopted than Asian children. The plan moved away from adoption for 64% of Asian children in their sample.

5.25 However the most important predictive factor as to whether a child is adopted or not is age. The older the child at the time of an adoption recommendation the less likely it is that they will be placed. Indeed, children

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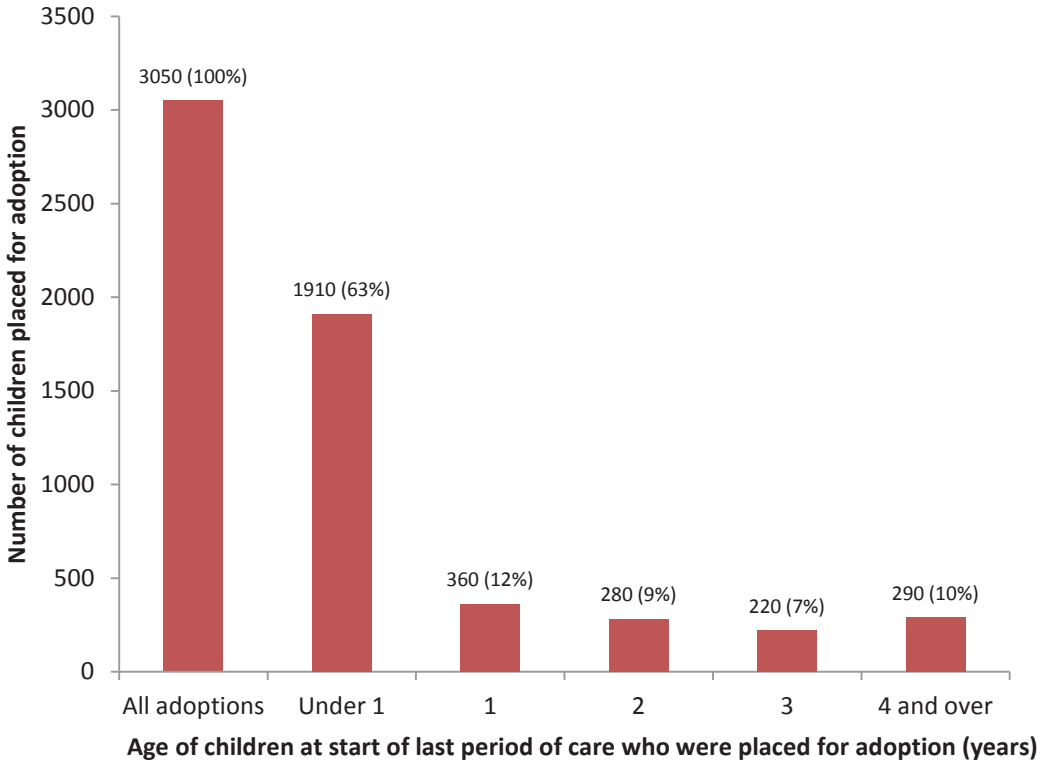
[268] Farmer, E. and Dance, C. with Beecham, J. Bonin, E. and Ouwejan, D. (2010) *An Investigation of Family Finding and Matching in Adoption.* Report to the Department for Children Schools and Families. Centre for Family Policy and Child Welfare: University of Bristol.
[269] *Ibid.*
[270] Selwyn, J., Harris, P., Quinton, D., Nawaz, S., Wijedasa, D. and Wood, M. (2008) *Pathways to Permanence for Black, Asian and Mixed Ethnicity Children: Dilemas, Decision-Making and Outcomes.* London: Department for Children, Schools and Families.
[271] *Ibid.*

under the age of three in Selwyn and colleagues' study[272] were 10 times more likely to be adopted than children over that age at the time of a panel recommendation. Further analysis of the national statistics graphically illustrates this point. Chart 5.1 below shows the number of children who were adopted in England during 2011.[273] Almost two thirds (63%) of those who were adopted during the year were aged under one at the time of placement. Under 10% were aged four or over. Children placed for adoption before their first birthdays are substantially more likely to be adopted than those who are older, showing that as children grow older they are increasingly unlikely to follow this route. Therefore the timeliness of decision-making before, during and after care proceedings is crucial in determining the likelihood that a child will reach permanency through adoption. As Chart 5.2 shows, a major factor is the increasing difficulty in finding suitable adoptive families as children become older.[274] This chart shows the percentage of children who were adopted within 12 months of an agency decision that they should be placed for adoption by age group, during the year 2011.[275] Many more families are willing to adopt babies than older children, with the result that children under the age of one year are substantially more likely to be placed within 12 months of the decision to adopt than older children. As children grow older, the chances of them being able to move swiftly to an adoptive family decrease and their futures become increasingly jeopardised by temporary, insecure arrangements.

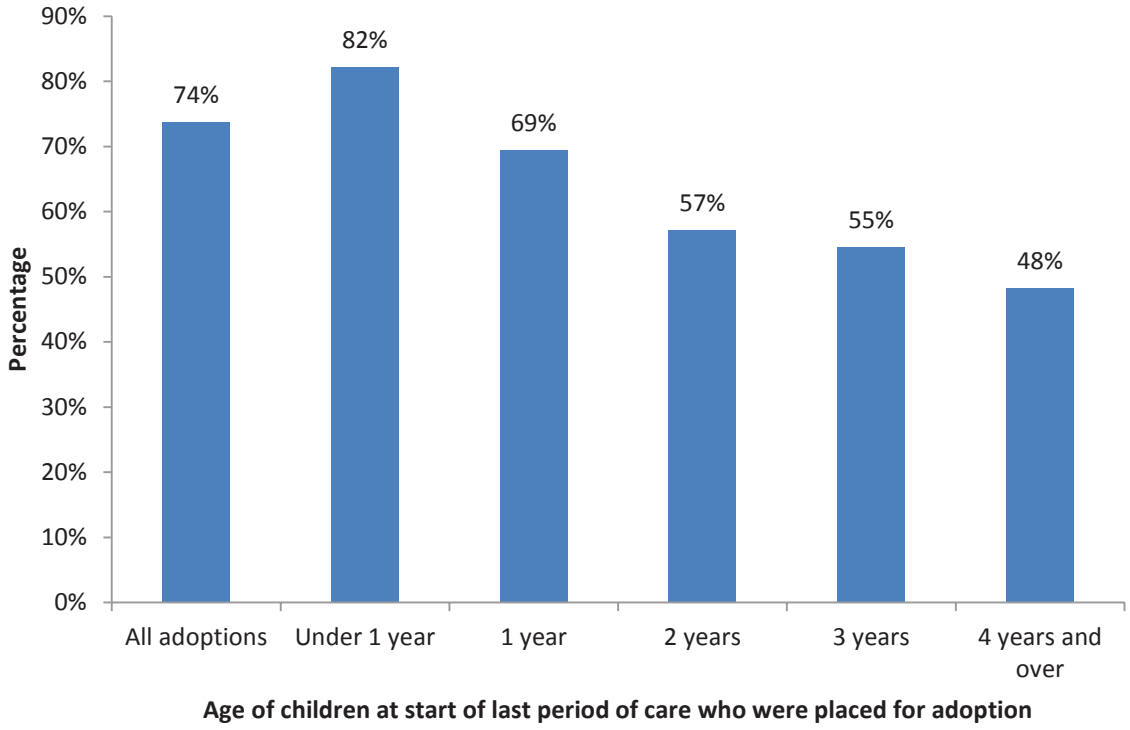
[272] *Ibid.*
[273] Department for Education (2011b) *op. cit.*
[274] Selwyn *et al.* (2008) *op. cit.*
[275] Department for Education (2011b) *op. cit.*

Chart 5.1: Children adopted in 2011 (numbers placed by age)[276]



[276] Data from: Department for Education (2011b) *Outcomes for Children Looked After by Local Authorities in England, as at 31 March 2011* SFR 30/2011. http://www.education.gov.uk/rsgateway/DB/SFR/s001046/sfr30-2011v3.pdf

Chart 5.2: Children adopted during 2011 who were placed for adoption within 12 months of an agency decision that the child should be placed for adoption as a percentage of total adoptions[277]



Conclusion: Cumulative jeopardy

5.26 There is a complex interaction between child development timeframes and delayed actions by local authorities and the courts. Firstly, research on child development and the consequences of abuse shows that the longer children are left inadequately protected from all forms of maltreatment (emotional abuse and neglect, as well as physical and sexual abuse) the greater the chance that their long-term wellbeing will be compromised. Three recent English studies that explored the consequences of professional decision-making in neglectful and/or abusive families all found that a high proportion of maltreated children are left in very damaging circumstances with inadequate action being taken to safeguard them, and with adverse consequences for their health and development.[278] [279] [280] Intensive

[277] *Ibid.*
[278] See Farmer and Lutman (2012) *op. cit.*
[279] see Wade *et al.* (2011) *op. cit.*

interventions such as the Family Drug and Alcohol Courts[281] can make a difference in families, prevent recurrence of abuse and neglect and enable children to remain safely at home. They are also able to show where parents are not able to change within a child's timeframe, so that decisions concerning alternative routes to permanence can be made in a timely fashion. However such interventions are not yet widely available in this country.

5.27 Secondly, a number of studies have shown that, once children are removed from abusive families they often spend lengthy periods in temporary placements before long-term plans are made for their future.[282] Young children can become closely attached to interim carers, only to experience further loss when this attachment is disrupted as they move to a permanent home. Ward, Brown and Maskell Graham[283] found that infants who had experienced this double jeopardy (six months or more in an abusive environment followed by a short period of stability and then a disrupted attachment) were showing severe developmental and behavioural difficulties by the time they were three, and that these persisted as they entered formal education. Again, evidence based interventions were not available for these children, and indeed some carers had difficulty in accessing any psychotherapeutic or behavioural support for them.

5.28 The long-term wellbeing of abused and neglected children can be jeopardised in other ways. Frequent changes of placements are one of the most problematic aspects of the current care system in England, as each change can have a negative impact on children's developmental progress, and particularly their capacity to form secure attachments. Studies by Masson and colleagues[284] and Ward, Munro and Dearden[285] both identified a relationship between delayed decisions and placement instability when

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[280] See Ward, Brown and Westlake (2012) *op. cit.*
[281] See Harwin *et al.* (2011) *op. cit*.
[282] See Ward, Munro and Dearden (2006) *op. cit*; Masson *et al.* (2008) *op. cit*.
[283] Ward, Brown and Maskell Graham (2012) *op. cit.*
[284] Masson *et al.* (2008) *op. cit*.
[285] Ward, Munro and Dearden (2006) *op. cit.*

children are looked after away from home. Masson and colleagues found that 'the longer the case lasted the more likely it was that the child would move':[286] children moved during the proceedings in over 80% of the cases in this study. Ward, Munro and Dearden[287] found that very young children move at least as frequently as teenagers, and that instability is closely related to the provisional nature of decisions, as children move back and forwards between temporary, short-term foster homes and placements with own parents or new carers while they wait for permanence plans to be made.

5.29 Finally, there is also a relatively short window of opportunity in which decisive actions can be taken to ensure that children are adequately safeguarded. Delays close off these opportunities. If children are to remain at home, proactive engagement with social workers needs to begin early, particularly in view of evidence that case management becomes less active after they reach their sixth birthdays. There is a body of research evidence to show that if abuse and neglect are not adequately addressed at an early stage, as children grow older they may benefit less both from specialist interventions to address its consequences and from separation to prevent its recurrence.[288] [289] Early intervention is also urgently necessary where there are concerns that a child might need to be placed for adoption, for not only do children become increasingly difficult to place as the consequences of long-term exposure to abuse and neglect become more entrenched, but also adoptive carers are harder to find for older children.

5.30 The following timeline, showing best and worst case scenarios related to child development timescales where children remain with their birth parents and where adoption is the conclusion illustrates how these issues intertwine.

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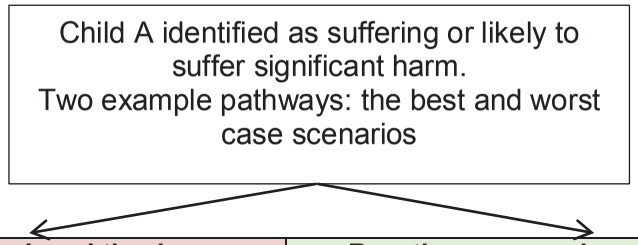
[286] Masson *et al.* (2008) *op. cit.* p.61.
[287] *Ibid.*
[288] Montgomery, P., Gardner, F. and Bjornstad, G. (2009) *Systematic Reviews of Interventions following Physical Abuse: Helping Practitioners and Expert Witnesses Improve the Outcomes of Child Abuse.* London: Department for Children, Schools and Families.
[289] Ward, Holmes and Soper (2008) *op. cit.*

Figure 5.1: Pathway to permanence: remaining with birth parents



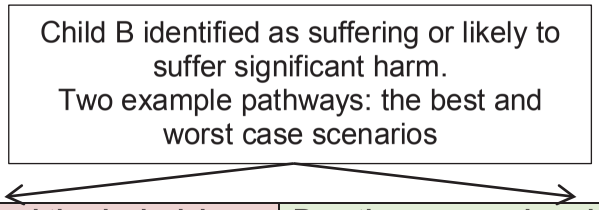
Age of child	Key points in a child's developmental timeframe	Proactive case work and timely decision making: positive outcomes	Reactive case work and delayed decision making: cumulative jeopardy
Pre-birth	Majority of brain's neurons are formed and positioned prenatally. Exposure to drugs/alcohol/violence *in utero* can have a detrimental impact on child's health and wellbeing.	• Pre-birth assessments conclusive. • Proactive social care case work during pregnancy commences. • Parents sporadically engage with an intensive evidence based parenting programme. • Parents address some but not all of their difficulties such as domestic violence and substance misuse. • Extended family offer support and parents accept it.	• Pre-birth assessments inconclusive. • Reactive social care case work. • Parents begin to address difficulties such as domestic violence and substance misuse. • Extended family offer support, however parents do not accept this support. • Parents' reluctant to accept social work support – false compliance.
Birth	The brain is an immature organ at birth. Newborn babies require stimuli from their environment allowing them to adapt to their specific circumstances. Interactions with caregiver(s) are a crucial part of brain development. Babies require experiences rich in touch, face to face contact and stimulation through conversation (or reciprocating baby babble). These stimuli encourage a more richly networked brain (the production of synaptic connections between neurons). A newborn baby also cannot regulate their own emotions; they rely on their caregiver(s) to respond to their cries for food, warmth, comfort and protection. Babies learn how to regulate their emotions through	• Decision to initiate care proceedings to facilitate removal of child should this be necessary. • Child remains with birth parents with an ICO. • Parents engage more consistently with the intensive evidence based parenting programme. • Parents also engage with substance misuse and domestic violence services. • Extended family provides support to parents and help with child care. • Child's brain is developing rapidly and adapting to an environment of experiences rich in stimuli where their needs are met and a secure attachment	• Child remains with birth parents. • Decision not to initiate care proceedings as parents have made slight improvements – their substance use has decreased. • Reactive case work continues. • No monitoring of home circumstances. • Child's needs are not consistently met and there are episodes of domestic violence in the home. • Mother experiences post natal depression. • Child's stress response system is regularly activated and chronically high levels of cortisol are released. • Child's environment is not rich in stimuli

	their attachment to their caregiver(s). This process starts at birth at the latest.	begins to form with parents and close members of the extended family. • A richly networked brain is developing.	and the developing networks within their brain are limited – particularly those governing the social aspects of life. • Child begins to form an insecure attachment
6 months	At around the age of six months an infant can generally show a clear attachment to their caregiver(s) and providing they have formed a secure attachment they begin to develop a normal pattern of cortisol level. Cortisol is a hormone which is released when the stress response system is activated. Persistent high levels of cortisol have a detrimental impact on health and wellbeing, and can cause damage to the brain. An infant can experience high levels of cortisol if their basic needs are not met and/or if they experience aggressive or hostile parenting.	• Care proceedings completed within 26 weeks. • Child subject to a CO under placement with parent regulations. • Continued monitoring of home circumstances. • Parents have addressed all of their difficulties and focus on the needs of their child. • Extended family continues to be heavily involved with child care and support for parents. • Child has developed a secure attachment and begins to regulate their cortisol levels. • Child's brain is continuing to rapidly develop in response to their environment and interactions with caregivers. Rich neural networks are being formed.	• Child remains with birth parents. • Monitoring of case decreases. • Home circumstances deteriorate and parents' substance misuse and domestic violence escalate. • Child's cortisol levels have been consistently high. Stress response system develops atypically. • Insecure attachment relationship with caregivers continues. • Child's brain is developing in response to insufficient stimuli and inconsistent and hostile parenting. Neural networks in areas of the brain which govern social aspects of life are limited.
1 year	The human brain increases in volume more during the first year of life than at any other time. Therefore a positive environment, experiences and interactions with caregivers are crucial during this time to ensure healthy brain development.	• Child remains subject to a CO under placement with parents regulations. • Monitoring of case continues • Home circumstances remain stable • Extended family remains heavily involved. • Child has developed a richly networked brain and secure attachment relationships. Child has begun to develop a healthy stress response system.	• Domestic violence and parents' substance misuse escalates further. • Child's home is used for drug use and prostitution. There are often many drug users in the home. • Child is often cared for by a wide range of people. • Children's social care increase their monitoring of the case, however care proceedings are not initiated. • Child has formed a disorganised attachment. • Child's stress response system has

			established atypically, and chronically elevated cortisol levels have caused brain damage.
2 years	From about the age of two years onwards the connections within the brain which have been developed are either strengthened if they are being used or discarded if they are not being used. This allows the brain to become more efficient and finely tuned. Experience continues to be a crucial factor in determining which synapses are strengthened and which are lost, this is often referred to as 'use it or lose it'.	• Birth of a sibling • Child remains the subject of a CO to monitor parents' continued ability to provide adequate care for index child and new baby. • Extended family remains involved. • Home circumstances remain stable • Child's brain is becoming more efficient as a result of the neural connections being strengthened as child is receiving good stimulation. • Child developing healthily and no behavioural or developmental difficulties have emerged.	• Birth of a sibling • Attention no longer focuses on index child. Parents given repeated opportunity to demonstrate capacity for change, but they remain resistant to engage with children's social care services. • Substance misuse and domestic violence continue. • Child begins to display behavioural and developmental difficulties.
3 years	Between the ages of three and five years there is a window of opportunity for dramatic development of executive function, which includes; working memory, inhibitory control, and cognitive and mental flexibility. Executive function skills are crucial for school readiness. Without development in this area school performance, both academically and socially will be impaired. The foundations for the development of executive function begin to develop from birth, and continue through childhood and adolescence.	• CO is revoked. • Intensive interventions completed but continuing support provided to family by universal and targeting services. • Extended family remains supportive. • Parents have remained abstinent and there is no evidence of domestic violence. • Child begins pre-school and is able to form friendships with other children and good relationships with pre-school workers. • Child's executive function skills are developing well.	• Crisis interventions put in place as child found wondering the streets alone. • Child made subject to an EPO and placed with extended family members. • Care proceedings are initiated. • Kin carers struggle to cope with child's disruptive and aggressive behaviour. • Child begins pre-school, however struggles to form friendships with other children or good relationships with pre-school workers. Child is often aggressive towards other children and staff. • Child's executive function skills are limited.
4 years	At about this time, and providing a child's needs for a secure attachment have been met, a normal pattern of cortisol level is established (it has taken since about the age of four to six months for this pattern to regulate).	• Home circumstances remain stable and extended family continues to play an important role in support for parents and care of child. • Child starts school and does well both academically and socially.	• Extended family can no longer cope with caring for child due to their behavioural difficulties and attachment disorder. • Child is reunited to parents but the return is unplanned. • Sequential and repeated specialist assessments of parents and kin are

			commissioned. • Care proceedings complete in 50 weeks - conclude child can remain with birth parents as some improvements have been made during past year. • Child starts school but finds it difficult to cope both academically and socially.
Adolescence	Around the time of puberty the brain has a growth spurt in the higher regions which govern, planning, impulse control, reasoning and the regulation and reaction to emotions. Prior to this growth spurt young people are more prone to engage in dangerous risk taking behaviour and are not sufficiently able to interpret emotions, particularly if there is no secure attachment figure available to them to help them negotiate these tasks. This is because they rely on their more primitive limbic response and lack the more mature cortex which can override the limbic response. Young people may never develop these capabilities if development in other areas of the brain is not sufficient.	• Young person has remained with birth parents and has close bond with extended family. • Young person's brain is continuing to develop healthily and young person has started to be able to plan, control impulses, reason and regulate and react to emotions. • Young person continues to have secure attachment figures who help to negotiate their developmental tasks of adolescence. • Young person engages well with school and plans to continue in higher education.	• Young person has frequently moved between parents and relatives as situation at home has been unstable. • Parents have often made slight improvements and have abstained from drug use over short periods but this has not been maintained in the long-term. • Domestic violence has continued throughout. • Young person engages in risk taking behaviour and finds it difficult to form positive peer relationships. • Young person also has difficulties in being able to empathise, to reason and to regulate and interpret emotions. Development in young person's higher regions of the brain has been limited. • Young person involved with youth offending team and does not engage with school. • Young person has begun to use alcohol.

Figure 5.2: Pathway to permanence: separation



Age of child	Key points in a child's developmental timeframe	Proactive case work and timely decision making: positive outcomes	Reactive case work and delayed decision making: cumulative jeopardy
Pre-birth	Majority of brain's neurons are formed and positioned prenatally. Exposure to drugs/alcohol/violence can have detrimental impact on health and wellbeing, and once born may make baby harder to care for.	• Issues relating to parenting capacity include domestic violence and substance misuse. • Pre-birth assessments conclusive and proactive case work during pregnancy.	• Issues relating to parenting capacity include domestic violence and substance misuse. • Pre-birth assessments inconclusive. • Reactive case work.
Birth	The brain is an immature organ at birth. Newborn babies require stimuli from their environment allowing them to adapt to their specific circumstances. Interactions with caregiver(s) are a crucial part of brain development. Babies require experiences rich in touch, face to face contact and stimulation through conversation (or reciprocating baby babble). These stimuli encourage a more richly networked brain (the production of synaptic connections between neurons). A newborn baby also cannot regulate their own emotions; they rely on their caregiver(s) to respond to their cries for food, warmth, comfort and protection. Babies learn how to regulate their emotions through their attachment to their caregiver(s). This process starts at birth at the latest.	• Decision to initiate care proceedings. • Child placed in foster care subject to an ICO. • Child's brain is developing rapidly and adapting to an environment of experiences rich in stimuli where their needs are met and a secure attachment begins to form. • A richly networked brain is developing.	• Child remains with birth parents and is subject to neglect and emotional abuse. • Reactive case work continues. • No monitoring of level and/or impact of neglect and emotional abuse experienced by child. • Child's needs are not consistently met; child is often negatively aroused creating an atypical stress response system. Caregivers unable/unavailable to help child regulate response to stress. Child experiences consistent high levels of cortisol. • Child's environment is not rich in stimuli and the developing networks within their brain are limited – particularly those governing the social aspects of life. • Child begins to form an insecure attachment.
6 months	At around the age of six months an infant can generally show a clear attachment to their caregiver(s) and providing they have formed	• Care proceedings completed within 26 weeks: CO and PO made. • Permanency plan immediately	• Child remains with birth parents where neglect and emotional abuse continue. • Child's cortisol levels have been

	a secure attachment they begin to form a normal pattern of cortisol level. Cortisol is a hormone which is released when the stress response system is activated. Persistent high levels of cortisol have a detrimental impact on health and wellbeing. An infant can experience high levels of cortisol if their basic needs are not met and/or if they experience aggressive or hostile parenting.	implemented and family finding begins. • Child has developed a secure attachment and begins to regulate their cortisol levels. • Child's brain is continuing to rapidly develop in response to their environment and interactions with caregivers. Rich neural networks are being formed. • Child placed with adoptive family before the age of one year. • Chances that this placement will breakdown are low.	consistently high. Stress response system develops atypically. • Insecure attachment relationship with caregivers continues. • Child's brain is developing in response to insufficient stimuli and inconsistent and hostile parenting. Neural networks in areas of the brain which govern social aspects of life are limited.
1 year	The human brain increases in volume more during the first year of life than at any other time. Therefore a positive environment, experiences and interactions with caregivers are crucial during this time to ensure healthy brain development.	• Child has so far developed a richly networked brain and a secure attachment relationship. Child has begun to develop a healthy stress response system. These developments will continue in their adoptive placement. • Adoptive family receive post adoption support until placement is established.	• Child's home circumstances greatly deteriorate and crisis interventions put in place - child placed in foster care on under Section 20 of the Children's Act 1989 pending assessments of parenting capacity. • Child is 18 months old when care proceedings are initiated almost two years after children's social care first identified child as suffering, or likely to suffer significant harm.
2 years	From about the age of two years onwards the connections within the brain which have been developed are either strengthened if they are being used or discarded if they are not being used. This allows the brain to become more efficient and finely tuned. Experience continues to be a crucial factor in determining which synapses are strengthened and which are lost, this is often referred to as 'use it or lose it'.	• Child remains in adoptive placement and has developed a secure attachment to the adoptive caregivers. • Child's brain is becoming more efficient as a result of the neural connections being strengthened as child is receiving good stimulation. • Child developing healthily and no behavioural or developmental difficulties have emerged.	• Care proceedings completed in 52 weeks (child two years six months old). • Sequential and repeated assessments of parenting capacity and kin commissioned. • Care proceedings conclude adoption is in child's best interest. • Behavioural and developmental difficulties have emerged.
3 years	Between the ages of three and five years there is a window of opportunity for dramatic development of executive function, which includes; working memory, inhibitory control,	• Child begins pre-school and is able to form friendships with other children and good relationships with pre-school workers.	• Family finding begins but there are difficulties in finding suitable adopters due to child's older age and their substantial behavioural difficulties.

	and cognitive and mental flexibility. Executive function skills are crucial for school readiness. Without development in this area school performance, both academically and socially will be impaired. The foundations for the development of executive function begin to develop from birth, and continue through childhood and adolescence.	• Child's executive function skills are developing well.	• Child remains in temporary foster care. • Child begins pre-school, however struggles to form friendships with other children or good relationships with pre-school workers. Child is often aggressive towards other children and staff. • Child's executive function skills are limited. • Child is uncertain about their future and lacks confidence that they will ever be adopted.
4 years	At about this time, and providing a child's needs for a secure attachment have been met, a normal pattern of cortisol level is established (it has taken since about the age of four to six months for this pattern to regulate).	• Child remains with adoptive family. • Child starts school and does well both academically and socially.	• Adoptive family found and child placed. However the placement disrupts within six months due to child's behavioural difficulties and attachment disorder. • Child returns to (different) foster carers. • No proactive case work to plan for child's future. • Child starts school but finds it difficult to cope both academically and socially.
Adolescence	Around the time of puberty the brain has a growth spurt in the higher regions which govern, planning, impulse control, reasoning and the regulation and reaction to emotions. Prior to this growth spurt young people are more prone to engage in dangerous risk taking behaviour and are not sufficiently able to interpret emotions, particularly if there is no secure attachment figure available to them to help them negotiate these tasks. This is because they rely on their more primitive limbic response and lack the more mature cortex which can override the limbic response. Capabilities in these areas may always be impaired if the young person has experienced a childhood of aggressive, hostile or neglectful parenting.	• Young person has remained with adoptive family. • Young person's brain is continuing to develop healthily and child has started to be able to plan, control impulses, reason and regulate and react to emotions. • Young person continues to have secure attachment figures who help to negotiate their developmental tasks of adolescence. • Young person is making good progress in school.	• Young person has remained in foster care and has experienced several placements • Young person engages in risk taking behaviour and finds it difficult to form positive peer relationships. • Young person also has difficulties in being able to empathise, to reason and to regulate and interpret emotions. • Development in child's higher regions of the brain has been limited. • Young person excluded from mainstream school due to aggressive behaviour.

Chapter 6: Materials in support of training

Introduction

6.1 This paper has presented an overview of research evidence for family justice professionals concerning child development and the impact of maltreatment. It was commissioned in response to the Family Justice Review recommendations for consistent training and continuing professional development, including a greater emphasis on child development. This section is intended to assist the Judicial College's training programme in this area.

6.2 Two real-life case studies, James and Madeleine, are presented. James and Madeleine are children from the authors' prospective longitudinal study of infants suffering, or likely to suffer, significant harm.[290] Their life pathways and developmental progress; the perspectives of their parents and carers; and the decision-making by professionals on their behalf have been traced, to date, between 2006, the year James and Madeleine were born, and 2012, the year they reached their sixth birthdays.

6.3 To protect confidentially identifying details have been removed from the case studies. However no alterations have been made to the decision-making processes, the timeframes within which decisions were made, and the developmental progress of the children concerned. These case studies therefore show a true picture of decision-making by children's social care and the family courts and the impact this has had on the life chances of the children. It is hoped that by examining these case studies along with the research evidence presented in this paper, a greater understanding of the needs and timeframes of individual children can be applied to practice to ensure that the child remains at the centre of family justice and children's social care decision-making.

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[290] Ward, Brown and Westlake (2012); Ward, Brown and Maskell Graham (2012).

James and Madeleine

6.4 At around the time of their birth there were a number of similarities between the cases of James and Madeleine. Both were identified as likely to suffer significant harm *in utero* and pre-birth assessments were completed. Concerns in both cases were in relation to parental substance misuse, mental illness and domestic violence. In addition, in both cases older siblings had previously been permanently separated from their parents' care and care proceedings were initiated in relation to James and Madeleine within the first couple of weeks of their birth. It is also noteworthy that up to the point of the children's sixth birthdays, in both cases, the cost of children's social care support and the court processes were very similar, approximately £80,000 each.[291] However, the decisions made by the courts and children's social care that followed the children's births varied considerably, along with their future life chances and developmental progress. The timelines at the end of this chapter (Figures 6.1 and 6.2) show how in James' case, an early decision was made that his mother would be unable to overcome her difficulties within an appropriate timescale, and at one month old he was placed with temporary foster carers, pending adoption. In contrast, Madeleine was removed from her parents at birth under an Emergency Protection Order, and spent the first three months of her life in foster care. However she was then returned to her parents under an Interim Care Order and remained with them for the next six years, with varying levels of concern and intervention from the courts and children's social care. At the age of six she was placed again in foster care with the expectation that she would now need a long-term placement away from home, possibly with an adoptive family.

[291] See Brown and McDermid (forthcoming) *Infants suffering, or likely to suffer, harm: The cost of delay*.

Exercise for training

6.5 Examine the timelines for James and Madeleine (Figures 6.1 and 6.2) and consider the following.

Underlying issues

- Identify the key decision points for each case.
- Identify the possible causes of delay for each decision.
- How might these delays have been addressed? Focus on the children's journeys and consider delays pre-proceedings, during proceedings and post- proceedings.
- How have the decisions promoted the wellbeing of James and Madeleine?
- How have the decisions inhibited the children's wellbeing?
- Consider practice in your own locality. What role might family justice professionals have in reducing delays?

James

6.6 Interviewed when James was four, his adoptive mother described him as 'lovely and an absolute joy and we wouldn't be without him.' Likewise, his keyworker at nursery described James as a 'normal, happy and content little boy,' who was reaching all of his developmental milestones and socialised well with other children. However, by the time he was six his mother expressed concerns about his challenging and disruptive behaviour. James had recently undergone a paediatric assessment which indicated that he had an attachment disorder.

- Consider James' life pathway and explore factors which may have contributed to the deterioration in his progress.

Madeleine

6.7 By the time Madeleine was five years old her parents' heroin use had escalated. Madeleine and her younger sibling had also witnessed numerous incidents of domestic violence and Madeleine's mother was engaged in prostitution to pay for the couple's drug habits. Her father commented upon the apparent ease with which he and his partner had been able to hide the extent of their drug use from professionals over the years, stating that their social worker, 'didn't have a clue.'

- Consider what the likely impact of Madeleine's parents' heroin habit was having on the care she was receiving and on her developmental progress.
- Consider how Madeleine's parents were able to hide the extent of their drug use, and what actions could have been taken to prevent this?

6.8 When Madeleine was five, her teacher had concerns about her poor attendance at school, which was below 75%, and her unhealthy diet. Her father reported that some weekends she would eat more than twenty bags of crisps, and not much else. Children's social care had resumed their involvement, and a child protection plan was in place. However the home circumstances deteriorated further. Madeleine's mother was inviting men who were known to pose a risk of sexual abuse to children into their home. Madeleine's school teachers were becoming increasingly concerned about her welfare. She was described by her teacher as being introverted and withdrawn and she had also disclosed to them that she felt uncomfortable when men (with whom her mother was prostituting) were in her home. The head teacher of Madeleine's school described this case as the 'one which keeps me awake at night'. At this stage the head teacher, who was involved with the child protection case conferences, believed that the case should progress to care proceedings, however the social work view at this point was that there was not enough evidence to proceed in this way. The head teacher noted her frustration with this decision.

- Consider why children's social care believed that there was not enough evidence to initiate care proceedings at this stage?
- The head teacher had more concerns about the neglect Madeleine experienced than the social work professionals; why might this have been the case? Would her evidence have been useful to the court?

6.9 At around the time of her sixth birthday, Madeleine and her younger sister were made the subjects of Interim Care Orders and were placed in foster care outside the local authority. Shortly after these orders had been made, Madeleine's father stated to the research team that he thought the decision to take his children into care was ironic, considering that their circumstances had been much worse three years previously than at the point they were removed. Madeleine and her sister remain in foster care and the plan for their future is adoption.

- If, as Madeleine's father asserted, her home circumstances were much worse three years prior to Madeleine being taken into care, what factors changed to enable the threshold for care proceedings to be met?
- Madeleine was described by her teacher as being introverted and withdrawn, she was also displaying the early signs of an eating disorder. Consider the long-term consequences of neglect. How might evidence concerning the chronicity of neglect and its long-term impact on the life chances of children be better utilised by family justice and social work professionals?
- What chances does Madeleine now have of achieving a permanent home? What might family justice professionals do to expedite this?

Figure 6.1: James

Risk Factors

- Physical abuse (*in utero* exposure to drug use)
- Mental illness (mum has schizophrenia and personality disorder and dad has psychiatric disorder)
- Substance abuse (mum and dad, it is also believed they are dealing drugs from home)
- Denial of problems (mum and dad)
- Lack of compliance (mum and dad)
- Inter-parental conflict and violence (between mum and dad)
- Previous maltreatment (five older siblings separated from mum and dad because of chronic neglect and non-school attendance)

Protective factors

- Mum maintains contact with child

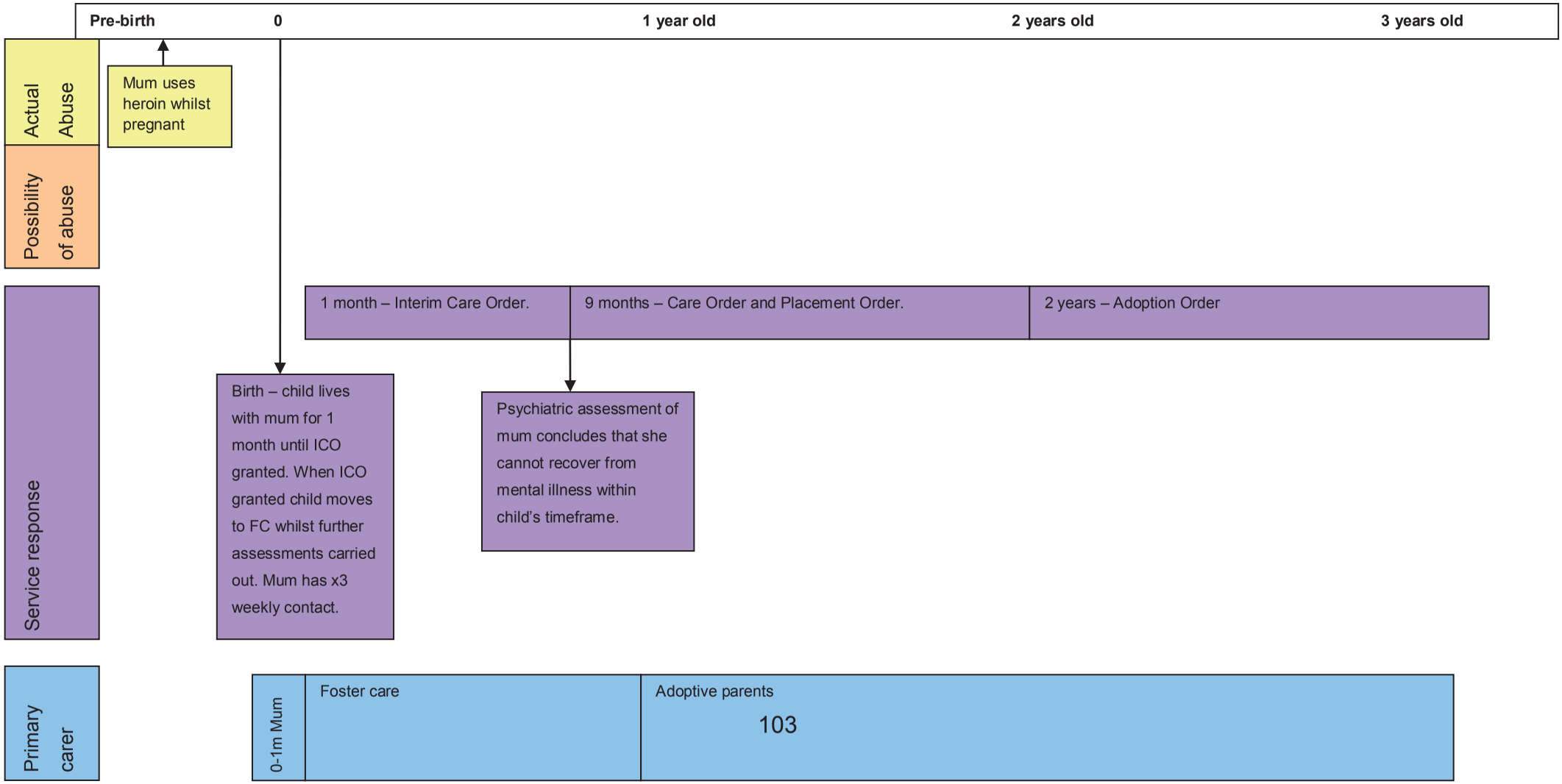


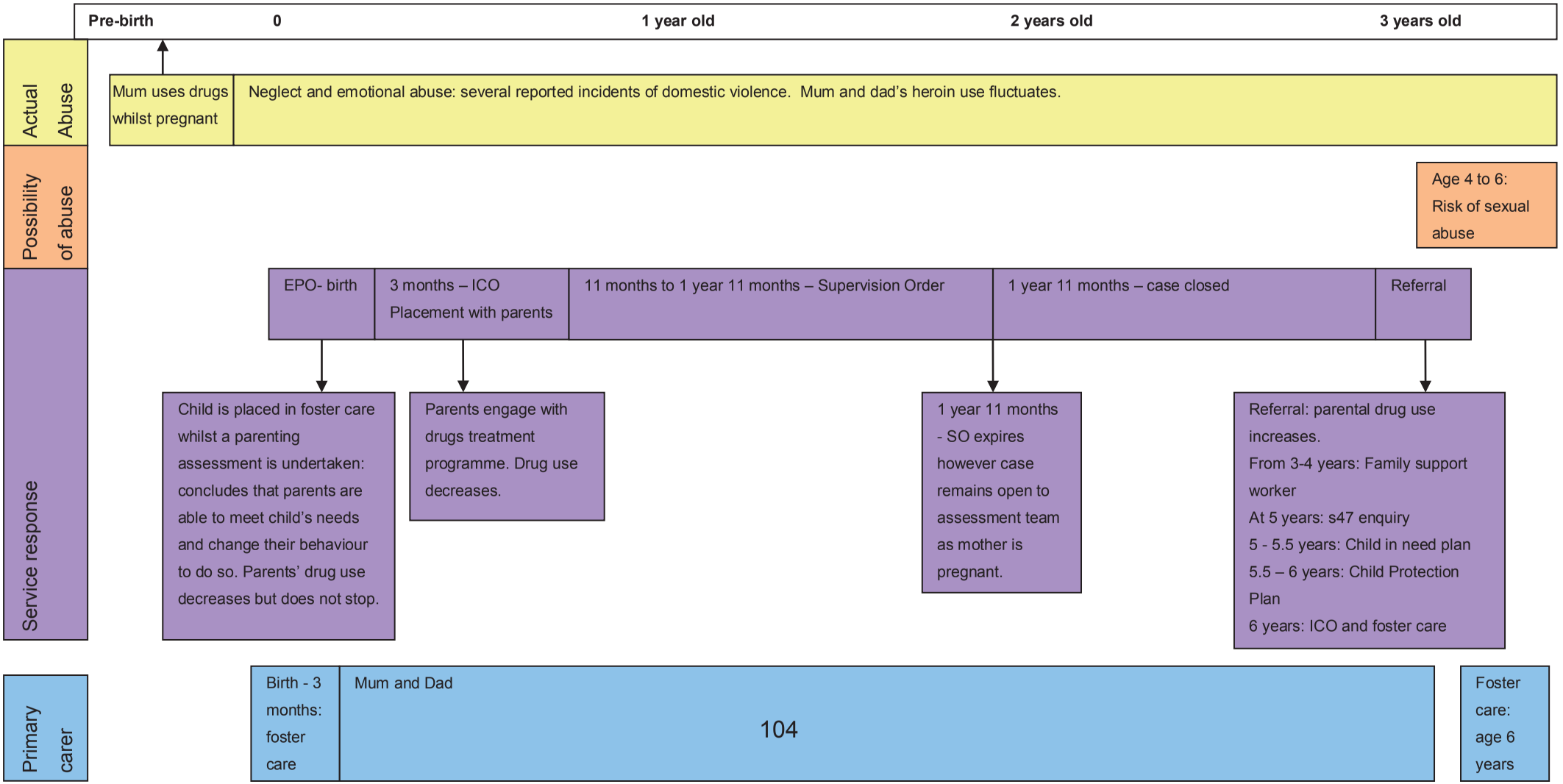
Figure 6.2: Madeleine

Risk factors

- Physical abuse (*in utero* substance abuse)
- Neglect
- Previous maltreatment (previous children removed from mum and dad)
- Substance abuse (mum and dad)
- Abuse in childhood (sexual abuse: mum)
- Own needs before child's (mum and dad)
- Denial of problems (mum and dad)
- Lack of compliance (mum and dad)
- Inter-parental conflict and violence (between mum and dad)

Protective factors

- Willingness to engage with services (especially drugs treatment programmes)
- Capacity to change (drug use initially decreases, however it does not stop and capacity for change is not sustained)



Appendix 1: Literature search database and key words

BAILI British and Irish legal Information

Lexis Law and Legal Information

Westlaw

Policy Hub

Social Care Online

Social Services Abstracts

ASSIA Applied Social Sciences Index and Abstracts (CSA)

Encyclopaedia of social psychology

Gale encyclopaedia of psychology

Intute: Health and life sciences

Intute: Social sciences

Medline

PsychArticles (EBSCO)

PsychInfo

Psychline

SAGE e reference

Science Direct

Springer Online Journals

Wiley Interscience Journals

Economic and Social Data Service (ESDS)

Encyclopaedia of children and childhood in history and society

Search terms

Child development and maltreatment

Child development and abuse

Child development and sexual abuse

Child development and physical abuse

Child development and emotional abuse

Child development and psychological abuse

Child development and neglect

Child development and child protection

Child development and safeguarding

Attachment and maltreatment

Attachment and abuse

Attachment and sexual abuse

Attachment and physical abuse

Attachment and emotional abuse

Attachment and psychological abuse

Attachment and neglect

Attachment and child protection

Attachment and safeguarding

Neurobiological development and maltreatment

Neurobiological development and abuse

Neurobiological development and sexual abuse

Neurobiological development and physical abuse

Neurobiological development and emotional abuse

Neurobiological development and psychological abuse

Neurobiological development and neglect

Neurobiological development and child protection

Neurobiological development and safeguarding

Emotional development and maltreatment

Emotional development and abuse

Emotional development and sexual abuse

Emotional development and physical abuse

Emotional development and emotional abuse

Emotional development and psychological abuse

Emotional development and neglect

Emotional development and child protection

Emotional development and safeguarding

Psychological development and maltreatment

Psychological development and abuse

Psychological development and sexual abuse

Psychological development and physical abuse

Psychological development and emotional abuse

Psychological development and psychological abuse

Psychological development and neglect

Psychological development and child protection

Psychological development and safeguarding

Psychosocial development and maltreatment

Psychosocial development and abuse

Psychosocial development and sexual abuse

Psychosocial development and physical abuse

Psychosocial development and emotional abuse

Psychosocial development and psychological abuse

Psychosocial development and neglect

Psychosocial development and child protection

Psychosocial development and safeguarding

Appendix 2: Overview of research studies

Key references from Chapter Two

Cleaver, H., Unell, I. and Aldgate, J. (2011) *Children's Needs – Parenting Capacity*: *Child Abuse: Parental Mental Illness, Learning Disability, Substance Misuse and Domestic Violence* (2nd Edition). London: The Stationery Office.

Full text available from:
https://www.education.gov.uk/publications/eOrderingDownload/Childrens%20Needs%20Parenting%20Capacity.pdf

This publication provides an overview of research on the impact of parental problems, such as substance misuse, domestic violence, learning disability and mental illness, on children's welfare. It applies a holistic and developmental model in considering how issues which undermine parenting capacity affect the child. Research findings are disaggregated through applying the Assessment Framework[292] which is designed to assess and measure outcomes for children in need. Three inter-related domains constitute this framework. These include; children's developmental needs; parenting capacity; and family and environmental factors. The evidence in this publication is explored in relation to these domains with particular emphasis on how parental mental illness, learning disabilities, substance misuse and domestic violence have an impact on children's health and development, and whether there is evidence that children are suffering, or likely to suffer, significant harm.

The authors of this publication point out the limitations of the research evidence (pp.16-17). These include implications relating to:

- different laws and cultures, particularly as much of the evidence relating to mental illness, learning disability, domestic violence and substance misuse comes from the US;
- a tendency of research to focus on a specific issue such as domestic violence, depression, learning disability or heroin use. In practice however, many individuals are dealing with a complex combination of a variety of issues. For example, many problem drug users will use a variety of drugs and alcohol, or those experiencing domestic violence may also suffer from depression and may use alcohol as a way of coping;

[292] Department of Health, Department for Education and Employment and Home Office (2000) *Framework for the Assessment of Children in Need and their Families*. London: The Stationery Office.

- time-limited research, which usually explores the influence on parenting capacity over a relatively short period. This approach does not take into account the differing needs of the child at various times in their life or the fluctuating nature of drugs and alcohol use, learning disability, mental illness or domestic violence. Longitudinal studies can help to minimise these limitations, however they are rare;
- sampling bias as many research studies are taken from specific groups such as parental cocaine or alcohol users in treatment, mentally ill parents in hospital, parents in receipt of services for learning disability or mothers in refuges. Much less is known about parents in the general population who experience these problems but do not seek help – it would be dangerous to assume that the populations studied are representative.

However the authors of this publication conclude:

> With all of the above limitations in mind, there is a great deal of consistency in the results of research on some aspects of parenting capacity and the influence of these parental problems on children, while other aspects are less consistent. One of our objectives is to help place the research in context, taking account of the limitations.[293]

Hindley, N., Ramchandani, P.G. and Jones, D.P.H. (2006) 'Risk factors for recurrence of maltreatment: A systematic review.' *Archives of Disease in Childhood 91*, 9, 744-752.

Full text available from (subscription required): http://adc.bmj.com/content/91/9/744

This paper disseminates findings from a systematic review of the research base predicting those children at highest risk of recurrent maltreatment. Sixteen studies met the inclusion criteria. The studies were heterogeneous. A variety of forms of maltreatment were considered. Four factors were most consistently identified as predicting future maltreatment: number of previous episodes of maltreatment; neglect (as opposed to other forms of maltreatment); parental conflict; and parental mental illness. Children maltreated previously were approximately six times more likely to experience recurrent maltreatment than children who had not previously been maltreated. The risk of recurrence was highest in the period soon after the index episode of maltreatment (within 30 days), and diminished thereafter.

[293] Cleaver *et al*. (2011) *op. cit.* p.17.

The authors conclude that there are factors clearly associated with an increased risk of recurrent maltreatment, and these should be considered in professional assessments of children who have been maltreated.

Systematic reviews are more likely to capture quantitative studies with the larger sample sizes than qualitative studies with a smaller sample size. Whilst quantitative studies might be more representative of the population being studied, they tend not to capture the reasons why certain results might occur.

Howe, D. (2005) *Child Abuse and Neglect: Attachment, Development and Intervention.* Basingstoke: Palgrave MacMillan.

Book

This book provides a comprehensive analysis of the risks and consequences of child abuse, neglect, rejection and trauma placed within the theoretical framework of attachment theory. Whilst no one theory or approach can claim exclusive authority over human behaviour and experience the author argues that attachment theory can offer an interesting and practical perspective on the emotionally and scientifically difficult subject. The book provides a framework for understanding the origins of problematic caregiving and its consequences for children's psychological development, mental health and social behaviour. The consequences of different types of child maltreatment are examined including consideration of their impact in cases where different type of abuse and neglect occur together. A number of attachment-based interventions as they apply to infants, toddlers, school-age children, adults and parents are also reviewed.

Key references from Chapter Three

Belsky, J. and de Haan, M. (2010) 'Annual research review: Parenting and children's brain development: the end of the beginning.' *The Journal of Child Psychology and Psychiatry 52,* 4, 409-428.

Full text available from (subscription required):
http://onlinelibrary.wiley.com/doi/10.1111/jcpp.2011.52.issue-4/issuetoc

This paper explores research evidence concerning the relationship between parenting and brain development and highlights the importance of scientific investigation into how family experience shapes human development. It reviews evidence suggesting that brain structure and function are 'chiselled' by parenting. Key findings from this review include:

- Brain structures develop at different rates, so they are differentially sensitive to developmental experience, including parenting, at different points in time.
- Most studies illuminating putative 'effects' on brain structure and function are of children exposed to child maltreatment and severe deprivation in institutions. Evidence clearly suggests that both brain structure and functioning can be adversely affected by such experience.
- Experimental interventions will afford stronger causal inference than observational studies. Research on parenting 'in the normal range' is needed.
- Work that incorporates phenotype outcomes would afford evaluation of whether parenting effects on the developing brain mediate parenting effects on behaviour, cognition, emotion and health.
- Consideration should be given to the hypothesis that children vary in their susceptibility to parenting effects on the developing brain.

The authors conclude that although the generalisability of most findings is limited because of disproportionate, but understandable focus on clinical samples (for example, maltreated children with post-traumatic stress disorder) and causal inferences are difficult to draw because of the observational nature of most of the evidence, it is noteworthy that some work with community samples suggests that tentative conclusions regarding effects of parenting on the developing brain may well be substantiated in future research.

Glaser, D. (2000) 'Child abuse and neglect and the brain – a review.' *Journal of Child Psychology and Psychiatry 41,* 1, 97-116.

Full text available from (subscription required):
http://onlinelibrary.wiley.com/doi/10.1111/1469-7610.00551/abstract

This paper reviews evidence concerning the effects of child abuse and neglect on the brain, excluding non-accidental injury that causes gross physical trauma to the brain. This paper was one of the first to provide a comprehensive review of neuroscience research pertinent to child maltreatment.

The paper commences with a background summary of the nature, context, and some deleterious effects of omission and commission within child maltreatment. The author asserts that there is no post-maltreatment syndrome; rather children's outcomes vary with many factors including nature, duration, and interpersonal context of the maltreatment as well as the nature of later intervention. The paper then explores environmental influences on brain development, demonstrating the orderly process of neurodevelopment on the child's environment. Ontogenesis, or the development of the self through self-determination, proceeds in the context of the nature-nurture interaction. As a prelude to reviewing the neurobiology of child abuse and neglect, the next section is concerned with bridging the mind and the brain. Here, neurobiological processes, including cellular, biochemical, and neurophysiological processes, are examined alongside their behavioural, cognitive, and emotional equivalents and vice versa. Child maltreatment is a potent source of stress and the stress response is therefore discussed in some detail. Evidence is outlined for the buffering effects of a secure attachment on the stress response. The section dealing with actual effects on the brain of child abuse and neglect discusses manifestations of the stress response including dysregulation of the hypothalamic-pituitary-adrenal axis, and parasympathetic and catecholamine responses. Recent evidence about reduction in brain volume following child abuse and neglect is also outlined. Some biochemical, functional, and structural changes in the brain that are not reflections of the stress response are observed following child maltreatment. The mechanisms bringing about these changes are less clearly understood and may well be related to early and more chronic abuse and neglect affecting the process of brain development. The behavioural and emotional concomitants of their neurobiological manifestations are discussed. The paper argues that the importance of early intervention and attention to the chronicity of environmental adversity may indicate the need for permanent alternative caregivers, in order to preserve the development of the most vulnerable children.

McCrory, E., De Brito, S.A. and Viding, E. (2010) 'Research review: The neurobiology and genetics of maltreatment and adversity.' ***The Journal of Child Psychology and Psychiatry 51,*** **10, 1079-1095.**

Full text available from (subscription required):
http://onlinelibrary.wiley.com/doi/10.1111/j.1469-7610.2010.02271.x/abstract

This paper provides a concise synopsis of those studies investigating the neurobiological and genetic factors associated with childhood maltreatment and adversity. The paper first

provides an overview of the neuroendocrine findings, drawing from animal and human studies. These studies indicate an association between early adversity and atypical development of the hypothalamic-pituitary-adrenal (HPA) axis stress response, which can predispose to psychiatric vulnerability in adulthood. The paper then reviews the neuroimaging findings of structural and functional brain differences in children and adults who have experienced childhood maltreatment. These studies offer evidence of several structural differences associated with early stress, most notably in the corpus callosum in children and the hippocampus in adults; functional studies have reported atypical activation of several brain regions, including decreased activity of the prefrontal cortex. Next the paper considers studies that suggest that the effect of environmental adversity may be conditional on an individual's genotype and briefly considers the possible role that epigenetic mechanisms might play in mediating the impact of early adversity. Finally the paper considers several ways in which the neurobiological and genetic research may be relevant to clinical practice and intervention. Key points from this paper include:

- Advances in neurobiological and genetic research are providing us with a more detailed and integrated understanding of the impact of childhood maltreatment.
- Children exposed to such adversity may be vulnerable to developing an atypical HPA response to stress that increases their risk for later psychopathology.
- Neuroimaging evidence points to structural and functional brain differences that may underpin the psychological and behavioural problems associated with childhood maltreatment.
- As research advances, an awareness of such biological influences should increasingly help clinicians understand psychological mechanisms of risk and resilience.
- In future, biological markers may provide novel ways of predicting treatment response and measuring treatment outcome.

National Scientific Council on the Developing Child: working papers

The council is an initiative of the Center on the Developing Child at Harvard University and is chaired by is Professor Jack Shonkoff. The council is committed to an evidence-based approach and aims to disseminate findings from primary research about early childhood development and its underlying neurobiology; it has released a number of working papers.

Full text for all papers cited below available from:
http://developingchild.harvard.edu/resources/reports_and_working_papers/

- Working Paper 1 (2004) - *Young children develop in an environment of relationships*: This report summarises the most current and reliable scientific research on the impact of relationships on all aspects of a child's development.
- Working Paper 2 (2004) - *Children's emotional development is built into the architecture of their brains*: This report presents an overview of the scientific research on how a child's capacity to regulate emotions develops in a complex interaction with his or her environment and ongoing cognitive, motor, and social development.
- Working Paper 3 (2005) - *Excessive stress disrupts the architecture of the developing brain*: This report explains how significant adversity early in life can alter, in a lasting way, a child's capacity to learn and to adapt to stressful situations, and discusses how sensitive and responsive caregiving can buffer the effects of such stress.
- Working Paper 4 (2006) - *Early exposure to toxic substances damages brain architecture*: This report summarises the complex scientific research on which toxins present the greatest risk at various stages of brain development, and addresses popular misconceptions about the relative risk and safety of some common substances.
- Working Paper 5 (2007) - *The timing and quality of early experiences combine to shape brain architecture*: This report summarises in clear language the most recent scientific advances in understanding the importance of sensitive periods on brain development.
- Working Paper 6 (2008) - *Mental health problems in early childhood can impair learning and behaviour for life*: This report summarises in clear language the most recent scientific advances regarding the importance of addressing emerging emotional and behavioural problems in the early years.
- Working Paper 7 (2008) - *Workforce development, welfare reform, and child well-being*: This report summarises recent evidence from a series of evaluations of family self-sufficiency programs. These studies show that policies can be successful in achieving both positive economic benefits for parents (increased employment, for example) and positive educational effects on their children.
- Working Paper 8 (2009) - *Maternal depression can undermine the development of young children*: *This report* summarises evidence on the potentially far-reaching harmful effects of chronic and severe maternal depression on families and children.

- Working Paper 9 (2010) - *Persistent fear and anxiety can affect young children's learning and development*: This report examines why, while some of these experiences are one-time events and others may reoccur or persist over time, all of them have the potential to affect how children learn, solve problems, and relate to others.
- Working Paper 10 (2010) - *Early experiences can alter gene expression and affect long-term development*: This report summarises in clear language why this growing scientific evidence supports the need for society to re-examine the way it thinks about the circumstances and experiences to which young children are exposed.
- Working Paper 11 (2011) - *Building the brain's 'air traffic control' system: How early experiences shape the development of executive function*: This report explains how these lifelong skills develop, what can disrupt their development, and how supporting them pays off in school and life.

Child Welfare Information Gateway (2009) *Understanding the Effects of Maltreatment on Brain Development.*

Full text available from: http://www.childwelfare.gov/pubs/issue_briefs/brain_development/

The Child Welfare Information Gateway (part of the U.S Government Department of Health and Human Sciences) has produced a bulletin which provides basic information on brain development and the effects of abuse and neglect on that development. The information is designed to help professionals understand the emotional, mental, and behavioural impact of early abuse and neglect in children who come to the attention of the child welfare system.

Key references from Chapter Four

Shonkoff, J.P. and Garner, A.S. and The Committee on Psychosocial Aspects of Child and Family Health, Committee on Early Childhood, Adoption, and Dependent Care, and Section on Developmental and Behavioral Pediatrics (2012) 'The lifelong effects of early childhood adversity and toxic stress.' *American Academy of Pediatrics 129,* e232-e246.

Full text available from:
http://pediatrics.aappublications.org/content/early/2011/12/21/peds.2011-2663.abstract

This paper presents an ecobiodevelopmental framework that illustrates how early experiences and environmental influences can leave a lasting signature on the genetic predispositions that affect emerging brain architecture and long-term health. The paper also examines extensive evidence of the disruptive impacts of toxic stress, offering insights into causal mechanisms that link early adversity to later impairments in learning, behaviour, and both physical and mental well-being.

Perry, B.D. (2002) 'Childhood experience and the expression of genetic potential: What childhood neglect tells us about nature and nurture.' ***Brain and Mind 3,*** **79-100.**

Full text available from: http://www.childtrauma.org/index.php/articles/abuse-a-neglect

This paper reviews the timeframes of various processes of neurodevelopment, including, neurogenesis, migration, differentiation, apoptosis, arborisation, synaptogenesis, synaptic sculpting, and myelination. Evidence is presented that development of synaptic pathways tends to be a "use it or lose it" proposition. The paper reviews previous studies and clinical experience of childhood abuse and neglect by the author, studies exploring the development of children in orphanages who lacked emotional contact, and animal deprivation and enrichment studies. The author concludes that the evidence shows that children and young nonhuman mammals need both stable emotional attachments with and touch from primary adult caregivers, and spontaneous interactions with peers. If these experiences are lacking, brain development both of caring behaviour and cognitive capacities is damaged in a lasting fashion.

Chugani, H.T., Behen, M.E., Muzik, O., Juhász, C., Nagy, F. and Chugani, C. (2001) 'Local brain functional activity following early deprivation: A study of post institutionalized Romanian orphans.' ***NeuroImage 14*****, 1290-1301.**

Full text available from: http://phy.ucsf.edu/~houde/coleman/chugani.pdf

In order to examine brain dysfunction underlying the cognitive and behavioural deficits observed in institutionalised children the authors of this paper applied a positron emission tomography (PET) technique on 10 children who were adopted from Romanian orphanages (6 males, 4 females, mean age 8.8 years). PET is a specialised radiology procedure used to examine various body tissues to identify certain conditions. Using statistical parametric mapping (SPM), the pattern of brain glucose metabolism in the orphans was compared to

the patterns obtained from two control groups: (i) a group of 17 normal adults (9 males, 8 females, mean age 27.6 years) and (ii) a group of 7 children (5 males and 2 females, mean age 10.7 years) with medically refractory focal epilepsy, but normal glucose metabolism pattern in the contralateral hemisphere. Consistent with previous studies of children adopted from Romanian orphanages, neuropsychological assessment of Romanian orphans in the present study showed mild neurocognitive impairment, impulsivity, and attention and social deficits. Comparing the normalised glucose metabolic rates to those of normal adults, the Romanian orphans showed significantly decreased metabolism bilaterally in the orbital frontal gyrus, the infralimbic prefrontal cortex, the medial temporal structures (amygdala and head of hippocampus), the lateral temporal cortex, and the brain stem. These findings were confirmed using a region-of-interest approach. SPM analysis showed significantly decreased glucose metabolism in the same brain regions comparing the orphans to the nonepileptic hemisphere of the childhood epilepsy controls. Dysfunction of these brain regions may result from the stress of early global deprivation and may be involved in the long-term cognitive and behavioural deficits displayed by some Romanian orphans.

In summary, this study shows that children exposed to early social deprivation display long-term cognitive and behavioural deficits, associated with dysfunction (indicated by decreased glucose utilisation) in a group of limbic brain regions known to be activated by stress and damaged by prolonged stress. The authors suggest that chronic stress experienced by the children in the Romanian orphanages during infancy resulted in altered development of these limbic structures and that altered functional connections in these circuits may represent the mechanism underlying persistent behavioural disturbances in the Romanian orphans.

Key references from Chapter Five

Masson, J., Pearce, J., Bader, K., Joyner, O., Marsden, J. and Westlake, D. (2008) *Care Profiling Study: Research Series 4/08.* London: Ministry of Justice.

Full text available from:
http://www.bristol.ac.uk/law/research/researchpublications/2008/care-profiling-study-report.pdf

The aim of this study was to provide baseline data on court proceedings for the protection of children brought under s. 31 Children Act 1989. The Protocol for Judicial Case Management

in Public Law Children Act Cases applied to these proceedings. The Care Proceedings System Review (2006) had identified limitations in the existing data.

Data were collected through a detailed examination of a random sample of court files relating to applications made in 2004, in 15 Family Proceedings Courts (FPCs) and 8 county courts (Care Centres). The sample consisted of 386 cases involving 682 children, initiated by 15 local authorities. Data were recorded on: the family circumstances of the children and parents who were drawn into care proceedings; the work which the local authority had done with the family before proceedings were started, and subsequently; the legal processes through which cases were decided, including the representation of the parties, the work of the children's guardian, and the use of experts; and the outcome of cases in terms of orders made.

Key findings

- There is no evidence that the local authorities brought care proceedings without good reason. Many families had lost the care of children in previous proceedings.
- Almost 60% of cases relate to one child in a family. Over a quarter of care proceedings involve babies.
- Neglect was the basis for concern in three-quarters of cases; fewer than 10% involved major injuries to children but 40% of cases resulted from a crisis.
- Half the children were living with a lone parent; fathers were only involved in the care of a third of the children at the time of care proceedings.
- Children's services departments were working with 85% of families but court applications included a core assessment for only a minority of children.
- Courts managed these cases very differently; the average duration in county courts ranged from 37 to 72 weeks.
- 60% of cases resulted in care orders and 23% in residence orders.
- The management information collected and published by the Ministry of Justice does not accurately reflect the work of the courts in care proceedings and is inadequate for monitoring policies relating to transfer between FPCs and county courts.

The authors highlight that there are three major limitations to studying court proceedings through court files:

- The information available depends on the completeness of court files. In some cases mis-filing of documents meant that elements of the case, for example directions

about assessments or reports for hearings relating to contact, were invisible to the researchers.

- Court files rarely include accounts of the discussions between the parties during which agreements may be reached about directions, evidence or timetables.
- Neither judgments or reasons for the decision are generally available on the county court file. While magistrates are required to provide written reasons for their decisions, judgments given in the county court, though recorded, are not routinely transcribed. Time and resources did not allow for transcripts of judgments so the researchers could not routinely analyse the reasons given for decisions in the county court.

Ofsted (2012) *Right on Time: Exploring Delays in Adoption*. Manchester: OFSTED

Full text available from: http://www.ofsted.gov.uk/resources/right-time-exploring-delays-adoption

This report summarises the findings of a survey of nine local authority areas to look at the effectiveness of arrangements to avoid delay in adoption outcomes for children. Inspectors sought to identify common barriers to good practice and the key factors in promoting timely outcomes for children who need, or may need, to be adopted, by looking at: the quality of care planning, including the clarity, timeliness and effectiveness of key decision-making and multi-agency working; panel functioning; legal advice; liaison between local authorities, Cafcass and the courts; performance management, including management oversight; training; policies/procedures; strategic planning, including recruitment of adopters; and staffing issues.

Inspectors visited the local authority areas between November 2011 and January 2012. On each survey visit, two inspectors tracked a minimum of six cases to examine the adoption process, via meetings with involved professionals and access to case records. Inspectors also examined a randomly selected sample of relevant cases via electronic care records and meetings with practitioners.

Tracked cases included examples of:

- children recently (within the last 12 months) adopted or placed for adoption, including children who were not placed within 12 months of a 'should be placed for adoption' (SHOBPA) decision; and

- children subject to a recent SHOBPA panel decision (this may include children still subject to care proceedings) but not yet matched.

Fifty three cases were tracked, and a further 36 cases were randomly sampled.

Key findings

- The most common reason for delay in the cases tracked for this report was the length of time taken for care proceedings to be concluded before an adoption plan could be confirmed. There were several reasons for court delay, including most significantly:
    - repeat assessments of birth parents;
    - additional assessments of relatives, often commenced late in proceedings;
    - additional expert assessments, sometimes by independent social workers;
    - a general lack of social worker confidence and assertiveness within the court arena, which sometimes led to a lack of challenge to changes in plans and additional assessments; and
    - insufficient capacity of local courts to meet demand, resulting in timetabling difficulties.
- Fourteen of the 53 tracked cases scrutinised by inspectors had been known to children's social care for a considerable length of time prior to care proceedings being initiated.
- There was some evidence in a small number of local authorities that accommodation under s. 20 Children Act 1989 was regularly used inappropriately for very young children, causing significant delay in achieving permanence.
- Evidence of effective communication links between local authorities, Cafcass and the courts to address shared strategic and practice issues, including delay for children, was variable. Although these services often met routinely and formally, the impact of the meetings on improving the timeliness of outcomes for children was not always evident.
- Recruitment strategies for adopters did not always fully reflect changing demand, nor were they always accompanied by specific action plans.
- Although several cases were subject to delay due to difficulties in identifying suitable adopters, most children were placed within 12 months of an agency decision that they should be adopted.
- Processes for matching children with adoptive placements were generally robust. There was little evidence of delay caused by an unrealistic search for a 'perfect' ethnic match.

- Most of the adopters spoken to reported that they had experienced a welcoming response from agencies when they first enquired about adoption.
- Most adopters felt, especially with the benefit of hindsight, that the time taken to complete their assessment was necessary, although some had experienced delay as a result of staff shortages.
- There was little evidence of decisions being taken, or not being taken, as a result of financial constraints, including the payment of inter-agency fees or when planning post-adoption support.
- Senior managers and social workers in several local authorities felt that increasing workload demands had adversely affected their capacity to achieve timely permanence outcomes for children.
- The level and quality of support available from adoption workers to children's social workers, including family finding specialists, were key factors in minimising the impact of competing demands and commencing timely parallel planning.
- Local authorities' adoption services were structured in a variety of ways. The extent to which the inevitable risks of any service structure were managed was variable, however, with some evidence of a lack of adequate training and support for those workers responsible for permanence and adoption planning.
- Local authorities which had robust systems in place to track the progress of cases were more likely to minimise the risk of significant accumulated delay.
- The level of challenge from managers and independent reviewing officers (IROs) to prevent or reduce delay was inconsistent.

Pearce J., Masson, J. and Bader, K. (2011) *Just following instructions? The Representation of Parents in Care Proceedings.* Bristol: School of Law, University of Bristol.

Full text available from:
http://www.bristol.ac.uk/law/research/researchpublications/2011/justfollowinginstructions.pdf

The objective of this study was to examine the task of legal representation and client management, in the context of the experience of lawyers representing parents of children subject to care proceedings. While previous research had focused on the work of legal representatives in other areas of family law, and also on the work of other parties in child protection litigation there was no research on the work of the legal representatives of the parents of children in these cases. This study aimed both to contribute to the literature on

professional roles within the family justice system, and also to provide an understanding of the nature and quality of parental legal representation.

Qualitative methods were utilised to allow for an in-depth exploration, rather than to provide statistical data. A combination of observation and interview methods was used, allowing for triangulation to achieve a multi-dimensional perspective. The study included three elements:

- observations of court hearings at all stages of the proceedings;
- 16 case studies tracked as they proceeded through the court system; and
- interviews with solicitors and barristers representing parties, including those who act for parents, and other legal personnel involved in care proceedings.

The main fieldwork was carried out between September 2008 and the end of 2009 in four locations in England and Wales which were chosen to capture diversity in terms of practice and procedures.

Key findings

- The operation of the care proceedings system is heavily dependent on a small number of specialist solicitors who devote most of their time to this work. Not all are members of the Law Society Children Panel.
- Lawyers doing this work, including judges and local authority representatives, viewed the state's powers as draconian, justifying parents' absolute rights to contest, however hopeless their case.
- Parents were able to find committed and able lawyers, generally attended court hearings and most remained engaged in their case.
- Solicitors carried very heavy workloads, sustained by their commitment to this work, so as to meet the demands of cases and maintain profitability within the fixed fee regime.
- Solicitors aimed to enable parent clients to understand the process and make it work in their favour. Most also felt some responsibility to consider the child's welfare.
- Most lawyers gave realistic advice and identified options for parents. They stressed to parents the importance of co-operation with the local authority.
- Negotiation between lawyers had a greater role than judicial case management in shaping the progress of cases.

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Childhood Wellbeing Research Centre (CWRC)
Working Paper 16 Second Edition
Title: Decision-making within a child's timeframe: An overview of current research evidence for family justice professionals concerning child development and the impact of maltreatment.
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Date: February 2013

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